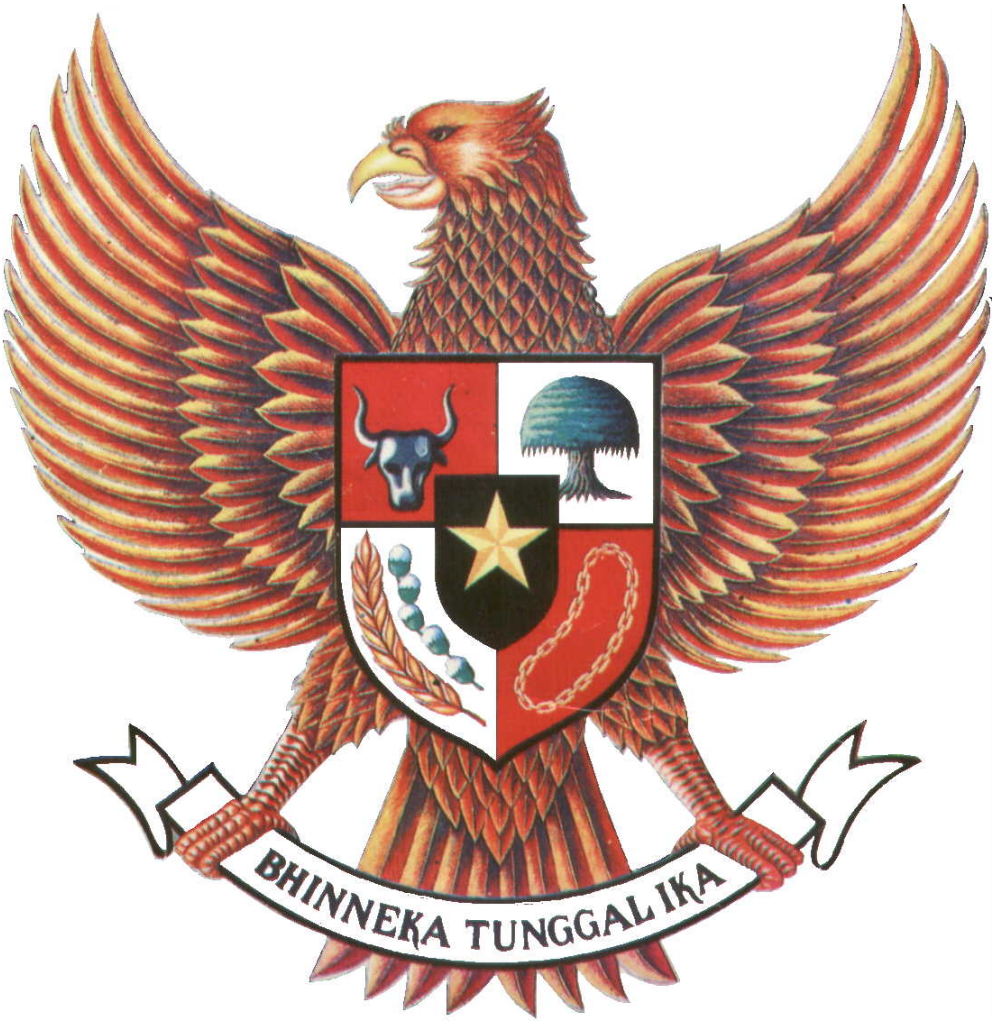

REPUBLIC OF INDONESIA
MINISTRY OF TRANSPORTATION

CIVIL AVIATION SAFETY REGULATION (CASR)

PART 63
LICENSING AND CERTIFICATION OF FLIGHT OPERATIONS PERSONNEL OTHER THAN PILOTS

LAMPIRAN KEPUTUSAN MENTERI PERHUBUNGANI
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CIVIL AVIATION SAFETY REGULATIONS (C.A.S.R.)

PART 63
Amandment 2

LICENSING AND CERTIFICATION OF FLIGHT OPERATIONS PERSONNEL OTHER THAN PILOTS

REPUBLIC OF INDONESIA
MINISTRY OF TRANSPORTATION

PART 63
LICENSING AND CERTIFICATION OF FLIGHT OPERATIONS PERSONNEL OTHER THAN PILOTS

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SUB PART A GENERAL

63.0 Regulatory Reference

This Civil Aviaiton Safety Regulation (CASR) Part 63 sets forth the implementing rules for licensing flight crew members other than pilot and flight operation officers, certification of flight attendant as required by Aviaiton Act Number 1 Year 2009, Chapter V “Aircraft Personnel”, Article 58, 59, 60, and 61.

63.1 Applicability

(a) This part prescribes the requirements for issuing flight engineer licences, flight navigator licences, flight operations officer licences, flight attendent certificates, and the general operating rules for holders of those licences and certificates.

(b) Where used in this part, 'licence' means 'certificate' when referring to the certification of flight attendents.

63.2 Licensing of foreign persons

A person who is not an Indonesian citizen is issued a licence under this part (other than under Part 63.23 or Part 63.42) outside the Republic of Indonesian only when the Director finds that licence is needed for the operation of an Indonesian – Registered civil aircraft.

63.3 Licences and ratings required

(a) No person my act as flight engineer of a civil aircraft of Indonesian registry unless he has in his personal possession a current flight engineer licence with appropriate type ratings issued to him under this part and a first-class medical certificate issued to him under Part 67 of the CASRs within the preceding 12 calendar months. However, when the aircraft is operated within a foreign country, a current flight engineer licence issued by the country in which the aircraft is operated, with evidence of current medical qualification for that licence, may be used. Also, in the case of a flight engineer licence issued under Part 63.43, evidence of current medical qualification accepted for the issued of that licence is used in place of a medical certificate.

(b) No person my act as flight navigator of civil aircraft of Indonesian registry unless he has in his personal possession a current flight navigator licence issued to him under this part and a second – class (or higher) medical certificate issued to him under Part 67 of the CASRs within the preceding 12 calendar months. However, when the aircraft is operated within a foreign country, a current flight navigator licence issued by the country in which the aircraft is operated, with evidence of current medical qualification for that licence, may be used.

(c) No person my act as flight operations officer (exercising responsibility with the pilot in command in the operational control of a flight) in connection with any civil aircraft in air commerce unless he has in his personal possession a current flight operations officer licence issued to him under this part and a third – class (or higher) medical certificate issued to him under Part 67 of the CASRs.

(d) No person my act as flight attendant in connection with any civil aircraft in air commerce unless he has in his personal possession a current flight attendant certificate issued to him under this part and a second – class (or higher) medical certificate issued to him under Part 67 of the CASRs within the preceding 12 calendar months.

(e) Inspection of licence. Each person who holds a flight engineer, flight navigator or flight operations officer licence, or medical or flight attendent certificate, shall present either or both for inspection upon the request of the Director General or his authorized representative.

(f) Privileges of the holder of the licence and the conditions to be observed in exercising such privileges:

(1) privileges of the holder of flight navigator licence shall be act as flight navigator of any aircraft;

(2) privileges of the holder of a flight engineer licence shall be to act as flight engineer of any type of aircraft on which the holder has demonstrated a level of knowledge and skill, as determined by the DGCA on the basis of those requirements specified in 63.35 and 63.39 which are applicable to the safe operation of that type of aircraft;

(3) privileges of the holder of a flight operations officer licence shall be to serve in that capacity with responsibility for each area for which the applicant meets the requirements specified in CASR 121 / 135 on which the holder has demonstrated a level of knowledge and skill, as determined by the DGCA on the basis of applicable requirements to the safe operation of that type of aircraft.

63.11 Application and issue

(a) An application for a licence and appropriate type rating, or for an additional rating, under this part must be made on a form and in a manner prescribed by the Director General.

(b) An applicant who meets the requirements of this part is entitled to an appropriate licence and appropriate type ratings.

(c) Unless authorized by the Director General, a person whose flight engineer, flight navigator, flight operation officer, license, and flight attendant certificate are suspended may not apply for any rating to be added to that licence during the period of suspension.

(d) Unless the order of revocation provides otherwise, a person whose flight engineer, flight navigator, flight operation officer, license, and flight attendant certificate are revoked may not apply for the same kind of licence for 1 year after the date of revocation.

63.12 Offenses involving alcohol or drugs

(a) A conviction for the violation of any national law relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation or narcotic drugs, marihuana, or depressant or stimulant drugs or substances is grounds for-

(1) Denial of an application for any licence or rating issued under this part for a period of to 1 year after the date of final conviction; or

(2) Suspension or revocation of any licence or rating issued under this part.

(b) The commission of an act prohibited by Part 91.17(a) or Part 91.19(a) of the CASRs is grounds for-

(1) Denial of an application for any licence or rating issued under this part for a period of to 1 year after the date of that act; or

(2) Suspension or revocation of any licence or rating issued under this part.

(c) No person may exercise or attempt to exercise his privileges to dispatch of a civil aircraft

(1) Within 8 hours after consuming alcohol;

(2) While under the influence of alcohol;

(3) While using any drug that affects the person's faculties in any way contrary to safety; or

(4) While having 0.04 percent by weight or more alcohol in the blood.

(d) The commission of an act prohibited by Part 63.12(c) or Part 91.19(a) of the CASRs is grounds for-

(1) Denial of an application for any license or rating issued under this part for a period of to 1 year after the date of that act; or

(2) Suspension or revocation of any license or rating issued under this part.

63.12a Refusal to submit to a drug or alcohol test or to furnish test results

A refusal to submit to a drug or alcohol test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer in accordance with Part 91.17(c) of the CASRs, or a refusal to furnish or authorize the release of the test results when requested by the Director General in accordance with Part 91.17(c) or (d) of the CASRs, is grounds for

(a) Denial of an application for any licence or rating issued under this part for a period of up to 1 year after the date of that refusal; or

(b) Suspension or revocation of any licence or rating issued under this part.

63.13 Temporary licence

A licence effective for a period of not more than 30 days may be issued to a qualified applicant, pending review of his application and supplementary documents and the issue of the license for which he applied.

63.15 Duration of licences

(a) Except as provided in Part 63.23 and Paragraph (b) of this Part, a license or rating issued under this part is effective until it is surrendered, suspended, or revoked.

(b) A flight engineer licence (with any added amendments) issued under Part 63.42 expires at the end of the 24th calendar month after the month in which the licence was issued or renewed. However the holder may exercise the privileges of that licence only while the foreign flight engineer licence on which that licence is based is effective.

(c) A flight navigator license (with any added amendments) issued under Part 63.60 expires at the end of the 24th calendar month after the month in which the license was issued or renewed. However the holder may exercise the privileges of that license only while the foreign flight navigator license on which that license is based is effective.

(d) A flight operations officer license (with any added amendments) issued under Part 63.80 expires at the end of the 24th calendar month after the month in which the license was issued or renewed. However the holder may exercise the privileges of that license only while the foreign flight operations officer license on which that license is based is effective.

(e) Any licence issued under this part ceases to be effective if it is surrendered, suspended, or revoked. The holder of any licence issued under this part that is suspended or revoked shall, upon the Director General's request, return it to the Director General.

63.15a Proficiency and Competency Checks

(a) Flight engineer and flight navigator must satisfactory completed a proficiency check within preceding 12 calendar months.

(b) Except as provided in paragraphs (c) and (d) of this section, a proficiency check must meet the following requirements:

(1) It must include at least the procedures and maneuvers set forth in by the Director;

(2) It must be given by the DGCA or company check airman.

(c) An approved airplane simulator or other appropriate training device may be used in conduct of a proficiency check.

(d) In the case of a flight attendant and flight operations officer a compentency check shall be valid to the first day of the twenty fifth – (25) month following the month in which the CC was taken.

(e) Flight operations officer has to complete operating familiarization at least once within every 12 months period on one of the types of airplane in each group he is to dispatch.

(f) Where a proficiency check, a competency check or annual training is renewed within the last 60 days of its validity period, such check or training is deemed to have taken place on the last day of the validity period.

(g) The Director may extend the validity period of a proficiency check, a competency check or annual training by up to 60 days where the Director is of the opinion that aviation safety is not likely to be affected.

(h) Where the validity period of a proficiency check or a competency check of annual training has been expired for 24 months or more, the person shall re-qualify by meeting all initial training requirements relating to that aircraft.

63.16 Replacement of lost or destroyed licence; change of name

(a) An application for the replacement of lost or destroyed licence issued under this part is made by letter to the Directorate General of Civil Aviation (DGCA), Directorate of Airworthiness and Aircraft Operations. The letter must-

(1) State the name of the person to whom the licence was issued, the company mailing address, and date and place or birth of the licence holder, and any available information regarding the number, and date of issue of the licence, and the rating on it.

(2) Be accompanied by a receipt for the cost of the replacement license, payable to the DGCA.

(3) Police report from the local police office.

(b) An application for the replacement of lost or destroyed medical certificate is to be made by letter to the DGCA, Aviation Medical Center, accompanied by a receipt for the cost of the replacement license, payable to the DGCA.

(c) A person who has lost a license issued under this part, or a medical certificate issued under part 67 of the CASRs, or both, may obtain a facsimile message (fax) from the DGCA confirming that it was issued. The fax may be carried as a license for a period not to exceed 60 days pending his receipt of the duplicate license under paragraph (a) or (b) of this part, unless he has been notified that the license has been suspended or revoked. The request for such a fax may be made by letteror fax, including the date upon which a duplicate license was previously requested, if a request has been made, and a check giro or post wesel for the cost of the duplicate license. The request for a fax license is sent to the office listed in paragraph (a) or (b) of this part, as appropriate. However, a request for both license and medical certificates at the same time must be sent to the office prescribed in paragraph (a) of this part.

63.17 Test: General procedure

(a) Tests prescribed by or under this part are given at times and by persons, designated by the Director General.

(b) The minimum passing grade for each test is 70 percent.

63.17a Written Test: Prerequisites and Passing Grades

(a) An applicant for a written test must-

(1) Show that she/he (they) has (have) satisfactorily completed the ground instruction course required by this part for the license or rating sought;

(2) Present a personal identification a license, driver’s license, Kartu Tanda Penduduk (KTP), or other officially-approved document; and

(3) Present a birth certificate or other official document showing that he meets the age requirement prescribed in this part for the license sought not later than 2 years from the date of application for the test.

63.18 Written Test: Cheating or Other Unauthorized Conduct

(a) No person may-

(1) Copy or internantionally removed, a written test under this part;

(2) Give to another, or receive from another, any part or copy of that test;

(3) Give help on that test to, or receive help on that test from, any person during the period that test is being given.

(4) Take any part of that test on behalf of another person;

(5) Use any material or aid during the period that test being given; or

(6) Intentionally cause, assisit, or participate in any act prohibited by this paragraph.

(b) No person who commits an act prohibited by paragraph (a) of this part is eligible for any license or rating under the CASRs for a period of 1 year after the date of that act. In addition, the commission of that act is a basis for suspending or revoking any license or rating held by that person.

63.19 Operations during physical deficiency

No person may serve as a flight engineer, flight navigator, flight operations officer, or flight attendant during a period of known physical deficiency, or increase in physical deficiency, that would make him unable to meet the physical requirements for his current medical certificate.

63.20 Applications, licences, logbooks, reports, and records; falsification, reproduction, or alteration

(a) No person may make or cause to be made-

(1) Any fraudulent or intentionally false statement or any application for a licence or rating under this part;

(2) Any fraudulent or intentionally false entry in any logbook, record or report that is required to be kept, made or used, to show compliance with any requirement for any licence or rating under this part;

(3) Any reproduction for fraudulent purpose of any licence or rating this part; or

(4) Any alteration of any licence or rating under this part.

(b) The commission by any person of an act prohibited under Paragraph (a) of this Part is a basis for suspending or revoking any licence or rating held by that person.

63.21 Change of address

The holder of a licence issued under this part who has made a change in company may not after 30 days from the date he moved, exercise the privileges of this licence unless he has notified in writing the DGCA of his new address.

63.23 Special purpose flight engineer and flight navigator licences: Operation of Indonesian – registered civil aircraft leased by a person not an Indonesian citizen

(a) General. The holder of current foreign flight engineer or flight navigator licence, or authorization issued by a foreign contracting State to the Convention on International Civil Aviation, who meets the requirements of this Part, may hold a special purpose flight engineer or flight navigator licence authorizing the holder to perform flight engineer or flight navigator duties on a civil aircraft of Indonesian registry, leased to a person not a citizen of the Republic of Indonesian, carrying persons or property for compensation or hire. Special purpose flight engineer or flight navigator licences are issued under this part only for aircraft types that can have maximum passenger seating configuration (not including any flight crewmember seat) of more than 30 seats or a maximum payload capacity of more than 7,500 pounds.

(b) Eligibility. To be eligible for the issuance, renewal, of a licence under this Part, an applicant must present the following to the Director General-

(1) A current foreign flight engineer or flight navigator licence, or authorization issued by the aeronautical authority of a foreign contracting State to the Convention on International Civil Aviation or a facsimile acceptable to the Director General. The licence or authorization must authorize the applicant to perform the flight engineer or flight navigator duties to be authorized by a licence issued under this Part on the same aircraft types as the leased aircraft.

(2) A current certification by the lessee of the aircraft -
(i) Stating that the applicant is employed by the lessee;
(ii) Specifying the aircraft type on which the applicant will perform flight engineer or flight navigator duties; and
(iii) Stating that the applicant has received ground and flight instruction which qualifies the applicant to perform the duties to be assigned on the aircraft.

(3) Documentation showing that the applicant currently meets the medical standards for the foreign flight engineer or flight navigator licence, or authorization required by Paragraph (b)(1) of this Part, except that a Republic of Indonesian medical certificate issued under Part 67 of the CASRs is not evidence that the applicant meets those standards unless the State which issued the applicant foreign flight engineer or flight navigator licence, or authorization accepts a Republic of Indonesian medical certificate as evidence of medical fitness for a flight engineer or flight navigator licence, or authorization.

(c) Privileges. The holder of a special purpose flight engineer or flight navigator licence issued under this Part may exercise the same privileges as those shown

on the licence, or authorization specified in Paragraph (b)(1) of this Part, subject to the limitations specified in this Part.

(d) Limitations. Each licence issued under this Part is subject to the following limitations;

(1) It is valid only _
  (i) For flights between foreign countries and for foreign air commerce;
  (ii) While it and the licence, or authorization required by Paragraph (b)(1) of this Part are in the licence holders personal possession and are current
  (iii) While the licence holder is employed by the person to whom the aircraft described in the certification required by Paragraph (b)(2) of this Part is leased.
  (iv) While the licence holder is performing flight engineer or flight navigator duties on the Indonesian-registered civil aircraft described in the certification required by Paragraph (b)(2) of this Part ; and
  (v) While the medical documentation required by the Paragraph (b)(3) of this Part is in the licence holders personal possession and is currently valid.

(2) Each licence issued under this Part contains the following:
  (i) The name of the person to whom the Indonesian-registered civil aircraft is leased.
  (ii) The type of aircraft.
  (iii) The limitation: “Issued under, and subject to, Part 63.23 of the Civil Aviation Safety Regulation”.
  (iv) The limitations: “Subject to the privileges and limitations shown on the holders foreign flight (engineer or navigator) licence, or authorization.”

(3) Any additional limitations placed on the licence which the Director General considers necessary.

(e) Termination. Each special purpose flight engineer or flight navigator licence issued under this Part terminates-

(1) When the lease agreement for the aircraft described in the certification required by Paragraph (b) (2) of this Part terminates;

(2) When the foreign flight engineer or flight navigator licence, or authorization, or the medical documentation required by Paragraph (b) of this Part is suspended, revoked, or no longer valid; or

(3) After 24 calendar months after the month in which the special purpose flight engineer or flight navigator licence was issued.

(f) Surrender of licence. The licence holder shall surrender the special purpose flight engineer or flight navigator licence to the Director within 7 days after the date it terminates.

(g) Renewal. The licence holder may have the licence renewed by complying with the requirements of Paragraph (b) of this Part at the time of application for renewal.

SUB PART B FLIGHT ENGINEERS

63.31 Eligibility Requirements; General

To be eligible for a flight engineer licence, a person must;

(a) Be at least 18 years of age;

(b) Be able to read, speak, and understand the English language, or have an appropriate limitation placed on his flight engineer licence;

(c) Hold at least a first – class medical certificate issued under Part 67 of the CASRs within the 12 calendar months before the date he applies, or other evidence of medical qualification accepted for the issue of a flight engineer licence under Part 63.42, and

(d) Comply with the requirements of this subpart that apply to the rating he seeks.

63.33 Aircraft Ratings

(a) The specific aircraft type rating will be place on the flight engineer licence

(b) To be eligible for an additional aircraft type rating, an applicant must pass the written test that is appropriate to the type of aircraft for which an additional rating is sought, and

(1) Satisfactorily complete an approved flight engineer training program that is appropriate to the additional type rating sought; and

(2) Pass the flight test for that type of aircraft.

63.35 Knowledge Requirements

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

(1) Air law

Rules and regulations relevant to the holder of a flight engineer license; rules and regulations governing the operation of civil aircraft pertinent to the duties of a flight engineer;The regulations of the CASRs that apply to the duties of a flight engineer.

(2) Aircraft general knowledge;

(i) Basic principles of powerplants, gas turbine and/or piston engines characteristics of fuels, fuel systems including fuel control, lubricants and lubrication systems; afterburners and I jection system, function and operation of engine ignition and starter systems;

(ii) Principlesof operation, handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance;

(iii) Airframes. Flight controls, structures, wheel assemblies, brakes and anti-skid units, corrosion and fatigue life, identification of structural damage and defects;

(iv) ice and rain protection systems;

(v) Pressurization and air-conditioning systems, oxygen systems;

(vi) Hydraulic and pneumatic systems;

(vii) Basic electrical theory, electric systems (AC and DC), aircraft wiring systems, bonding and screening;

(viii) Principles of operation of instruments, compasses, autopilots, radio communication equipment, radio and radar navigation aids, flight management systems, displays and aviaonics;

(ix) Limitations of appropriate aircraft;

(x) Fire protection, detection, suppression and extinguishing systems;

(xi) Use and serviceability checks of equipment and systems of appropriate aircraft.

(3) Flight performance, planning and loading:

(i) Effects of loading and mass distribution on aircraft handling, flight characteristic and performance; mass and balance calculations;

(ii) Use and practical application of performance data including procedures for cruise control.

(4) Human performance

(i) Human performance relevant to the flight engineer including principles of threat and error management.

(5) Operational procedures:

(i) Principles of maintenance, procedures for the maintenance of airworthiness, defect reporting, pre-flight inspections, precautionary procedures for fuelling and use of external power; installed equipment and cabin systems;

(ii) Normal, abnormal and emergency procedures;

(iii) Operational procedures for carriage of freight and dangerous goods.

(6) Principles of flight

Fundamentals of aerodynamics;

(7) Radiotelephony

Communication procedures and phraseology.

(8) fundamentals of navigation; principles and operation of self-contained systems; and

(9) operational aspects of meteorology.

(b) An applicant for the original or additional issue of a flight engineer class rating must pass a written test for that aircraft class on the following:

(1) Preflight

(2) Aircraft equipment.

(3) Aircraft systems

(4) Aircraft loading

(5) Aircraft procedures and engine operations with respect to limitations

(6) Normal operating procedures

(7) Emergency procedures

(8) Mathematical computation of engine operations and fuel consumption

(c) Before taking the written tests prescribed in Paragraphs (a) and (b) of this Part, an applicant for a flight engineer licence must present satisfactory evidence of having completed one of the experience requirements of Part 63.37; he may take the written test before acquiring the flight training required by Part 63.37.

(d) An applicant for a flight engineer licence or rating must have passed the written test required by Paragraphs (a) and (b) of this Part since the beginning of the 24th calendar month before the month in which the flight is taken. However, this limitation does not apply to an applicant for a flight engineer licence or rating if_

(1) The applicant:

(i) Within the period ending 24 calendar months after the month in which the applicant passed the written test, is employed as a flight crewmember or aircraft maintenance engineer by an Indonesian air carrier operating either under Part 121 or as a commuter air carrier under Part 135 and is employed by such a certificate holder at the time of the time of the flight test;

(ii) If employed as a flight crewmember, has completed initial training, and, if appropriate, transition or upgrade training; and

(iii) Meets the recurrent training requirements of the applicable part or, for an aircraft maintenance engineer, meets the recency of experience requirements of Part 65; or

(2) Within the period ending 24 calendar months after the month in which the applicant passed the written test, the applicant participated in a flight engineer or maintenance training program of a Republic Indonesia scheduled military air transportation service and is currently participating in that program.

(e) An air carrier with an approved training program under Part 121 of the CASRs may, when authorized by the Director General, provide as part of that program a written test that it may administer to satisfy the test required for an additional rating under Paragraph (b) of this Part.

63.37 Aeronautical Experience Requirements

(a) The applicant shall have completed, under the supervision of a person acceptable to the Director General for that purpose, not less than 100 hours of flight time in the performance of the duties of a flight engineer. The Director General shall determine whether experience as a flight engineer in a flight simulator, which he has approved, is acceptable as part of the total flight time of 100 hours. Credit for such experience shall be limited to a maximum of 50 hours.

(b) When the applicant has flight time as a pilot, the Director General shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (a) above can be reduced accordingly.

(c) The applicant shall have operational experience in the performance of the duties of a flight engineer, under the supervision of a flight engineer acceptable to the Director General for that purpose, in at least the following areas:

(1) Normal procedures
  (i) Preflight inspections
  (ii) Fuelling procedures, fuel management
  (iii) Inspection of maintenance documents
  (iv) Normal flight deck procedures during all phases of flight
  (v) Crew co-ordination and procedures in case of crew incapacitation
  (vi) Defect reporting

(2) Abnormal and alternate (standby) procedures
  (i) Recognition of abnormal functioning of aircraft systems
  (ii) Use of abnormal and alternate (standby) procedures

(3) Emergency procedures
  (i) Recognition of emergency conditions
  (ii) Use of appropriate emergency procedures.

63.39 Skill Requirements

(a) The applicant shall have demonstrated the ability to performs as flight engineer of an aircraft, the duties and procedures described in Part 63.37(c) with a degree of competency appropriate to the privileges granted to the holder of a flight engineer license, and to:

(1) Recognize and manage threats and errors;

(2) Use aircraft systems within the aircraft’s capabilities and limitations;

(3) Exercise good judgement and airmanship;

(4) Apply aeronautical knowledge;

(5) Perform all the duties as part of an integrated crew with the successful outcome assured; and

(6) Communicate effectively with the other flight crew members.

(b) The use of flight simulation training device for performing any of the procedures required during the demonstration of skill described in 63.39 shall be approved by the DGCA, which shall ensure that the flight simulation training device is appropriate to the task.

63.41 Retesting After Failure

An applicant for a flight engineer licence who fails a written test or practical test for that licence may apply for retesting_

(a) After 30 days after the date he failed that test; or

(b) After he has received additional practice or instruction (flight, synthetic trainer, or ground training, or any combination thereof) that is necessary, in the opinion of the Director General or the applicant's instructor (if the Director General has authorized him to determine that additional instruction is necessary) to prepare the applicant for retesting.

63.42 Flight Engineer Licence Issued on Basis of a Foreign Flight Engineer Licence

(a) Licence issued. The holder of a current foreign flight engineer licence issued by a contracting State to the Convention on International Civil Aviation, who meets the requirements of this Part, may have a flight engineer licence issued to him for the operation of civil aircraft of Indonesian registry. Each flight engineer licence issued under this Part specifies the number and State of issuance of the foreign flight engineer licence on which it is based. If the holder of the licence cannot read, speak, or understand the English language, the Director may place any limitation on the licence that considers necessary for safety. Prior to issue Indonesian flight engineer license based on foreign license, Director General must verify the authenticity of that foreign license to the issuing authority

(b) Medical standards and certification. An applicant must submit evidence that the meets the medical standards for the foreign flight engineer licence on which the application for a licence under this Part is based. A current medical certificate issued under Part 67 of the CASRs will be accepted as evidence that the applicant meets those standards. However, a medical certificate issued under Part 67 of the CASRs is not evidence that the applicant meets those standards outside the Republic of Indonesia unless the State that issued the applicant's foreign flight engineer licence also accepts that medical certificate as evidence of the applicant's physical fitness for his foreign flight engineer licence.

(c) Rating Issued. The aircraft type ratings listed on the applicant's foreign flight engineer licence, in addition to any issued to him after testing under the provisions of this part, are placed on the applicant's flight engineer licence. An applicant without an aircraft type rating on his foreign flight engineer licence may be issued a type rating if he shows that he currently meets the requirements for exercising the privileges of his foreign flight engineer licence on that type aircraft.

(d) Privileges and Limitations. The holder of a flight engineer licence issued under this Part may act as a flight engineer of a civil aircraft of Indonesian registry subject to the limitations of this part and any additional limitations placed on his licence by the Director General. He is subject to these limitations while he is acting as a flight engineer of the aircraft within or outside the Republic of Indonesia. However he may not act as flight engineer or in any other capacity as a required flight crewmember, of a civil aircraft of Indonesia registry that is carrying persons or property for compensation or hire.

(e) Renewal of licence and ratings. The holder of a licence issued under this Part may have that licence and ratings placed thereon renewed if, at the time of application for renewal, the foreign flight engineer licence on which that licence is based is in effect. Application for the renewal of the licence and ratings thereon must be made before the expiration of the licence.

63.43 Flight Engineer Course

An applicant for approval of a flight engineer course must submit a letter to the Director General requesting approval, and must also submit three copies of each course outline, a description of the facilities and equipment, and a list of the instructors and their qualifications. An air carrier with an approved flight engineer training course under Part

121 of the CASRs may apply for approval of a training course under this part by letter without submitting the additional material required by this paragraph. Minimum requirements for obtaining approval of a flight engineer course are set forth in Appendix C of this Part.

SUB PART C FLIGHT NAVIGATORS

63.51 Eligibility Requirements; General

To be eligible for a flight navigator licence, a person must-

(a) Be at last 18 years of age;

(b) Be able to read, write, speak, and understand the English language or have an appropriate limitation placed on his flight navigator license;

(c) Hold a least a second-class medical certificate issued under Part 67 of the CASRs within the 12 calendar months before the date he applies; and

(d) Comply with Parts 63.53, 63.55, and 63.57.

63.53 Knowledge Requirements

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

(1) Air law

Rules and regulations relevant to the holder of a flight navigator license; appropriate air traffic services practices and procedures;

(2) Flight performance, planning and loading

(i) Effects of loading and mass distribution on aircraft performance;

(ii) Use of take-off, landing and other performance data including procedures for cruise control;

(iii) Pre-flight and en-route operational flight planning; preparation and filling of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;

(3) Human performance relevant to the flight navigator including principles of threat and error management;

(4) Meteorology

(i) Interpretation and practical application of aeronautical meteorological reports, charts and forecast; codes and abbreviations; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimeter;

(ii) Aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems; the structure of fronts, and the origin and characteristic of significant weather phenomena which affect take-off, en-route and landing conditions;

(5) Navigation

(i) Dead-reckoning, pressure-pattern and celestial navigation procedures; the use of aeronautical charts; radio navigation aids and area

navigation systems; specific navigation requirements for long-range flights;

(ii) Use, limitation and serviceability of avionics and instruments necessary for the navigation of the aircraft;

(iii) Use, accuracy and reliability of navigation systems used in departure, en-route and approach phases of flight; identification of radio navigation aids;

(iv) Principles, characteristic and use of self-contained and external-referenced navigation systems; operation of airborne equipment;

(v) The celestial sphere including the movement of heavenly bodies and their selection and identification for the purpose of observation and reduction of sights; calibration of sextants; the completion of navigation documentation;

(vi) Definitions, units and formulae used in air navigation;

(6) Operational procedures

Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes, abbreviations, and instrument procedure charts for departure, en-route, descent and approach;

(7) Principles of flight;

(8) Radiotelephony;

Communication procedures and phraseology.

(b) A passing grade is evidence, for a period of 24 calendar months after the test, which the applicant has complied with this Part.

63.55 Experience Requirements

(a) An applicant for a flight navigator licence must be a graduate of a flight navigator course approved by the Director General or present satisfactory evidence of-

(1) Satisfactory determination of this position in flight at least 25 times by night by celestial observations and at least 25 times by day by celestial observations in conjunction with other aids;

(2) At least 200 hours of satisfactory flight navigation in aircraft engaged in cross-country flight including celestial and radio navigation and dead reckoning, of which at least 30 hours at night.

A pilot who has logged 500 hours of cross-country flight time, of which at least 100 hours were at night, may be credited with not more than 100 hours for the purposes of Paragraphs (a)(2) of this Part.

(b) Flight time used exclusively for practicing long range navigation methods, with emphasis on celestial navigation and dead reckoning, is considered to be satisfactory navigation experience for the purposes of Paragraph (a) of this Part. It must be substantiated by a logbook, by record of State aircraft operations or a certificated air carrier, or by a letter signed by a licensed flight navigator and attached to the application.

63.57 Skill Requirements

(a) An applicant for a flight navigator licence must pass a practical test in navigating aircraft by-

(1) Dead reckoning;

(2) Celestial means; and

(3) Radio aids to navigation.

(4) Recognize and manage threats and errors;

(5) Exercise good judgement and airmanship;

(6) Apply aeronautical knowledge;

(7) Perform all duties as part of as part of an integrated crew; and

(8) Communicate effectively with the other flight crew members.

(b) An applicant must pass the written test prescribe by Part 63.53 before taking the test under this Part. However, if a delay in taking the test under this Part would inconvenience the applicant or an air carrier, he may take it before he receives the result of the written test, or after he has failed the written test.

(c) The test requirements for this Part are set forth in Appendix A of this part.

63.59 Retesting After Failure

(a) An applicant for a flight navigator licence who fails a written or practical test for that licence may apply for retesting-

(1) After 30 days after the date he failed that test; or

(2) Before the 30 days have expired if the applicant presents a signed statement from a licensed flight navigator, licensed ground instructor, or any other qualified person approved by the Director General, certifying that person has given the applicant additional instruction in each of the subjects failed and that person considers the applicant ready for retesting.

(b) A statement from a licensed flight navigator, or from an operations official of an approved navigator course is acceptable, for the purposes Paragraphs (a)(2) of this Part, for the written test and for the flight test. A statement from a person approved by the Director General is acceptable for the written tests. A statement from a supervising or check navigator with the State aircraft operations is acceptable for the written test and for the practical test.

(c) If the applicant failed the flight test, the additional instruction must have been administered in flight.

63.60 Flight Navigator License Issued on Basis of a Foreign Flight Navigator License

(a) License issued. The holder of a current foreign flight navigator license issued by a contracting State to the Convention on International Civil Aviation, who meets the requirements of this part, may have a flight navigator license issued to him for the operation of civil aircraft of Indonesian registry. Each flight navigator license issued under this part specifies the number and State of issuance of the foreign flight navigator license on which it is based. If the holder, of the license cannot

read, speak, or understand the English language, the Director General may place any limitation on the license that considers necessary for safety. Prior to issue Indonesian flight navigator license based on foreign license Director General must verify the authenticity of that foreign license to the issuing authority.

(b) Medical standards and certification. An applicant must submit evidence that the meets the medical standards for the foreign flight navigator license on which gthe application for a license under this part is based. A current medical certificate A current medical certificate issued under Part 67 of the CASRs will be accepted as evidence that the applicant meets those standards meets those standards. However, a medical certificate issued under Part 67 of the CASRs is not evidence that the applicant meets those standards outside the Republic of Indonesia unless the State that issued the applicant's foreign flight navigator license also accepts that medical certificate as evidence of the applicant's physical fitness for his foreign flight navigator license.

(c) Rating issued. The aircraft type ratings listed on the applicant's foreign flight navigator license, in addition to any issued to him after testing under the provisions of this part, are placed on the applicant's flight navigator license. An applicant without an aircraft type rating on his foreign flight navigator license may be issued a type rating if he shows that he currenctly meets the requirements for exercising the privileges of his foreign flight navigator license on that type aircraft.

(d) Privileges and limitations. The holder of a flight navigator license issued under this part may act as a flight navigator of a civil aircraft of Indonesian registry subject to the limitations of this part and any addition limitations placed on his license by the Director General. He is subject to these limitations while he is acting as a flight navigator of the aircraft within or outside the Republic of Indonesia. However he may not act as flight navigator or in any other capacity as a required flight crewmember, of a civil aircraft of Indonesia registry that is carrying persons or property for compensation or hire.

(e) Renewal of license and ratings. The holder of a license issued under this part may have that license and ratings placed thereon renewed if, at the time of application for renewal, the foreign flight navigator license on which that license is based is in effect. Application for the renewal of the license and ratings thereon must be made before the expiration of the license.

63.61 Flight navigator courses

An applicant for approval of a flight navigator course must submit a letter to the Director General requesting approval, and must also submit three copies of the course outline, a description of his facilities and equipment, and a list of the instructors and their qualifications. Requirements of the course are set forth in Appendix B to this Part.

SUB PART D FLIGHT OPERATIONS OFFICERS

63.71 Licence Required

(a) No person may act as a flight operations officer (exercising responsibility with the pilot in command in the operational control of a flight) in connection with any civil aircraft in air commerce unless that person has in his personal possession a flight operations officer licence issued under this subpart.

(b) Each person who holds a flight operations officer licence must present it for inspection upon the request of the Director General or an authorized representative of DGCA.

63.73 Eligibility requirements: General.

(a) To be eligible for a flight operations officer licence, a person must --

(1) Be at least 21 years of age;

(2) Be able to read, speak, write, and understand the English language or have an appropriate limitation placed on his flight operation officer license;

(3) Pass the required knowledge test prescribed by 63.75 of this part;

(4) Pass the required practical test prescribed by 63.79 of this part; and

(5) Comply with the requirements of 63.77 of this part.

63.75 Knowledge Requirements

(a) A person who applies for a flight operations officer licence must pass a knowledge test on the following aeronautical knowledge areas:

(1) Air law

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

(2) Aircraft general knowledge

(i) Principles of operation of airplane powerplants systems and instruments;

(ii) Operating limitations of airplanes and powerplants;

(iii) Minimum equipment list;

(3) Flight performance calculation, planning procedures and loading

(i) Effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;

(ii) Operational flight planning; fuel consumption and endurance calculations; alternate aerodrome selection procedures; en-route cruise control; extended range operation;

(iii) Preparation and filling of air traffic services flight plans;

(iv) Basic principles of computer-assisted planning system;

(4) Human performance

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

(5) Meteorology

(i) Aeronautical meteorology; the movement of pressure systems; the structure of fronts, and the origin and characteristic of significant weather phenomena which affect take-off, en-route and landing conditions;

(ii) Interpretation and application of aeronautical meteorological reports, charts and forecast; codes and abbreviations; use of, and procedures for obtaining, meteorlogical information;

(6) Navigation

Principles of air navigation with particular reference to instrument flight;

(7) Operational procedures

(i) Use of aeronautical documentation;

(ii) Operational procedures for the carriage of freight and dangerous goods;

(iii) Procedures relating to aircraft accidents and incidents; emergency flight procedures;

(iv) Procedures relating to unlawful interference and sabotage of aircraft;

(8) Principles of flight

(i) Principles of flight relating to the appropriate category of aircraft; and

(9) Radio communication

(i) Procedures for communicating with aircraft and relevant ground stations.

(b) The applicant must present documentary evidence satisfactory to the Director General of having passed a flight operations officer knowledge test within the preceding 24 calendar months.

63.77 Experience or Training Requirements

An applicant for a flight operations officer licence must present documentary evidence satisfactory to the Director General that he has the experience prescribed in paragraph (a) through (c) of this section:

(a) A total of at least two years of service in any one or in any combination of the capacities specified in (1) to (3) inclusive, provided that ini 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.

(d) 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.

(e) The applicant has satisfactorily completed operating familiarization consisting of observing operations from the flight deck operations, or, for airplanes without an observer seat on the flight deck, form a forward passenger seat with headset or speaker, in the type of airplane he is to dispatch within the preceding 12 calendar months.

63.79 Skill Requirements

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 neighbourhood 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;

(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; and

(d) Recognize and manage threats and errors.

An applicant for a flight operations officer license must pass a practical test given by the Director General, with respect to any one type of large aircraft used in air carrier operations. The practical test must be based on the flight operations officer practical test standards, as published by the DGCA on the items outlined in the Appendix D of this part.

63.80 Flight Operation Officer License Issued on Basis of a Foreign Flight Operation Officer License

(a) License issued. The holder of a current foreign flight operation officer license issued by a contracting State to the Convention on International Civil Aviation, who meets the requirements of this part, may have a flight operation officer license issued to him for the operation of civil aircraft of Indonesian registry. Each flight operation officer license issued under this part specifies the number and State of issuance of the foreign flight operation officer license on which it is based. If the holder, of the license cannot read, speak, or understand the English language, the Director General may place any limitation on the license that considers necessary for safety. Prior to issue Indonesian flight operation officer license based on foreign license Director General must verify the authenticity of that foreign license to the issuing authority.

(b) Medical standards and certification. An applicant must submit evidence that the meets the medical standards for the foreign flight operation officer license on which gthe application for a license under this part is based. A current medical certificate issued under Part 67 of the CASRs will be accepted as evidence that the applicant meets those standards. However, a medical certificate issued under Part 67 of the CASRs is not evidence that the applicant meets those standards outside the Republic of Indonesia unless the State that issued the applicant's foreign flight operation officer license also accepts that medical certificate as evidence of the applicant's physical fitness for his foreign flight operation officer license.

(c) Rating issued. The aircraft type ratings listed on the applicant's foreign flight operation officer license, in addition to any issued to him after testing under the provisions of this part, are placed on the applicant's flight operation officer license. An applicant without an aircraft type rating on his foreign flight operation officer license may be issued a type rating if he shows that he currenctly meets the requirements for exercising the privileges of his foreign flight operation officer license on that type aircraft.

(d) Privileges and limitations. The holder of a flight operation officer license issued under this part may act as a dispatcher of a civil aircraft of Indonesian registry subject to the limitations of this part and any addition limitations placed on his license by the Director General. He is subject to these limitations while he is exercising as a flight operation officer of the aircraft within or outside the Republic of Indonesia. However he may not act as a dispatcher of a civil aircraft of Indonesia registry that is carrying persons or property for compensation or hire.

(e) Renewal of licence and ratings. The holder of a licence issued under this Part may have that licence and ratings placed thereon renewed if, at the time of application for renewal, the foreign flight operations officer licence on which that licence is based in effect. Application for the renewal of the licence and ratings thereon must be made before the expiration of the licence.

63.81 Flight Operations Officer Licensing Courses: Content and Minimum Hours

(a) An approved flight operations officer licensing course must:

(1) Provide instruction in the areas of knowledge and topics listed in appendix D of this part;

(2) Include a minimum of 400 hours of instruction.

(b) An applicant for approval of a flight operations officer course must submit an outline that describes the major topics and subtopics to be covered and the number of hours proposed for each.

(c) Additional subject headings for an flight operations officer licensing course may also be included, however the hours proposed for any subjects not listed in appendix D of this part must be in addition to the minimum 400 course hours required in paragraph (a) of this section.

(d) For the purpose of completing an approved course, a student may substitute previous experience or training for a portion of the minimum 400 hours of training. The course operator determines the number of hours of credit based on an evaluation of the experience or training to determine if it is comparable to

portions of the approved course curriculum. The credit allowed, including the total hours and the basis for it must be placed in the student's record required by 65.70(a) of this part.

63.83 Flight Operations Officer Licensing Courses: Application, Duration, and Other General Requirements

(a) *Application.* Application for original approval of a flight operations officer licensing course or the renewal of approval of a flight operations officer licensing course under this part must be:

(1) Made in writing to the Director General;

(2) Accompanied by two copies of the course outline for which approval is sought;

(3) Accompanied by a description of the equipment and facilities to be used; and

(4) Accompanied by a list of the instructors and their qualifications.

(b) *Duration.* Unless withdrawn or canceled, an approval of a flight operations officer licensing course of study expires:

(1) On the last day of the 24th month from the month the approval was issued; or

(2) Except as provided in paragraph (f) of this section, on the date that any change in ownership of the school occurs.

(c) *Renewal.* Application for renewal of an approved flight operations officer licensing course must be made within 30 days preceding the month the approval expires provided the course operator meets the following requirements:

(1) At least 80 percent of the graduates from that flight operations officer licensing course, who applied for the practical test required by 63.79 of this part, passed the practical test on their first attempt; and

(2) The flight operations officer licensing course continues to meet the requirements of this subpart for course approval.

(d) *Course revisions.* Requests for approval of a revision of the course outline, facilities, or equipment must be in accordance with paragraph (a) of this section. Proposed revisions of the course outline or the description of facilities and equipment must be submitted in a format that will allow an entire page or pages of the approved outline or description to be removed and replaced by any approved revision. The list of instructors may be revised at any time without request for approval, provided the minimum requirements of 63.87 of this part are maintained and the Director General is notified in writing.

(e) *Withdrawal or cancellation of approval.* Failure to continue to meet the requirements of this subpart for the approval or operation of an approved flight operations officer licensing course is grounds for withdrawal of approval of the course. A course operator may request cancellation of course approval by a letter to the Director General. The operator must forward any records to the DGCA as requested by the Director General.

(f) *Change in ownership.* A change in ownership of a part 63, appendix D approved course does not terminate that flight operations officer licensing course approval if, within 10 days after the date that any change in ownership of the school occurs:

(1) Application is made for an appropriate amendment to the approval; and

(2) No change in the facilities, personnel, or approved flight operations officer licensing course is involved.

(g) *Change in name or location.* A change in name or location of an approved flight operations officer licensing course does not invalidate the approval if, within 10 days after the date that any change in name or location occurs, the course operator of the part 63, appendix D approved course notifies the Director General, in writing, of the change.

63.85 Flight Operations Officer Licensing Courses: Training Facilities

An applicant for approval of authority to operate a flight operations officer course of study must have facilities, equipment, and materials adequate to provide each student the theoretical and practical aspects of aircraft flight operations. Each room, training booth, or other space used for instructional purposes must be temperature controlled, lighted, and ventilated to conform to local building, sanitation, and health codes. In addition, the training facility must be so located that the students in that facility are not distracted by the instruction conducted in other rooms.

63.87 Flight operations officer licensing courses: Personnel.

(a) Each applicant for a flight operations officer licensing course must meet the following personnel requirements:

(1) Each applicant must have adequate personnel, including one instructor who holds a flight operations officer licence and is available to coordinate all training course instruction.

(2) Each applicant must not exceed a ratio of 25 students for one instructor.

(b) The instructor who teaches the practical dispatch applications area of the appendix D course must hold a flight operations officers licence

63.90 Flight operations officer licensing courses: Records.

(a) The operator of a flight operations officer course must maintain a record for each student, including a chronological log of all instructors; subjects covered, and course examinations and results. The record must be retained for at least 3 years after graduation. The course operator also must prepare, for its records, and transmit to the Director General not later than January 31 of each year, a report containing the following information for the previous year:

(1) The names of all students who graduated, together with the results of their flight operations officer licensing courses.

(2) The names of all the students who failed or withdrew, together with the results of their flight operations officer licensing courses or the reasons for their withdrawal.

(b) Each student who successfully completes the approved flight operations officer licensing course must be given a written statement of graduation, which is valid for 90 days. After 90 days, the course operator may revalidate the graduation licence for an additional 90 days if the course operator determines that the student remains proficient in the subject areas listed in appendix D of this part.

SUB PART E FLIGHT ATTENDENTS

63.101 Eligibility Requirements; General

To be eligible for a flight attendant certificate, a person must;

(a) Be at least 18 years of age;

(b) Be able to read, speak, and understand the English language or have an appropriate limitation placed on his/her flight attendant certificate;

(c) Hold at least a second – class medical certificate issued under Part 67 of the CASRs within the 12 calendar months before the date he or she applies, or other evidence of medical qualification accepted for the issue of a flight attendent certificate by the Director General under this Part, and

(d) Comply with the requirements of this subpart that apply to the rating he or she seeks.

63.103 Knowledge Requirements

A person who applies for a flight attendant certificate must pass a knowledge test on the following aeronatutical knowledge areas as required in paragraph (a) and (b) below:

(a) General subjects applicant for a flight attendent certificate must pass

(1) The authority of the pilot in command and succession of command;

(2) Relevant safety and security regulations;

(3) Passenger handling, including under age childres;

(4) Approved crew resource management training;

(5) Company policy manuals relating to the duties of a flight attendant;

(6) Customs and immigrations procedures;

(7) Passnger briefing; and

(8) Passenger cabin preparation and securing.

(b) For each airplane type:

(1) A general description of the aircraft emphasizing physical characteristics that may have a bearing on ditching, evacuation, and in-flight emergency procedures and on other related duties;

(2) The use of both the public address system and the means of communicating with other flight crewmembers; and

(3) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.

(c) For emergency or security equipment and procedures:

(1) Location and operation of all aircraft exits, including normal, alternate and emergency modes of operation;

(2) Location and use of all emergency equipment on board each aircraft;

(3) Normal and alternate mean of communication and communication procedures for normal, emergency and security situations;

(4) Alternate duties in the event of the incapacitation of other crew members;

(5) Passenger emergency briefings and aural commands;

(6) Armed intervention or unruly passengers;

(7) Cabin and passenger preparation for emergency landing, ditching anf evacuation; and

(8) Medical emergencies on board including administering oxygen.

(d) Each training program must provide the emergency training set forth in this Section with respect to each airplane type, model, and configuration, each required crewmember, and each kind of operation conducted, insofar as appropriate for each crewmember and the certificate holder. Emergency training must provide the following:

(1) Instruction in emergency assignments and procedures, including coordination among crewmembers;

(2) Individual instruction in the location, function, and operation of emergency equipment including:

(i) Equipment used in ditching and evacuation;

(ii) First aid equipment and proper use;

(iii) Portable fire extinguishers, with emphasis on type of extinguisher to be used on different classes of fires; and

(iv) Emergency exits in the emergency mode with the evacuation slide/raft pack attached (if applicable), with training emphasis on the operation of the exits under adverse conditions.

(3) Instruction in the handling of emergency situations including:

(i) Rapid decompression;

(ii) Fire in flight or on the surface, and smoke control procedures with emphasis on electrical equipment and related circuit breakers found in cabin areas including all galleys, service centers, lifts, lavatories and movie screens;

(iii) Ditching and other evacuation, including the evacuation of persons and their attendants, if any, who may need the assistance of another person to move expeditiously to an exit in the event of an emergency;

(iv) Illness, injury, or other abnormal situations involving passengers or crewmembers to include familiarization with the emergency medical kit; and

(v) Hijacking and other unusual situations.

(e) No air carrier shall assign a person to act as a crewmember on any aircraft unless that person has received crew resource management training in accordance with the following :

(1) Initial training for all crewmembers shall cover the following subjects:

(i) Attitudes and behaviors;

(ii) Communication skills;

(iii) Problem solving;

(iv) Human factors;

(v) Conflict resolution;

(vi) Decision making;

(vii) Team building and maintenance; and

(viii) Workload management.

(2) Recurrent training as prescribed herein, shall be given every 12 months and cover safety and emergency procedures and where possible, include joint participation of pilots and flight attendants:

(i) Relationship of crew members;

(ii) Review of incidents/accidents of air carriers;

(iii) Presentation and discussion of selected coordinated emergency procedures; and

(iv) Crewmember evacuation drills and debriefing.

63.105 Skill Requirements

(a) An applicant for a flight attendent certificate with a type rating must pass a practical test on the duties of a flight attendent in the class of aircraft for which a rating is sought.

(b) The applicant must-

(1) Show that he or she can satisfactory perform preflight safety inspections,

(2) In flight, show that he or she can satisfactorily perform the normal duties and procedures of a flight attendent relating to that aircraft,

(3) In flight, or in an approved flight attendent training device, show that he or she can satisfactorily perform emergency duties and procedures and recognize and take appropriate action in emergency situations.

An applicant for a flight attendant certificate must pass a practical test given by the Director General, with respect to any one type of large aircraft used in air carrier operations. The practical test must be based on the flight attendant practical test standards, as published by the DGCA on the items outlined in appendix E of this part.

63.107 Aircraft Ratings

(a) The specific aircraft type rating will be place on the flight attendant certificate

(b) To be eligible for an additional aircraft type rating, an applicant must Satisfactorily complete an approved flight attendent training program that is appropriate to the type rating sought and pass a flight attendant knowledge written test for that type rating.

63.109 Flight Attendent Course

An applicant for approval of a flight attendant course must submit a letter to the Director General requesting approval, and must also submit three copies of each course outline, a description of the facilities and equipment, and a list of the instructors and their qualifications.

APPENDIX A TEST REQUIREMENTS FOR A FLIGHT NAVIGATOR LICENCE

63xA.a Demonstration of skill

An applicant will be required to pass practical tests on the prescribed subjects. These tests may be given by DGCA inspectors and designated flight navigator examiners.

63xA.b The examination

The practical examination consists of a ground and flight test as itemized on the examination check sheet. Each item must be completed satisfactorily in order for the applicant to obtain a passing grade. Items 5, 6, 7 of the ground test may be completed orally, and items 17, 22, 23, 34, 36, 37, 38 and 39 of the flight test may be completed by an oral examination when a lack of ground facilities or navigation equipment makes such procedure necessary. In these cases a notation to that effect shall be made in the "Remarks" space on the check sheet.

63xA.c Examination procedure

(1) An applicant will provide an aircraft in which celestial observations can be taken in all directions. Minimum equipment shall include a table for plotting, a drift meter or absolute altimeter, an instrument for taking visual bearings, and a radio direction finder.

(2) More than one flight may be used to complete the flight test and any type of flight pattern may be used. The test will be conducted chiefly over water whenever practicable, and without regard to radio range legs or radials. If the test is conducted chiefly over land, a chart should be used which shows very little or no topographical and aeronautical data. The total flight time will cover a period of at least four hours. Only one applicant may be examined at one time, and no applicant may perform other than navigator duties during the examination.

(3) When the test is conducted with an aircraft belonging to an air carrier, the navigation procedures should conform to those set forth in the carrier's operations manual. Items of the flight test which are not performed during the routine navigation of the flight will be completed by oral examination after the flight or at times during flight which the applicant indicates may be used for tests on those items. Since in-flight weather conditions, the reliability of the weather forecast, and the stability of the aircraft will have considerable effect on an applicant's performance, good judgement must be used by the agent or examiner in evaluating the tests.

63xA.d Ground Test

For the ground test, in order of the numbered items on the examination check sheet, an applicant will be required to:

(1) Identify without a star identifier, at least six navigational stars and all planets available for navigation at the time of the examination and explain the method of identification.

(2) Identify two additional stars with a star identifier or sky diagrams and explain identification procedure.

(3) Pre-compute a time/altitude curve for a period of about 20 minutes and take 10 single observations of a celestial body which is rising or setting rapidly. The intervals between observations should be at least one minute. Mark each observation on the graph to show accuracy. All observations, after corrections, shall plot within 8 minutes of arc from the time/altitude curve, and the average error shall not exceed 5 minutes of arc.

(4) Take and plot one 3 star fix and 3 LOPs of the sun. Plotted fix or an average of LOPs must fall within 5 miles of the actual position of the observer.

(5) Demonstrate or explain the compensation and swinging of a liquid type magnetic compass.

(6) Demonstrate or explain a method of aligning one type of drift meter.

(7) Demonstrate or explain a method of aligning an astrocompass or periscopic sextant.

63xA.e Flight Test

For the flight test, in the order the numbered items on the examination check sheet, an applicant will be required to:

(1) Demonstrate his ability to read weather symbols and interpret synoptic surface and upper air weather maps with particular emphasis being placed on winds.

(2) Prepare a flight plan by zones from the forecast winds or pressure data of an upper air chart and the operator's data.

(3) Compute from the operator's data the predicted fuel consumption for each zone of the flight, including the alternate.

(4) Determine the point of no return for the flight with all engines running and the equitime point with one engine inoperative. Graphical methods which are part of the company's operations manual may be used for these computations.

(5) Prepare a cruise control (howgozit) chart from the operator's data.

(6) Enter actual fuel consumed on the cruise control chart and interpret the variations of the actual curve from the predicted curve.

(7) Check the presence on board and operating condition of all navigation equipment. Normally a check list will be used. This check will include a time tick or chronometer comparison. Any lack of thoroughness during this check will justify this item being graded unsatisfactory.

(8) Locate emergency equipment, such as the nearest fire extinguisher, life preserver, life rafts, exits, axe, first aid kits, etc.

(9) Recite the navigator's duties and stations during emergencies for the type of aircraft used for the test.

(10) Demonstrate the proper use of a flux gate compass or gyrosyn compass (when available), with special emphasis on the caging methods and the location of switches, circuit breakers, and fuses. If these compasses are not part of the aircraft's equipment, an oral examination will be given.

(11) Be accurate and use good judgment when setting and altering headings. Erroneous application of variation, deviation, or drift correction, or incorrect measurement of course on the chart will be graded as unsatisfactory.

(12) Demonstrate or explain the use of characteristics of various chart projections used in long range air navigation, including the plotting of courses and bearings, and the measuring of distances.

(13) Demonstrate ability to identify designated landmarks by the use of a sectional or WAC chart.

(14) Use a computer with facility and accuracy for the computation of winds, drift correction and drift angles, ground speeds, ETAs, fuel loads, etc.

(15) Determine track, ground speed, and wind by the double drift method. When a drift meter is not part of the aircraft's equipment, an oral examination on the use of the drift meter and a double drift problem shall be completed.

(16) Determine ground speed and wind by the timing method with a drift meter. When a drift meter is not of the aircraft's equipment, an oral examination on the procedure and a problem shall be completed.

(17) Demonstrate the use of air plot for determining wind between fixes and for plotting pressure lines of position when using pressure and absolute altimeter comparisons.

(18) Give ETAs to well defined check points at least once each hour after the second hour of flight. The average error shall not be more than 5 percent of the intervening time intervals, and the maximum error of any one ETA shall not be more than 10 percent.

(19) Demonstrate knowledge and use of D/F equipment and radio facility information. Grading on this item will be based largely on the applicant's selection of those radio aids which will be of most value to his navigation, the manner with which he uses equipment, including filter box controls, and the precision with which he reads bearings. The aircraft's compass heading and all compass corrections must be considered for each bearing.

(20) Use care in tuning to radio stations to insure maximum reception of signal and check for interference signals. Receiver will be checked to ascertain that antenna and BFO (Voice/CW) switches are in correct positions.

(21) Identify at least three radio stations using International Morse code only for identification. The agent or examiner will tune in to these stations so that the applicant will have no knowledge of the direction, distance, or frequency of the stations.

(22) Take at least one radio bearing by manual use of the loop. The agent or examiner will check the applicant's bearing by taking a manual bearing on the same station immediately after the applicant.

(23) Show the use of good judgment in evaluating radio bearings, and explain why certain bearings may be of doubtful value.

(24) Determine and apply correctly the correction required to be made to radio bearings before plotting them on a Mercator chart, and demonstrate the ability to plot bearings accurately on charts of the Mercator and Lambert conformal projections.

(25) Compute the compass heading, ETA, and fuel remaining if it is assumed that the flight would be diverted to an alternate airport at a time specified by the agent or examiner.

(26) Check the counter scales of a Loran receiver for accuracy, and explain the basic (face) adjustments which affect tuning and counter alignment. A guide sheet may be used for this test.

(27) Demonstrate knowledge of the basic principle of Loran and the ability to tune a Loran receiver, to match signals, to read time differences, to plot Loran LOPs, and to identify and use sky waves.

(28) Take and plot bearings from a consol station and explain the precautions which must be taken when tuning a radio receiver for consol signals. Also, discuss those conditions which affect the reliability of consol bearings.

(29) Demonstrate the ability to properly operate and read an absolute altimeter.

(30) Determine the "D" factors for a series of compared readings of an absolute altimeter and a pressure altimeter.

(31) Determine drift angle or lateral displacement from the true headingline by application of Bellamy's formula or a variation thereof.

(32) Interpret the altimeter comparison data with respect to the pressure system found at flight level. From this data evaluate the accuracy of the prognostic weather map used for flight planning and apply this analysis to the navigation of the flight.

(33) Interpret single LOPs for most probable position, and show how a series of single LOPs of the same body may be used to indicate the probable track and ground speed. Also show how a series of single LOPs (celestial or radio) from the same celestial body or radio station may be used to determine position when the change of azimuth or bearing is 30° or more between observations.

(34) Select one of the celestial LOPs used during the flight and explain how to make a single line of position approach to a point selected by the agent or examine, giving headings, times and ETAs.

(35) Demonstrate the proper use of an astrocompass or periscopic sextant for taking bearings.

(36) Determine compass deviation as soon as possible after reaching cruising altitude and whenever there is a change of compass heading of 15° or more.

(37) Take celestial fixes at hourly intervals when conditions permit. The accuracy of these fixes shall be checked by means of a Loran, radio, or visual fix whenever practicable. After allowing for the probable error of a Loran, radio, or visual fix, a celestial fix under favorable conditions should plot within 10 miles of the actual position.

(38) Select celestial bodies for observation, when possible, whose azimuths will differ by approximately 120° for a 3 body fix and will differ by approximately 90° for a 2 body fix. The altitudes of the selected bodies should be between 25° and 75° whenever practicable.

(39) Have POMAR and any other required reports ready for transmission at time of schedule, and be able to inform the pilot in command promptly with regard to the aircraft's position and progress in comparison with the flight plan.

(40) Keep a log with sufficient legible entries to provide a record from which the flight could be retracted.

(41) Note significant weather changes which might influence the drift or ground speed of the aircraft, such as, temperature, "D" factors, frontal conditions, turbulence, etc.

(42) Determine the wind between fixes as a regular practice.

(43) Estimate the time required and average ground speed during a letdown, under conditions specified by the pilot in command.

(44) Work with sufficient speed to determine the aircraft's position hourly by celestial means and also make all other observations and records pertinent to the navigation. The applicant should be able to take the observation, compute, and plot a celestial LOP within a time limit of 8 minutes, take and plot a Loran LOP within a time limit of 3 minutes for ground waves and 4 minutes for sky waves; observe the absolute and pressure altimeters and compute the drift or lateral displacement within a time limit of 3 minutes.

(45) Be accurate in reading instruments and making computations. Errors which are made and corrected without affecting the navigation will be disregarded unless they cause considerable loss of time. An uncorrected error in computation (including reading instruments and books) which will affect the reported position more than 25 miles, the heading more than 3°, or any ETA more than 15 minutes will cause this item to be graded unsatisfactory.

(46) Be alert to changing weather or other conditions during flight which might affect the navigation. An applicant should not fail to take celestial observations just prior to encountering a broken or overcast sky condition, and he should not fail to take a bearing on a radio station, which operates at scheduled intervals and which would be a valuable aid to the navigation.

(47) Show a logical choice and sequence in using the various navigation methods according to time and accuracy, and check the positions determined by one method against positions determined by other methods.

(48) Use a logical sequence in performing the various duties of a navigator and plan work according to a schedule. The more important duties should not be neglected for others of less importance.

APPENDIX B FLIGHT NAVIGATOR TRAINING COURSE REQUIREMENTS

63xB.a Training course outline

(1) Format. The ground course outline and the flight course outline shall be combined in one loose leaf binder and shall include a table of contents, divided into two parts - ground course and flight course. Each part of the table of contents must contain a list of the major subjects, together with hours allotted to each subject and the total classroom and flight hours.

(2) Ground course outline;

(i) It is not mandatory that a course outline have the subject headings arranged exactly as listed in this paragraph. Any arrangement of general headings and subheadings will be satisfactory provided all the subject material listed here is included and the acceptable minimum number of hours is assigned to each subject. Each general subject shall be broken down into detail showing items to be covered.

(ii) If any agency desires to include additional subjects in the ground training curriculum, such as international law, flight hygiene, or others which are not required, the hours allotted these additional subjects may not be included in the minimum classroom hours.

(iii) The following subjects with classroom hours are considered the minimum coverage for a ground training course for flight navigators:

Subjects	Classroom Hours
DGCA	5
To include CASR Parts 63, 91, and 121	
Meteorology	40
To Include:	
Basic weather principles	
Temperature	
Pressure	
Winds	
Moisture in the atmosphere	
Stability	
Clouds	
Hazards	
Air Masses	
Front weather	
Fog	
Thunderstorms	
Icing	
World weather and climate.	
Forecasting	
International Morse Code:	
Ability to receive code groups of letters and numerals at a speed of eight words per minute.	
Navigation instruments (exclusive of radio and radar)	20
To include:	
Compasses	

Pressure altimeters	
Airspeed indicators	
Driftmeters	
Bearing indicators	
Aircraft octants	
Instrument calibration and alignment.	
Charts and Pilotage	15
To include:	
Chart projections	
Chart symbols	
Principles of pilotage.	
Dead reckoning	30
To include:	
Air plot	
Ground plot	
Calculation of ETA	
Vector analysis	
Use of computer	
Search.	
Absolute altimeter with:	
Applications	15
To include:	
Principles of constructions	
Operating instructions	
Use of Bellamy's formula	
Flight planning with single drift correction.	
Radio and long-range navigational aids	35
To include:	
Principles of radio transmission and receptions	
Radio aids to navigation	
Government publications	
Airborne D/F equipment	
Quadrantal correction	
Plotting radio bearings	
ICAO Q code for direction finding	
Loran	
Consol.	
Celestial navigation	150
To include:	
The solar system	
The celestial sphere	
The astronomical triangle	
Theory of lines of position	
Use of the Air Almanac	
Time and its applications	
Navigation tables	
Precomputation	
Celestial line of position approach	
Star identification	
Corrections to celestial observations.	
Flight planning and cruise control	25
To include:	
The flight plan	

Fuel consumption charts	
Methods of cruise control	
Flight progress chart	
Point-of-no-return	
Equitime point.	
Long-range flight problems	15
Total (exclusive of final examinations)	350

(3) Flight course outline

(i) A minimum of 150 hours of supervised flight training shall be given, of which at least 50 hours of flight training must be given at night, and celestial navigation must be used during flights which total at least 125 hours.

(ii) A maximum of 50 hours of the required flight training may be obtained in acceptable types of synthetic flight navigator training devices.

(iii) Flights should be at least four hours in length and should be conducted off civil airways. Some training on long-range flights is desirable, but is not required. There is no limit to the number of students that may be trained on one flight, but at least one astrodorme or one periscopic sextant mounting must be provided for each group of four students.

(iv) Training must be given in dead reckoning, pilotage, radio navigation, celestial navigation, and the use of the absolute altimeter.

63xB.b Equipment

(1) Classroom equipment shall include one table at least 24 inch X 32 inch in dimensions for each student.

(2) Aircraft suitable for the flight training must be available to the approved Course operator to insure that the flight training may be completed without undue delay.

The approved course operator may contract or obtain written agreements with aircraft operators for the use of suitable aircraft. A copy of the contract or written agreement with an aircraft operator shall be attached to each of the three copies of the course outline submitted for approval. In all cases, the approved course operator is responsible for the nature and quality of instruction given during flight.

63xB.c Instructors

(1) Sufficient classroom instructors must be available to prevent an excessive ratio of students to instructors. Any ratio in excess of 20 to 1 will be considered unsatisfactory.

(2) At least one ground instructor must hold a valid flight navigator certificate, and be utilized to coordinate instruction of ground school subjects.

(3) Each instructor who conducts flight training must hold a valid flight navigator certificate.

63xB.d Revision of Training Course

(1) Requests for revisions to course outlines, facilities, and equipment shall follow procedures for original approval of the course. Revisions should be submitted in

such form that an entire page or pages of the approved outline can be removed and replaced by the revisions.

(2) The list of instructors may be revised at any time without request for approval, provided the minimum requirement of paragraph **63xB.e** of this section is maintained.

63xB.e Credit for Previous Training and Experience

(1) Credit may be granted by an operator to students for previous training and experience which is provable and comparable to portions of the approved curriculum. When granting such credit, the approved course operator should be fully cognizant of the fact that it is responsible for the proficiency of it graduates in accordance with paragraph **63xB.b (3) (i)**.

(2) Where advanced credit is allowed, the operator shall evaluate the student's previous training and experience in accordance with the normal practices of accredited technical schools. Before credit is given for any ground school subject or portion thereof, the student must pass an appropriate examination given by the operator. The results of the examination, the basis for credit allowance, and the hours credited shall be incorporated as a part of the student's records.

(3) Credit up to a maximum of 50 hours towards the flight training requirement may be given to pilots who have logged at least 500 hours while a member of a flight crew which required a certificated flight navigator or the Armed Forces equivalent. A similar credit may also be given to a licensed deck officer of the Maritime Service who has served as such for at least one year on ocean-going vessels. One-half of the flight time credited under the terms of this paragraph may be applied toward the 50 hours of flight training required at night.

63xB.f Students Records and Reports

Approval of a course shall not be continued in effect unless the course operator keeps an accurate record of each student, including a chronological log of all instruction, subjects covered and course examinations and grades, and unless he prepares and transmits to the DGCA not later than January 31 of each year, a report containing the following information for the previous calendar year.

(1) The names of all students graduated, together with their school grades for ground and flight subjects.

(2) The names of all students failed or dropped, together with their school grades and reasons for dropping.

63xB.g Quality of instruction.

Approval of a course shall not be continued in effect unless at least 80 percent of the students who apply within 90 days graduation are to qualify on the first attempt for licensing as flight navigators.

63xB.h Statement of graduation.

Each student who successfully completes an approved flight navigator course shall be given a statement of graduation.

63xB.i Inspections

Approved course operations will be inspected by authorized representatives of the Director as often as demand necessitates insuring that instruction is maintained at the required standards, but the period between inspections shall not exceed 12 calendar months.

63xB.j Change of ownership, name, or location

(1) Change of ownership. Approval of a flight navigator course shall not be continued in effect after the course has changed ownership. The new owner must obtain a new approval by following the procedure prescribed for original approval.

(2) Change in name. An approved course changed in name but not changed in ownership shall remain valid if the change is reported by the approved course operator to the DGCA. A letter of approval under the new name will be issued by the DGCA.

(3) Change in location. An approved course shall remain in effect even though the approved course operator changes location if the change is reported without delay by the operator to the DGCA which will inspect the facilities to be used. If they are found to be adequate, a letter of approval showing the new location will be issued by the DGCA.

63xB.k Cancellation of approval

(1) Failure to meet or maintain any of the requirements set forth in this Part for the approval or operation of an approved flight navigator course shall be considered sufficient reason for cancellation of the approval.

(2) If an operator should desire voluntary cancellation of his approved course, he should submit the effective letter of approval and a written request for cancellation to the Director.

63xB.l Duration

The authority to operate an approved flight navigator course shall expire 24 calendar months after the last day of the month of issuance.

63xB.m Renewal

Application for renewal of authority to operate an approved flight navigator course may be made by letter to the DGCA at any time within 60 days before the expiration date. Renewal of the approval will depend upon the course operator meeting the current conditions for approval and having a satisfactory record as an operator.

APPENDIX C FLIGHT ENGINEER TRAINING COURSE REQUIREMENTS

63xC.a Training course outline

(1) Format. The ground course outline and the flight course outline are independent. Each must be contained in a loose-leaf binder to include a table of contents. If an applicant desires approval of both a ground school course and a flight school course, they must be combined in one loose-leaf binder that includes a separate table of contents for each course. Separate course outlines are required for each type of aircraft.

(2) Ground course outline.

(i) It is not mandatory that the subject headings be arranged exactly as listed in this paragraph. Any arrangement of subjects is satisfactory if all the subject material listed here is included and at least the minimum programmed hours are assigned to each subject. Each general subject must be broken down into detail showing the items to be covered.

(ii) If any course operator desires to include additional subjects in the ground course curriculum, such as international law, flight hygiene, or others that are not required, the hours allotted these additional subjects may not be included in the minimum programmed classroom hours.

(iii) The following subjects and classroom hours are the minimum programmed coverage for the initial approval of a ground training course for flight engineers. Subsequent to initial approval of a ground training course an applicant may apply to the Director for a reduction in the programmed hours. Approval of a reduction in the approved programmed hours is based on improved training effectiveness due to improvements in methods, training aids, quality of instruction, or any combination thereof.

Subject	Classroom hours
Federal Aviation Regulations To include the regulations of this chapter that apply to flight engineers	10
Theory of Flight and Aerodynamics	10
Aircraft Familiarization To include as appropriate: Specifications. Construction features. Flight controls. Hydraulic systems. Pneumatic systems. Electrical systems. Anti-icing and de-icing systems. Pressurization and air-conditioning systems. Vacuum systems. Pilot static systems. Instrument systems. Fuel and oil systems. Emergency equipment.	90

Engine Familiarization 45
To include as appropriate:
Specifications.
Construction features.
Lubrication.
Ignition.
Carburetor and induction, supercharging and fuel control systems
Accessories.
Propellers.
Instrumentation.
Emergency equipment.

Normal Operations (Ground and Flight) 50
To include as appropriate:
Servicing methods and procedures.
Operation of all the aircraft systems.
Operation of all the engine systems.
Loading and center of gravity computations.
Cruise control (normal, long range, maximum endurance)
Power and fuel computation.
Meteorology as applicable to engine operation

Emergency Operations 80
To include as appropriate:
Landing gear, brakes, flaps, speed brakes, and leading edge devices
Pressurization and air-conditioning.
Portable fire extinguishers.
Fuselage fire and smoke control.
Loss of electrical power.
Engine fire control.
Engine shut-down and restart.
Oxygen.
Total (exclusive of final tests) 235

The above subjects, except Theory of Flight and Aerodynamics, and Regulations must apply to the same type of aircraft in which the student flight engineer is to receive flight training.

(3) Flight Course Outline.

(i) The flight training curriculum must include at least 10 hours of flight instruction in an aircraft specified in §63.37(a). The flight time required for the practical test may not be credited as part of the required flight instruction.

(ii) All of the flight training must be given in the same type aircraft.

(iii) As appropriate to the aircraft type, the following subjects must be taught in the flight training course:

SUBJECT

NORMAL DUTIES, PROCEDURES AND OPERATIONS

To include as appropriate:

Aircraft preflight.
Engine starting, power checks, pretakeoff, postlanding and shut-down procedures.
Power control.
Temperature control.
Engine operation analysis.
Operation of all systems.
Fuel management.
Logbook entries.
Pressurization and air conditioning.

RECOGNITION AND CORRECTION OF IN-FLIGHT MALFUNCTIONS

To include:

Analysis of abnormal engine operation.
Analysis of abnormal operation of all systems.
Corrective action.

EMERGENCY OPERATIONS IN FLIGHT

To include as appropriate:

Engine fire control.
Fuselage fire control.
Smoke control.
Loss of power or pressure in each system.
Engine overspeed.
Fuel dumping.
Landing gear, spoilers, speed brakes, and flap extension and retraction.
Engine shut-down and restart.
Use of oxygen.

(iv) If the Director finds a simulator or flight engineer training device to accurately reproduce the design, function, and control characteristics, as pertaining to the duties and responsibilities of a flight engineer on the type of aircraft to be flown, the flight training time may be reduced by a ratio of 1 hour of flight time to 2 hours of aircraft simulator time, or 3 hours of flight engineer training device time, as the case may be, subject to the following limitations:

(*a*) Except as provided in subdivision (*b*) of this paragraph, the required flight instruction time in an aircraft may not be less than 5 hours.

(*b*) As to a flight engineer student holding at least a commercial pilot licence with an instrument rating, aircraft simulator or a combination of aircraft simulator and flight engineer training device time may be submitted for up to all 10 hours of the required flight instruction time in an aircraft. However, not more than 15 hours of flight engineer training device time may be substituted for flight instruction time.

(v) To obtain credit for flight training time, aircraft simulator time, or flight engineer training device time, the student must occupy the flight engineer station and operate the controls.

63xC.b Classroom Equipment

Classroom equipment should consist of systems and procedural training devices, satisfactory to the Director, that duplicate the operation of the systems of the aircraft in which the student is to receive his flight training.

63xC.c Contracts or Agreements

(1) An approved flight engineer course operator may contract with other persons to obtain suitable aircraft, aircraft simulators, or other training devices or equipment.

(2) An operator who is approved to conduct both the flight engineer ground course and the flight engineer flight course may contract with others to conduct one course or the other in its entirety but may not contract with others to conduct both courses for the same aircraft type.

(3) An operator who has approval to conduct a flight engineer ground course or flight course for a type of aircraft, but not both courses, may not contract with another person to conduct that course in whole or in part.

(4) An operator who contracts with another to conduct a flight engineer course may not authorize or permit the course to be conducted in whole or in part by a third person.

(5) In all cases, the course operator who is approved to operate the course is responsible for the nature and quality of the instruction given.

(6) A copy of each contract authorized under this paragraph must be attached to each of the 3 copies of the course outline submitted for approval.

63xC.d Instructors

(1) Only licensed flight engineers may give the flight instruction required by this appendix in an aircraft, simulator, or flight engineer training device.

(2) There must be a sufficient number of qualified instructors available to prevent an excess ratio of students to instructors.

63xC.e Revisions

(1) Requests for revisions of the course outlines, facilities or equipment must follow the procedures for original approval of the course. Revisions must be submitted in such form that an entire page or pages of the approved outline can be removed and replaced by the revisions.

(2) The list of instructors may be revised at any time without request for approval, if the requirements of paragraph **63xC.d** of this appendix are maintained.

63xC.f Ground School Credits

(1) Credit may be granted a student in the ground school course by the course operator for comparable previous training or experience that the student can show by written evidence: however, the course operator must still meet the quality of instruction as described in paragraph **63xC.h** of this appendix.

(2) Before credit for previous training or experience may be given, the student must pass a test given by the course operator on the subject for which the credit is to be given. The course operator shall incorporate results of the test, the basis for credit allowance, and the hours credited as part of the student's records.

63xC.g Records and Rreports

(1) The course operator must maintain, for at least two years after a student graduates, fails, or drops from a course, a record of the student's training, including a chronological log of the subject course, attendance examinations, and grades.

(2) Except as provided in paragraph (3) of this section, the course operator must submit to the Director, not later than January 31 of each year, a report for the previous calendar year's training, to include:

(i) Name, enrollment and graduation date of each student;

(ii) Ground school hours and grades of each student;

(iii) Flight, aircraft simulator, flight engineer training device hours, and grades of each student; and

(iv) Names of students failed or dropped, together with their school grades and reasons for dropping.

(3) Upon request, the Director may waive the reporting requirements of paragraph (2) of this section for an approved flight engineer course that is part of an approved training course under subpart N of part 121 of this chapter.

63xC.h Quality of Instruction

(1) Approval of a ground course is discontinued whenever less than 80 percent of the students pass the FAA written test on the first attempt.

(2) Approval of a flight course is discontinued whenever less than 80 percent of the students pass the FAA practical test on the first attempt.

(3) Notwithstanding paragraphs (1) and (2) of this section, approval of a ground or flight course may be continued when the Director finds --

(i) That the failure rate was based on less than a representative number of students; or

(ii) That the course operator has taken satisfactory means to improve the effectiveness of the training.

63xC.i Time Limitation

Each student must apply for the written test and the flight test within 90 days after completing the ground school course.

63xC.j Statement of Course Completion

(1) The course operator shall give to each student who successfully completes an approved flight engineer ground school training course, and passes the FAA written test, a statement of successful completion of the course that indicates the date of training, the type of aircraft on which the ground course training was based, and the number of hours received in the ground school course.

(2) The course operator shall give each student who successfully completes an approved flight engineer flight course, and passed the FAA practical test, a statement of successful completion of the flight course that indicates the dates of the training, the type of aircraft used in the flight course, and the number of hours received in the flight course.

(3) A course operator who is approved to conduct both the ground course and the flight course may include both courses in a single statement of course completion if the provisions of paragraphs (1) and (2) of this section are included.

(4) The requirements of this paragraph do not apply to an air carrier or commercial operator with an approved training course under part 121 of this chapter providing the student receives a flight engineer licence upon completion of that course.

63xC.k Inspections

Each course operator shall allow the Director at any time or place, to make any inspection necessary to ensure that the quality and effectiveness of the instruction are maintained at the required standards.

63xC.l Change of Ownership, Name, or Location

(1) Approval of a flight engineer ground course or flight course is discontinued if the ownership of the course changes. The new owner must obtain a new approval by following the procedure prescribed for original approval.

(2) Approval of a flight engineer ground course or flight course does not terminate upon a change in the name of the course that is reported to the Director within 30 days. The Director issues a new letter of approval, using the new name, upon receipt of notice within that time.

(3) Approval of a flight engineer ground course or flight course does not terminate upon a change in location of the course that is reported to the Director within 30 days. The Director issues a new letter of approval, showing the new location, upon receipt of notice within that time, if he finds the new facilities to be adequate.

63xC.m Cancellation of Approval

(1) Failure to meet or maintain any of the requirements of this appendix for the approval of a flight engineer ground course or flight course is reason for cancellation of the approval.

(2) If a course operator desires to voluntarily terminate the course, he should notify the Director in writing and return the last letter of approval.

63xC.n Duration

Except for a course operated as part of an approved training course under subpart N of part 121 of this chapter, the approval to operate a flight engineer ground course or flight course terminates 24 months after the last day of the month of issue.

63xC.o Renewal

(1) Renewal of approval to operate a flight engineer ground course or flight course is conditioned upon the course operator's meeting the requirements of this appendix.

(2) Application for renewal may be made to the Director at any time after 60 days before the termination date.

63xC.p Course Operator Approvals

An applicant for approval of a flight engineer ground course, or flight course, or both, must meet all of the requirements of this appendix concerning application, approval, and continuing approval of that course or courses.

APPENDIX D FLIGHT OPERATIONS OFFICERS OVERVIEW

This appendix sets forth the areas of knowledge necessary to perform dispatcher functions. The items listed below indicate the minimum set of topics that must be covered in a training course for flight operations officer licensing. The order of coverage is at the discretion of the approved school.

63xD.a Regulations

A. Subpart D of this part;

B. Parts 1, 25, 61, 71, 91, 121, 139, and 175, of CASR;

C. ICAO Annexes applicable to duties and responsibilities of FOO;

D. General Operating Manual.

63xD.b Meteorology

A. Basic Weather Studies
   (1) The earth's motion and its effects on weather.
   (2) Analysis of the following regional weather types, characteristics, and structures, or combinations thereof:
      (a) Maritime.
      (b) Continental.
      (c) Polar.
      (d) Tropical.
   (3) Analysis of the following local weather types, characteristics, and structures or combinations thereof:
      (a) Coastal.
      (b) Mountainous.
      (c) Island.
      (d) Plains.
   (4) The following characteristics of the atmosphere:
      (a) Layers.
      (b) Composition.
      (c) Global Wind Patterns.
      (d) Ozone.
   (5) Pressure:
      (a) Units of Measure.
      (b) Weather Systems Characteristics.
      (c) Temperature Effects on Pressure.
      (d) Altimeters.
      (e) Pressure Gradient Force.
      (f) Pressure Pattern Flying Weather.
   (6) Wind:
      (a) Major Wind Systems and Coriolis Force.
      (b) Jetstreams and their Characteristics.
      (c) Local Wind and Related Terms.
   (7) States of Matter:
      (a) Solids, Liquid, and Gases.
      (b) Causes of change of state.
   (8) Clouds:

(a) Composition, Formation, and Dissipation.
(b) Types and Associated Precipitation.
(c) Use of Cloud Knowledge in Forecasting.

(9) Fog:
(a) Causes, Formation, and Dissipation.
(b) Types.

(10) Ice:
(a) Causes, Formation, and Dissipation.
(b) Types.

(11) Stability/Instability:
(a) Temperature Lapse Rate, Convection.
(b) Adiabatic Processes.
(c) Lifting Processes.
(d) Divergence.
(e) Convergence.

(12) Turbulence:
(a) Jetstream Associated.
(b) Pressure Pattern Recognition.
(c) Low Level Windshear.
(d) Mountain Waves.
(e) Thunderstorms.
(f) Clear Air Turbulence.

(13) Airmasses:
(a) Classification and Characteristics.
(b) Source Regions.
(c) Use of Airmass Knowledge in Forecasting.

(14) Fronts:
(a) Structure and Characteristics, Both Vertical and Horizontal.
(b) Frontal Types.
(c) Frontal Weather Flying.

(15) Theory of Storm Systems:
(a) Thunderstorms.
(b) Tornadoes.
(c) Hurricanes and Typhoons.
(d) Microbursts.
(e) Causes, Formation, and Dissipation.

B. Weather, Analysis, and Forecasts

(1) Observations:
(a) Surface Observations.
(i) Observations made by certified weather observer.
(ii) Automated Weather Observations.
(b) Terminal Forecasts.
(c) Significant En route Reports and Forecasts.
(i) Pilot Reports.
(ii) Area Forecasts.
(iii) Sigmets, Airmets.
(iv) Center Weather Advisories.
(d) Weather Imagery.
(i) Surface Analysis.
(ii) Weather Depiction.
(iii) Significant Weather Prognosis.
(iv) Winds and Temperature Aloft.

(v) Tropopause Chart.
(vi) Composite Moisture Stability Chart.
(vii) Surface Weather Prognostic Chart.
(viii) Radar Meteorology.
(ix) Satellite Meteorology.
(x) Other charts as applicable.

(e) Meteorological Information Data Collection Systems.

(2) Data Collection, Analysis, and Forecast Facilities.
(3) Service Outlets Providing Aviation Weather Products.

C. Weather Related Aircraft Hazards
(1) Crosswinds and Gusts.
(2) Contaminated Runways.
(3) Restrictions to Surface Visibility.
(4) Turbulence and Windshear.
(5) Icing.
(6) Thunderstorms and Microburst.
(7) Volcanic Ash.

63xD.c Navigation

A. Study of the Earth
(1) Time reference and location (0 Longitude, UTC).
(2) Definitions.
(3) Projections.
(4) Charts.

B. Chart Reading, Application, and Use.

C. National Airspace Plan.

D. Navigation Systems.

E. Airborne Navigation Instruments.

F. Instrument Approach Procedures.
(1) Transition Procedures.
(2) Precision Approach Procedures.
(3) Non-precision Approach Procedures.
(4) Minimums and the relationship to weather.

G. Special Navigation and Operations.
(1) North Atlantic.
(2) Pacific.
(3) Global Differences.

63xD.d Aircraft

A. Aircraft Flight Manual.

B. Systems Overview.
(1) Flight controls.
(2) Hydraulics.
(3) Electrical.
(4) Air Conditioning and Pressurization.
(5) Ice and Rain protection.

(6) Avionics, Communication, and Navigation.
(7) Powerplants and Auxiliary Power Units.
(8) Emergency and Abnormal Procedures.
(9) Fuel Systems and Sources.

C. Minimum Equipment List/Configuration Deviation List (MEL/CDL) and Applications.

D. Performance.
(1) Aircraft in general.
(2) Principles of flight:
(a) Group one aircraft.
(b) Group two aircraft.
(3) Aircraft Limitations.
(4) Weight and Balance.
(5) Flight instrument errors.
(6) Aircraft performance:
(a) Take-off performance.
(b) En route performance.
(c) Landing performance.

63xD.e Communications

A. Regulatory requirements.

B. Communication Protocol.

C. Voice and Data Communications.

D. Notice to Airmen (NOTAMS).

E. Aeronautical Publications.

F. Abnormal Procedures.

63xD.f Air Traffic Control

A. Responsibilities.

B. Facilities and Equipment.

C. Airspace classification and route structure.

D. Flight Plans.
(1) Domestic.
(2) International.

E. Separation Minimums.

F. Priority Handling.

G. Holding Procedures.

H. Traffic Management.

63xD.g Emergency and Abnormal Procedures

A. Security measures on the ground.

B. Security measures in the air.

C. FAA responsibility and services.

D. Collection and dissemination of information on overdue or missing aircraft.

E. Means of declaring an emergency.

F. Responsibility for declaring an emergency.

G. Required reporting of an emergency.

H. NTSB reporting requirements.

63xD.h Practical Dispatch Applications

A. Human Factors.
   (1) Decisionmaking:
      (a) Situation Assessment.
      (b) Generation and Evaluation of Alternatives.
         (i) Tradeoffs and Prioritization.
         (ii) Contingency Planning.
      (c) Support Tools and Technologies.
   (2) Human Error:
      (a) Causes.
         (i) Individual and Organizational Factors.
         (ii) Technology-Induced Error.
      (b) Prevention.
      (c) Detection and Recovery.
   (3) Teamwork:
      (a) Communication and Information Exchange.
      (b) Cooperative and Distributed Problem-Solving.
      (c) Resource Management.
         (i) Air Traffic Control (ATC) activities and workload.
         (ii) Flightcrew activities and workload.
         (iii) Maintenance activities and workload.
         (iv) Operations Control Staff activities and workload.

B. Applied Dispatching.
   (1) Briefing techniques, Dispatcher, Pilot.
   (2) Preflight:
      (a) Safety.
      (b) Weather Analysis.
         (i) Satellite imagery.
         (ii) Upper and lower altitude charts.
         (iii) Significant en route reports and forecasts.
         (iv) Surface charts.
         (v) Surface observations.
         (vi) Terminal forecasts and orientation to Enhanced Weather Information System (EWINS).
      (c) NOTAMS and airport conditions.
      (d) Crew.
         (i) Qualifications.
         (ii) Limitations.
      (e) Aircraft.
         (i) Systems.
         (ii) Navigation instruments and avionics systems.
         (iii) Flight instruments.

(iv) Operations manuals and MEL/CDL.
(v) Performance and limitations.
(f) Flight Planning.
(i) Route of flight.
1. Standard Instrument Departures and Standard Terminal Arrival Routes.
2. En route charts.
3. Operational altitude.
4. Departure and arrival charts.
(ii) Minimum departure fuel.
1. Climb.
2. Cruise.
3. Descent.
(g) Weight and balance.
(h) Economics of flight overview (Performance, Fuel Tankering).
(i) Decision to operate the flight.
(j) ATC flight plan filing.
(k) Flight documentation.
(i) Flight plan.
(ii) Dispatch release.
(3) Authorize flight departure with concurrence of pilot in command.
(4) In-flight operational control:
(a) Current situational awareness.
(b) Information exchange.
(c) Amend original flight release as required.
(5) Post-Flight:
(a) Arrival verification.
(b) Weather debrief.
(c) Flight irregularity reports as required.

APPENDIX E FLIGHT ATTENDANT OVERVIEW

This appendix sets forth the areas of knowledge necessary to perform flight attendant functions. The items listed below indicate the minimum set of topics that must be covered in a training course for flight attendant certification. The order of coverage is at the discretion of the approved school.

63xE.a Regulations

A. Subpart E of this Part;

B. CASR Parts 1, 92, 121, and 135;

C. General Operating Manual.

63xE.b Knowledge Requirements

Person who applies for a flight attendant certificate must pass a knowledge test on the following aeronautical knowledge areas as required in paragraph (A) and (B) below:

A. General Subjects

(1) Basic Aviation Knowledge;

(2) The authority of the pilot in command, and succession of command;

(3) Relevant Safety and Security Regulations;

(4) Passenger handling, including under age children;

(5) Approved crew resource management training;

(6) Company policy manuals relating to the duties of a flight attendant;

(7) Customs and immigrations procedures;

(8) Passenger briefing; and

(9) Passenger cabin preparation and securing.

B. For each airplane type

(1) A general description of the aircraft emphasizing physical characteristics that may have a bearing on ditching, evacuation, and in-flight emergency procedures and on other related duties;

(2) The use of both the public address system and the means of communicating with other flight crewmembers; and

(3) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.

C. For emergency or security equipment and procedures:

(1) Location and operation of all aircraft exits, including normal, alternate and emergency modes of operation;

(2) Location and use of all emergency equipment on board each aircraft;

(3) Normal and alternate means of communication and communication procedures for normal, emergency and security situations;

(4) Alternate duties in the event of the incapacitation of other crew members;

(5) Passenger emergency briefings and aural commands;

(6) Armed intervention or unruly passengers;

(7) Cabin and passenger preparation for emergency landing, ditching and evacuation; and

(8) Medical emergencies on board including administering oxygen.

D. Each training program must provide the emergency training set forth in this Section with respect to each airplane type, model, and configuration, each required crewmember, and each kind of operation conducted. Insofar as appropriate for each crewmember and the certificate holder. Emergency training must provide the following:

(1) Instruction in emergency assignments and procedures, including coordination among crewmembers;

(2) Individual instruction in the location function and operation of emergency equipment including:

(i) Equipment used in ditching and evacuation;

(ii) First aid equipment and its proper use;

(iii) Portable fire extinguishers, with emphasis on type of extinguisher to be used on different classes of fires; and

(iv) Emergency exits in the emergency mode with the evacuation slide / raft pack attached (if applicable), with training emphasis on the operation of the exits under adverse conditions.

(3) Instruction in the handling of emergency situations including :

(i) Rapid decompression;

(ii) Fire in flight or on the surface, and smoke control procedures with emphasis on electrical equipment and related circuit breakers found in cabin areas including all galleys, service centers, lifts, lavatories, and movie screens;

(iii) Ditching and other evacuation, including the evacuation of persons and their attendants, if any, who may need the assistance of another person to move expeditiously to an exit in the event of an emergency;

(iv) Illness, injury, or other abnormal situations involving passengers or crewmembers to include familiarization with the emergency medical kit; and

(v) Hijacking and other unusual situations.

E. Crew resource management training in accordance with the following:

Initial training for all crewmembers shall cover the following subjects:

(1) Attitudes and behaviors;

(2) Communication skills;

(3) Problem solving;

(4) Human factors;

(5) Conflict resolution;

(6) Decision making;

(7) Team building and maintenance; and

(8) Workload management.

63xE.c Skill Requirements

A. An applicant for a flight attendant certificate with a type rating must pass a practical test on the duties of a flight attendant in the class of aircraft for which a rating is sought.

B. The applicant must-

(1) Show that he or she can satisfactorily perform preflight safety inspection

(2) In flight, show that he or she can satisfactorily perform the normal duties and procedures of a flight attendant relating to that aircraft.

(3) In flight, or in an approved flight attendant training devices, show that he or she can satisfactorily perform emergency duties and procedures and recognize and take appropriate action in emergency situations.

63xE.d Flight Attendant Operational Training

A. A flight attendant must perform the assigned duties of a flight attendant on board an aeroplane, while under the supervision of a flight attendant supervisor qualified on that aeroplane type, for minimum of 10 sectors.

B. Flight attendant operational training is not required for a flight attendant who has previously acquired such experience on any passenger-carrying aeroplane of the same group, if:

(1) That person has received with respect to that aircraft, the initial ground training;

(2) That person has for that type of aeroplane, successfully completed the competency check outlined in this Subpart.

C. Flight attendant operational training prescribed herein may be completed in a full-scale (except for length) cabin training device of the type aeroplane in which they are to serve, provided:

(1) The cabin training device has been approved by the Director; and

(2) Has successfully completed a competency check outlined in this Subpart.

APPENDIX F LANGUAGE PROFICIENCY RATING SCALE

LEVEL	PRONUNCIATION Assumes a dialect and/or accent intelligible to the aeronautical community	STRUCTURE Relevant grammatical structures and sentence patterns are determined by language functions appropriate to the task	VOCABULARY	FLUENCY	COMPREHENSION	INTERACTIONS
Expert 6	Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding	Both basic and complex grammatical structures and sentence patterns are consistently well controlled	Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.	Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.	Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.	Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues and responds to them appropriately
Extended 5	Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding	Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.	Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work-related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.	Able to speak at length with relative ease on familiar topics but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors	Comprehension is accurate on common, concrete, and work-related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers	Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship effectively
Operational 4	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.	Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.	Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work-related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances	Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting	Comprehension is mostly accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.	Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.
Pre-operational 3	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding	Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.	Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work-related topics, but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Comprehension is often accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events.	Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events
Elementary 2	Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or	Shows only limited control of a few simple memorized grammatical structures and	Limited vocabulary range consisting only of isolated words and memorized phrases	Can produce very short, isolated, memorized utterances with	Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.	Response time is slow and often inappropriate . Interaction is limited to simple

	regional variation and usually interfere with ease of understanding	sentence patterns		frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words		routine exchanges
Pre-elementary 1	Performs at a level below the Elementary level	Performs at a level below the Elementary level.	Performs at a level below the Elementary level	Performs at a level below the Elementary level	Performs at a level below the Elementary level	Performs at a level below the Elementary level

Note.

The Operational Level (Level 4) is the minimum required proficiency level for a radiotelephony communication. Levels 1 through 3 describe Pre-elementary, Elementary, and Preoperational levels of language proficiency, respectively, all of which describe a level of proficiency below the ICAO language proficiency requirement. Levels 5 and 6 describe Extended and Expert levels, at levels of proficiency more advanced than minimum required Standard. As a whole, the scale will serve as benchmarks for training and testing, and in assisting candidates to attain the ICAO Operational Level (Level 4)