

**SCHEDULE 3
IMPLEMENTING STANDARDS**

Regulation 16 (18) Airport Requirements

An applicant for, and holder of, an approved training organization certificate with Level 1 Flight Training Specifications shall show that the airport at which training flights originate has the following:

- (a) at least one runway or take-off area that allows training aircraft to make a normal take-off and landing at the aircraft's maximum certified take-off gross weight under the following conditions:
 - (i) wind not more than 5 knots;
 - (ii) temperatures equal to the mean high temperature for the hottest month of the year in the operating area;
 - (iii) if applicable, with the powerplant operation, and landing gear and flap operation recommended by the manufacturer; and
 - (iv) in the case of a take-off—
 - (A) with smooth transition from lift-off to the best rate of climb speed without exceptional piloting skills or techniques; and
 - (B) clearing all obstacles in the take-off flight path by at least 50 feet;
- (b) a wind direction indicator that is visible from the end of each runway at ground level;
- (c) a traffic direction indicator when—
 - (i) the airport does not have an operating control tower; and
 - (ii) traffic and wind advisories are not available;
- (d) except as provided in paragraph (e), permanent runway lights if that airport is to be used for night training flights; and
- (e) adequate non-permanent lighting or shoreline lighting for an airport or seaplane base for night training flights in seaplanes, if approved by the Authority.

Regulation 28(1)(a)(i): Private Pilot Licensing Course

The following curriculum meets the minimum curriculum standard for a private pilot licensing course:

(1) Ratings:

- (a) aeroplane single-engine;
- (b) aeroplane multiengine;
- (c) rotorcraft helicopter;
- (d) rotorcraft gyroplane;
- (e) powered-lift;
- (f) glider;
- (g) lighter-than-air airship; and
- (h) lighter-than-air balloon.

(2) Eligibility for enrolment: A person shall hold a student pilot licence prior to enrolling in the flight portion of the private pilot licensing course.

(3) Aeronautical knowledge training:

(a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each approved course includes at least the following hours of ground training on the following aeronautical knowledge areas, appropriate to the aircraft category and class rating—

- (i) 35 hours for an aeroplane, rotorcraft, or powered-lift category rating;
- (ii) 15 hours for a glider category rating;
- (iii) 10 hours for a lighter-than-air category with a balloon class rating; and
- (iv) 35 hours for a lighter-than-air category with an airship class rating; and

(b) ground training shall include the following aeronautical knowledge areas:

- (i) applicable Trinidad and Tobago regulations for private pilot privileges, limitations, and flight operations;
- (ii) accident reporting requirements of Trinidad and Tobago;
- (iii) applicable subjects of the Authority providing aeronautical information publications;
- (iv) aeronautical charts for visual flight rules navigation using pilotage, dead reckoning, and navigation systems;
- (v) radio communication procedures;
- (vi) recognition of critical weather situations from the ground and in flight, wind shear avoidance, and the procurement and use of aeronautical weather reports and forecasts;
- (vii) safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence;
- (viii) effects of density altitude on take-off and climb performance;
- (ix) weight and balance computations;
- (x) principles of aerodynamics, powerplants, and aircraft systems;
- (xi) if the training course is for an aeroplane category or glider category rating, stall awareness, spin entry, spins, and spin recovery techniques;
- (xii) aeronautical decision making and judgement; and
- (xiii) pre-flight action that includes:
 - (A) obtaining information on runway lengths, data on take-off and landing distances, weather reports and forecasts, and fuel requirements; and
 - (B) planning for alternatives if a planned flight cannot be completed or delays are encountered.

(4) Flight training:

(a) each applicant for, and holder of, an aviation training organization certificate with this training specification shall include at least the following hours of flight training on the areas of operation listed in paragraph (d), appropriate to the aircraft category and class rating:

- (i) 35 hours for an aeroplane, rotorcraft, powered-lift, or airship rating;
- (ii) 6 hours for a glider rating; and
- (iii) 8 hours for a balloon rating;

(b) each applicant for, and holder of, an aviation training organization certificate with this training specification shall include at least the following hours of flight training in each course:

(i) for each category and class, unless otherwise noted, 20 hours from a flight instructor on the applicable areas of operation that includes at least—

(A) 3 hours of cross-country flight training in the category and class involved;

(B) 3 hours of night flight training in the category and class involved that includes—

(I) one cross-country flight of more than 100 nautical miles total distance;
And

(II) 10 take-offs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern);

(C) 3 hours of instrument training in the category and class involved; and

(D) 3 hours in the category and class involved in preparation for the practical test within 60 days preceding the date of the test;

(c) specific training for other categories and classes as shown:

(i) for a rotorcraft helicopter and gyroplane course 3 hours of night flight training in a helicopter that includes one cross-country flight of more than 50 nautical miles total distance;

(ii) for a glider course: 4 hours from a flight instructor on the applicable areas of operation in paragraphs (d) and (e) that includes at least—

(A) five training flights in a glider on launch/tow procedures approved for the course and in the applicable areas of operation listed in paragraphs (d) and (e); and

(B) three training flights in a glider in preparation for the practical test within 60 days preceding the date of the test;

(iii) for a lighter-than-air airship course: 20 hours from a commercial pilot with an airship rating on the applicable areas of operation in paragraphs (d) and (e) that include at least—

(A) 3 hours cross country training in an airship;

(B) 3 hours of night flight training in an airship that includes—

(I) one cross-country flight over 25 nautical miles total distance; and

(II) five take-offs and five landings to a full stop (with each landing involving a flight in the traffic pattern);

(iv) for a lighter-than-air balloon course: 8 hours, including at least five flights, from a commercial pilot with a balloon rating on the applicable areas of operation in paragraphs (d) and (e), that includes—

(A) if the training is being performed in a gas balloon—

(I) two flights of 1 hour each;

(II) one flight involving a controlled ascent to 3,000 feet above the launch site; and

(III) two flights in preparation for the practical test within sixty days preceding the date of the test;

(B) if the training is being performed in a balloon with an airborne heater—

(I) two flights of 30 minutes each;

(II) one flight involving a controlled ascent to 2,000 feet above the launch site; and

(III) two flights in preparation for the practical test within 60 days preceding the date of the test;

(d) each approved course shall include flight training in the following areas of operation that are applicable to the aircraft category and class rating:

- (i) preflight preparation;
- (ii) preflight procedures;
- (iii) airport and seaplane base operations;
- (iv) take-offs, landings, and go-arounds;
- (v) performance manoeuvres;
- (vi) ground reference manoeuvres;
- (vii) navigation;
- (viii) slow flight and stalls;
- (ix) basic instrument manoeuvres;
- (x) emergency operations;
- (xi) night operations; and
- (xii) postflight procedures; and

(e) in addition, for the specific category and class of aircraft shown, each approved course shall include the applicable flight training in the following areas of operation:

- (i) for a multiengine aeroplane course: multiengine operations;
- (ii) for a rotorcraft helicopter course: hovering manoeuvres;
- (iii) for a rotorcraft gyroplane course: flight at slow airspeeds;
- (iv) for a powered-lift course: hovering manoeuvres;
- (v) for a glider course—
 - (A) launches/tows, as appropriate, and landings;
 - (B) performance speeds; and

(C) soaring techniques;

(vi) for a lighter-than-air balloon course launches and landings;

(5) Solo flight training— Each approved course shall include at least the following solo flight training:

(a) for an aeroplane single-engine course: 5 hours of solo flight training in a single-engine aeroplane on the applicable areas of operation paragraph (4)(d) that includes at least—

(i) one solo cross-country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the take-off and landing locations; and

(ii) three take-offs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower;

(b) for an aeroplane multiengine course: 5 hours of flight training in a multiengine aeroplane performing the functions of a pilot-in command while under the supervision of a flight instructor, the training shall consist of the applicable areas of operation in paragraph (4)(d) and include at least—

(i) one cross-country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the take-off and landing locations; and

(ii) three take-offs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower;

(c) for a rotorcraft helicopter course: 5 hours of solo flight training in a helicopter on the applicable areas of operation in paragraph (4)(d) that includes at least—

(i) one solo cross-country flight of more than 50 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles between the take-off and landing locations; and

(ii) three take-offs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower;

(d) for a rotorcraft gyroplane course: 5 hours of solo flight training in gyroplanes on the applicable areas of operation in paragraph (4)(d) that includes at least—

(i) one solo cross-country flight of more than 50 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles between the take-off and landing locations; and

(ii) three take-offs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower;

(e) for a powered-lift course: 5 hours of solo flight training in a poweredlift on the applicable areas of operation in paragraph (4)(d) that includes at least—

(i) one solo cross-country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the take-off and landing locations;

(ii) three take-offs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower; and

(iii) transition from hover to forward flight using wing lift;

- (f) for a glider course: two solo flights in a glider on the applicable areas of operation in paragraph (4)(d) and the launch and tow procedures appropriate for the approved course;
 - (g) for a lighter-than-air airship course: 5 hours of flight training in the applicable areas of operation shown in paragraph (4)(d) in an airship performing the functions of pilot-in-command while under the supervision of a commercial pilot with an airship rating; and
 - (h) for a lighter-than-air balloon course: training on the applicable areas of operation in paragraph (4)(d), as applicable;
 - (i) two solo flights in a balloon with an airborne heater; or
 - (ii) at least two flights in a gas balloon performing the functions of pilot-in-command while under the supervision of a commercial pilot with a balloon rating.
- (6) Stage checks and end-of-course tests—
- (a) each student, to graduate from a private pilot course shall satisfactorily accomplish the stage checks and end-of-course tests, consisting of the applicable areas of operation listed in paragraph (4)(d) for the aircraft category and class rating; and
 - (b) each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight.

Regulation 28(1)(a)(ii): Instrument rating Course

The following curriculum meets the minimum curriculum standard for an instrument rating course and additional instrument rating course:

- (1) Ratings—
 - (a) instrument: aeroplane;
 - (b) instrument: helicopter; and
 - (c) instrument: powered-lift.
- (2) Eligibility for enrolment. A person shall hold at least a private pilot licence with an aircraft category and class rating appropriate to the instrument rating for which the course applies prior to enrolling in that portion of the instrument rating course.
- (3) Aeronautical knowledge training—
 - (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each approved course includes at least the following hours of ground training on the aeronautical knowledge areas appropriate to the instrument rating sought:
 - (i) 30 hours for an initial instrument rating; and
 - (ii) 20 hours for an additional instrument rating; and
 - (b) ground training shall include the following aeronautical knowledge areas:
 - (i) applicable Trinidad and Tobago regulations for IFR flight operations;
 - (ii) appropriate information in aeronautical information publications provided by the Authority;
 - (iii) air traffic control system and procedures for instrument flight operations;

- (iv) IFR navigation and instrument approaches to an airport by use of navigation systems;
- (v) use of IFR enroute and instrument approach procedure charts;
- (vi) procurement and use of aviation weather reports and forecasts, and the elements of forecasting weather trends on the basis of that information and personal observation of weather conditions;
- (vii) safe and efficient operation of aircraft under IFR conditions;
- (viii) recognition of critical weather situations and windshear avoidance;
- (ix) aeronautical decision making and judgement; and
- (x) crew resource management, to include crew communication and co-ordination.

(4) Flight training:

(a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least the following hours of flight training on the applicable areas of operation listed in paragraph (c):

- (i) 35 hours for an initial instrument rating; and
- (ii) 15 hours for an additional instrument rating;

(b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes the following flight training:

(i) for an instrument aeroplane course: instrument training from a flight instructor with an instrument rating on the applicable areas of operation in paragraph (c) including at least one cross-country flight that—

(A) is in the category and class of aeroplane that the course is approved for, and is performed under IFR

(B) is a distance of at least 250 nautical miles with one segment of the flight consisting of at least a straight line distance of 100 nautical miles between airports;

(C) involves an instrument approach at each airport; and

(D) involves three approaches with the use of different kinds of navigation systems;

(ii) for an instrument helicopter course: instrument training from a licensed flight instructor with an instrument rating on the applicable areas of operation in paragraph (c) including at least one cross-country flight that—

(A) is performed in a helicopter under IFR;

(B) is a distance of at least 100 nautical miles with one segment of the flight consisting of at least a straight line distance of 50 nautical miles between airports;

(C) involves an instrument approach at each airport; and

(D) involves three approaches with the use of different kinds of navigation systems;

- (iii) for an instrument powered-lift course: instrument training from a flight instructor with an instrument rating on the areas of operation in paragraph (c) including at least one crosscountry flight that—
 - (A) is in a powered-lift and is performed under IFR;
 - (B) involves transition from wing-borne to rotor borne flight under IFR;
 - (C) is a distance of at least 250 nautical miles with one segment of the flight consisting of at least a straight-line distance of 100 nautical miles between airports;
 - (D) involves an instrument approach at each airport; and
 - (E) involves three different kinds of approaches with the use of navigation systems; and
- (c) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes the flight training on the applicable areas of operation listed in this paragraph appropriate to the instrument aircraft category and class rating—
 - (i) preflight preparation;
 - (ii) preflight procedures;
 - (iii) air traffic control clearances and procedures;
 - (iv) flight by reference to instruments;
 - (v) navigation systems;
 - (vi) instrument approach procedures;
 - (vii) emergency operations; and
 - (viii) postflight procedures.

(5) Stage checks and end-of-course tests. Each student, to graduate from an instrument rating course shall satisfactorily accomplish the stage checks and end-of course tests, consisting of the areas of operation listed in paragraph (4)(c) that are appropriate to the aircraft category and class rating.

Regulation 28(1)(a)(iii): Commercial Pilot Licensing Course

The following curriculum meets the minimum curriculum standard for a commercial pilot licensing course:

- (1) Ratings:
 - (a) aeroplane single-engine;
 - (b) aeroplane multiengine;
 - (c) rotorcraft helicopter;
 - (d) rotorcraft gyroplane;
 - (e) powered-lift;
 - (f) glider;
 - (g) lighter-than-air airship; and

(h) lighter-than-air balloon.

(2) Eligibility for enrolment: A person shall hold the following prior to enrolling in the flight portion of the commercial pilot licensing course:

(a) at least a private pilot licence; and

(b) if the course is for a rating in an aeroplane or a powered-lift category—

(i) hold an instrument rating in the aircraft that is appropriate to the aircraft category rating for which the course applies; or

(ii) be enrolled concurrently in an instrument rating course that is appropriate to the aircraft category rating for which the course applies, and pass the required instrument rating practical test prior to completing the commercial pilot licensing course.

(3) Aeronautical knowledge training—

(a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least the following ground training on the applicable aeronautical knowledge areas listed in paragraph (b):

(i) 65 hours for an aeroplane category rating, powered-lift category rating, or a lighter-than-air category with an airship class rating;

(ii) 30 hours for a rotorcraft category rating;

(iii) 20 hours for a glider category rating; and

(iv) 20 hours for a lighter-than-air category with a balloon class rating;

(b) ground training shall include the following aeronautical knowledge areas:

(i) Trinidad and Tobago regulations that apply to commercial pilot privileges, limitations, and flight operations;

(ii) accident reporting requirements of Trinidad and Tobago;

(iii) basic aerodynamics and the principles of flight;

(iv) meteorology, to include recognition of critical weather situations, windshear recognition and avoidance, and the use of aeronautical weather reports and forecasts;

(v) safe and efficient operation of aircraft;

(vi) weight and balance computations;

(vii) use of performance charts;

(viii) significance and effects of exceeding aircraft performance limitations;

(ix) use of aeronautical charts and a magnetic compass for pilotage and dead reckoning;

(x) use of air navigation facilities;

- (xi) aeronautical decision making and judgement;
- (xii) principles and functions of aircraft systems;
- (xiii) manoeuvres, procedures, and emergency operations appropriate to the aircraft;
- (xiv) night and high-altitude operations;
- (xv) descriptions of and procedures for operating within the Trinidad and Tobago airspace system;
and
- (xvi) procedures for flight and ground training for lighter-than air ratings.

(4) Flight training:

(a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least the following flight training on the applicable areas of operation listed in subparagraph (c)—

- (i) 155 hours for an aeroplane, powered-lift, or an airship rating;
- (ii) 115 hours for a rotorcraft rating;
- (iii) 6 hours for a glider rating; and
- (iv) 10 hours and 8 training flights for a balloon rating.

(b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least the following flight training:

(i) for an aeroplane single-engine course: 55 hours of flight training from a licensed flight instructor on the areas of operation listed in subparagraph (c) that includes at least—

- (A) 5 hours of instrument training in a single-engine aeroplane;
- (B) 10 hours of training in a single-engine aeroplane that has retractable landing gear, flaps, and a controllable pitch propeller, or is turbine-powered;
- (C) one cross-country flight in a single-engine aeroplane of at least a 2-hour duration, a total straight-line distance of more than 100 nautical miles from the original point of departure, and occurring in day visual flight rules conditions;
- (D) one cross-country flight in a single-engine aeroplane of at least a 2-hour duration, a total straight-line distance of more than 100 nautical miles from the original point of departure, and occurring in night visual flight rules conditions; and
- (E) 3 hours in a single-engine aeroplane in preparation for the practical test within 60 days preceding the date of the test;

(ii) for an aeroplane multiengine course: the flight training shown in paragraph (c), accomplished in a multiengine aeroplane;

(iii) for a rotorcraft helicopter and gyroplane course: the flight training shown in paragraph (c), accomplished in a helicopter; except 30 hours of flight training from a flight instructor on the areas of operation listed in subparagraphs (c) and (d) that includes at least—

- (A) 5 hours of instrument training;

- (B) one cross-country flight in a helicopter of at least a 2-hour duration, a total straight-line distance of more than 50 nautical miles from the original point of departure, and occurring in day visual flight rules conditions; and
 - (C) one cross-country flight in a helicopter of at least a 2-hour duration, a total straight-line distance of more than 50 nautical miles from the original point of departure, and occurring in night visual flight rules conditions;
- (iv) for a powered-lift course: the applicable flight training shown in paragraph (c), flown in a powered-lift aircraft;
- (v) for a glider course: 4 hours of flight training from a flight instructor on the areas of operation in subparagraphs (c) and (d), that includes at least—
- (A) five training flights in a glider on launch/tow procedures approved for the course and on The appropriate areas of operation listed in subparagraphs (c) and (d); and
 - (B) three training flights in a glider in preparation for the practical test within the 60 days preceding the date of the test;
- (vi) for a lighter-than-air airship course: 55 hours of training in airships from a commercial pilot with an airship rating on the areas of operation in subparagraphs (c) and (d) that includes at least—
- (A) 3 hours of instrument training in an airship;
 - (B) one cross-country flight in an airship of at least a 1-hour duration, a total straight-line distance of more than 25 nautical miles from the original point of departure, and occurring in day visual flight rules conditions;
 - (C) one cross-country flight in an airship of at least a 1-hour duration, a total straight-line distance of more than 25 nautical miles from the original point of departure, and occurring in night visual flight rules conditions; and
 - (D) 3 hours in an airship, in preparation for the practical test within 60 days preceding the date of the test;
- (vii) for a lighter-than-air balloon course: flight training from a commercial pilot with a balloon rating on the areas of operation in paragraph (5)(h) that includes at least—
- (A) for a gas balloon—
 - (I) two flights of 1 hour each;
 - (II) one flight involving a controlled ascent to at least 5,000 feet above the launch site; and
 - (III) two flights in preparation for the practical test within 60 days preceding the date of the test;
 - (B) for a balloon with an airborne heater—
 - (I) two flights of 30 minutes each;
 - (II) one flight involving a controlled ascent to at least 3,000 feet above the launch site; and
 - (III) two flights in preparation for the practical test within 60 days preceding the date of the test;

(c) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes the flight training on the following areas of operation, as applicable:

(i) for an aeroplane single-engine course—

- (A) preflight preparation;
- (B) preflight procedures;
- (C) airport and seaplane base operations;
- (D) take-offs, landings, and go-arounds;
- (E) performance manoeuvres;
- (F) navigation;
- (G) slow flight and stalls;
- (H) emergency operations;
- (I) high-altitude operations; and
- (J) postflight procedures;

(d) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course for the following category and class ratings includes flight training on the applicable areas of operation:

(i) for an aeroplane multiengine course: multiengine operations;

(ii) for a rotorcraft helicopter course—

- (A) hovering manoeuvres;
- (B) transition to wing-borne flight;
- (C) transition to hover; and
- (D) special operations;

(iii) for a rotorcraft gyroplane course: flight at slow airspeeds;

(iv) for a powered-lift course—

- (A) hovering manoeuvres; and
- (B) special operations;

(v) for a glider course—

- (A) launches or tows, as appropriate, and landings; and
- (B) soaring techniques;

(vi) for a lighter-than-air airship course—

- (A) fundamentals of instructing;
 - (B) technical subjects; and
 - (C) preflight lessons on a manoeuvre to be performed in flight;
- (vii) for a lighter-than-air balloon course—
- (A) fundamentals of instructing;
 - (B) technical subjects;
 - (C) preflight lesson on a manoeuvre to be performed in flight; and
 - (D) launches and landings.

(5) Solo Flight training. Each applicant for, and holder of, an approved training organization certificate with level 1 Flight Training Specifications, shall ensure that each approved course includes at least the following solo flight training:

- (a) for an aeroplane single-engine course— 10 hours of solo flight training in a single-engine aeroplane on the areas of operation in paragraph (4)(c)(i) that include at least—
 - (i) one cross-country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one of the segments consisting of a straightline distance of at least 150 nautical miles;
 - (ii) one cross-country flight, if the training is being performed on other than a small island, with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 250 nautical miles; and
 - (iii) 5 hours in night visual flight rules conditions with 10 take-offs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower;
- (b) for an aeroplane multiengine course, 10 hours of flight training in a multiengine aeroplane performing the functions of pilot-in-command while under the supervision of a flight instructor, consisting of the areas of operation in paragraph (4)(d)(i) that include at least—
 - (i) one cross-country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one of the segments consisting of a straight-line distance of at least 150 nautical miles;
 - (ii) one cross-country flight, if the training is being performed on a small island, with landings at a minimum of three points and one segment of the flight consisting of a straight-line distance of at least 250 nautical miles; and
 - (iii) 5 hours in night visual flight rules conditions with 10 take-offs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower;
- (c) for a rotorcraft helicopter course: 10 hours of solo flight training in a helicopter on the areas of operation in paragraph (4)(d)(ii) that include at least—

- (i) one cross-country flight with landings at a minimum of three points and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles from the original point of departure; and
 - (ii) 5 hours in night visual flight rules conditions with 10 take-offs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower;
- (d) for a rotorcraft or gyroplane course: 10 hours of solo flight training in a gyroplane on the areas of operation in paragraph (4)(d)(iii) that include at least—
- (i) one cross-country flight with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles from the original point of departure; and
 - (ii) 5 hours in night visual flight rules conditions with 10 take-offs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower;
- (e) for a powered-lift course: 10 hours of solo flight training in a powered-lift on the areas of operation in paragraph (4)(d)(iv) that include at least—
- (i) one cross-country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one segment of the flight consisting a straight line distance of at least 150 nautical miles;
 - (ii) one cross-country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 250 nautical miles; and
 - (iii) 5 hours in night visual flight rules conditions with 10 take-offs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower;
- (f) for a glider course: 5 solo flights in a glider on the areas of operation in paragraph (4)(d)(v);
- (g) for a lighter-than-air airship course: 10 hours of flight training in an airship, while performing the functions of pilot-in-command under the supervision of a commercial pilot with an airship rating consisting of the areas of operation in paragraph (4)(d)(vi) that include at least—
- (i) one cross-country flight with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles from the original point of departure; and
 - (ii) 5 hours in night visual flight rules conditions with 10 take-offs and 10 landings with each landing involving a flight with a traffic pattern;
- (h) for a lighter-than-air balloon course—
- (i) training on the applicable areas of operation in paragraph (4)(d)(vii), while performing the duties of pilot-in command under the supervision of a commercial pilot with a balloon rating;
 - (ii) two solo flights for a hot air balloon rating; and
 - (iii) at least two flights in a gas balloon for a gas balloon rating;

(6) Stage checks and end-of-course tests:

- (a) each student, to graduate from a commercial pilot course, shall satisfactorily accomplish the stage checks and end-of course tests consisting of the applicable areas of operation listed in paragraph (4)(d); and
- (b) each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight.

Regulation 28(1)(a)(iv): Airline Transport Pilot Licensing Course

The following curriculum meets the minimum curriculum standard for an Airline Transport Pilot Licensing Course:

(1) Rating:

- (a) aeroplane single-engine;
- (b) aeroplane multiengine;
- (c) rotorcraft helicopter;
- (d) powered-lift.

(2) Eligibility for enrolment: Prior to enrolling in the flight portion of the airline transport pilot licensing course, a person shall—

- (a) meet the aeronautical experience requirements prescribed in Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004, Part III for an Airline Transport Pilot Licence that is appropriate to the aircraft category and class rating for which the course applies;
- (b) hold at least a commercial pilot license and an instrument rating;
- (c) meet the military experience requirements under Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004 to qualify for a Commercial Pilot Licence and an instrument rating, if the person is a rated military pilot or former rated military pilot of an armed force of Trinidad and Tobago; or
- (d) hold a foreign Airline Transport Pilot License or foreign Commercial Pilot Licence and an instrument rating, issued by a contracting state to the convention on international civil aviation.

(3) Aeronautical knowledge areas:

- (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least 40 hours of ground training on the applicable aeronautical knowledge areas listed in paragraph (b);
- (b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that ground training includes the following aeronautical knowledge areas:
 - (i) applicable Trinidad and Tobago regulations that relate to airline transport pilot privileges, limitations, and flight operations;
 - (ii) meteorology, including knowledge of and effects of fronts, frontal characteristics, cloud formations, icing, and upper air data;
 - (iii) general system of weather and notam collection, dissemination, interpretation, and use;

- (iv) interpretation and use of weather charts, maps, forecasts, sequence reports, abbreviations, symbols;
- (v) Trinidad and Tobago weather service functions as they pertain to operations in the Trinidad and Tobago airspace system;
- (vi) windshear and microburst awareness, identification and avoidance;
- (vii) principles of air navigation under instrument meteorological conditions in the Trinidad and Tobago airspace system;
- (viii) air traffic control procedures and pilot responsibilities as they relate to *en route* operations, terminal area and radar operations, and instrument departure and approach procedures;
- (ix) aircraft loading, weight and balance, use of charts, graphs, tables, formulas, and computations and the effects on aircraft performance;
- (x) aerodynamics relating to an aircraft's flight characteristics and performance in normal and abnormal flight regimes;
- (xi) human factors;
- (xii) aeronautical decision making and judgement; and
- (xiii) crew resource management to include crew communication and co-ordination.

(4) Flight training:

- (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least 25 hours of flight training on the applicable areas of operation listed in paragraph (b), including at least 15 hours of instrument flight training; and
- (b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes flight training on the following areas of operation, as applicable:
 - (i) preflight preparation;
 - (ii) preflight procedures;
 - (iii) take-off and departure phase;
 - (iv) in-flight manoeuvres;
 - (v) instrument procedures;
 - (vi) landings and approaches to landings;
 - (vii) normal and abnormal procedures;
 - (viii) emergency procedures; and
 - (ix) postflight procedures.

(5) Stage checks and end-of-course tests. Each student, to graduate from an airline transport pilot course shall satisfactorily accomplish the stage checks and end-of course tests, consisting of the areas of operation listed in paragraph 4(b) that are appropriate to the aircraft category and class rating for which the course applies.

Regulation 28(2)(a)(v): Flight Instructor Course

The following curriculum meets the minimum curriculum standard for a flight instructor licensing course and an additional flight instructor rating course:

(1) Rating:

- (a) aeroplane single-engine;
- (b) aeroplane multiengine;
- (c) rotorcraft helicopter;
- (d) rotorcraft gyroplane;
- (e) powered-lift; and
- (f) glider category.

(2) Eligibility for enrolment: A person shall hold the following prior to enrolling in the flight portion of the flight instructor or additional flight instructor rating course:

- (a) a commercial pilot license or an airline transport pilot license with an aircraft category and class rating appropriate to the flight instructor rating for which the course applies; and
- (b) an instrument rating or privilege in an aircraft that is appropriate to the aircraft category and class rating for which the course applies, if the course is for a flight instructor aeroplane or powered-lift instrument rating.

(3) Aeronautical knowledge training:

(a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least the following ground training in the aeronautical knowledge areas listed in paragraph (b):

- (i) 40 hours of training if the course is for an initial issuance of a flight instructor certificate; or
- (ii) 20 hours of training if the course is for an additional flight instructor rating;

(b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that ground training includes the following aeronautical knowledge areas:

(i) the fundamentals of instructing, including:

- (A) the learning process;
- (B) elements of effective teaching;
- (C) student evaluation and testing;
- (D) course development;
- (E) lesson planning; and
- (F) classroom training techniques; and

(ii) the aeronautical knowledge areas required for—

- (A) a private and commercial pilot licence that is appropriate to the category and class rating sought; and
- (B) an instrument rating that is appropriate to the aircraft category and class rating for which the course applies, if the course is for an aeroplane or powered-lift aircraft rating; and

(c) an approved training organization certificate with level 1 flight training specifications may credit a student who satisfactorily completes 2 years of study on the principles of education at a college or university with no more than 20 hours of the training required in subparagraph (a)(i).

(4) Flight training:

(a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least the following flight training on the applicable areas of operation of subparagraphs (b) and (c):

(i) 25 hours for an aeroplane, rotorcraft, or powered-lift rating; and

(ii) 10 hours and 10 flights for a glider category rating;

(b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes flight training on the following areas of operation, as applicable for each category and class:

(i) fundamentals of instructing;

(ii) technical subject areas;

(iii) preflight preparation;

(iv) preflight lesson on a manoeuvre to be performed in flight;

(v) preflight procedures;

(vi) airport and seaplane base operations;

(vii) take-offs, landings, and go-arounds

(viii) fundamentals of flight;

(ix) performance manoeuvres;

(x) ground reference manoeuvres;

(xi) slow flight, stalls, and spins;

(xii) basic instrument manoeuvres;

(xiii) emergency operations; and

(xiv) post flight procedures; and

(c) for the category and class of aircraft shown below, each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes flight training in the following areas of operation, as applicable:

(i) for an aeroplane: multiengine course, multiengine operations;

(ii) for a rotorcraft: helicopter course—

(A) hovering manoeuvres; and

(B) special operations;

(iii) for a rotorcraft: gyroplane course flight at slow airspeeds;

(iv) for a powered-lift course—

- (A) hovering manoeuvres;
 - (B) transition to wing-borne flight;
 - (C) transition to hover; and
 - (D) special operations; and
- (v) for a glider course—
- (A) launches, landings, and go-around;
 - (B) performance speeds; and
 - (C) soaring techniques.
- (5) Stage checks and end-of-course tests:
- (a) each student to graduate from a flight instructor course shall satisfactorily accomplish the stage checks and end-of-course tests, consisting of the applicable areas of operation listed in paragraph (4);
 - (b) a student enrolled in a flight instructor-aeroplane rating or flight instructor-glider rating course shall have—
 - (i) received a logbook endorsement from a flight instructor certifying the student received ground and flight training on stall awareness, spin entry, spins, and spin recovery procedures in an aircraft that is certified for spins and that is appropriate to the rating sought; and
 - (ii) demonstrated instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures.

Regulation 28(1)(a)(vi): Flight Instructor Instrument Rating Course

The following curriculum meets the minimum curriculum standard for a flight instructor instrument licensing course:

(1) Ratings:

- (a) flight instructor instrument: aeroplane;
- (b) flight instructor instrument: helicopter; and
- (c) flight instructor instrument: powered-lift aircraft.

(2) Eligibility for enrolment: A pilot shall hold, prior to enrolling in the flight portion of the course—

- (a) a commercial pilot licence or airline transport pilot licence with a category and class rating appropriate to the rating sought; and
- (b) for commercial pilot licence holders, an instrument rating that is appropriate to the rating sought.

(3) Aeronautical knowledge training:

- (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least 15 hours of ground training on the applicable aeronautical knowledge areas listed in subparagraph (b); and
- (b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes ground training on the following aeronautical knowledge areas:

- (i) the fundamentals of instructing including—
 - (A) learning process;
 - (B) elements of effective teaching;
 - (C) student evaluation and testing;
 - (D) course development;
 - (E) lesson planning; and
 - (F) classroom training techniques; and
- (ii) the aeronautical knowledge areas required for the instrument rating that is appropriate to the category and class of aircraft.

(4) Flight training:

- (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least 15 hours of flight training in the applicable areas of operation of paragraph (b);
- (b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course for the flight instructor instrument rating includes flight training on the following areas of operation:
 - (i) fundamentals of instructing;
 - (ii) technical subject areas;
 - (iii) pre-flight preparation;
 - (iv) pre-flight lesson on a manoeuvre to be performed in flight;
 - (v) air traffic control clearances and procedures;
 - (vi) flight by reference to instruments;
 - (vii) navigation systems;
 - (viii) instrument approach procedures;
 - (ix) emergency operations; and
 - (x) post-flight procedures.

(5) Stage checks and end-of-course tests: Each student to graduate from a flight instructor instrument course shall satisfactorily accomplish the stage checks and end of- course tests, consisting of the applicable areas of operation listed in paragraph (4)(b).

Regulation 28(1)(a)(vii): Ground Instructor Authorization Course

The following curriculum meets the minimum curriculum standard for a ground instructor licensing course and an additional ground instructor rating course, issued under the Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004:

(1) Ratings:

- (a) ground instructor: basic;
- (b) ground instructor: advanced; and
- (c) ground instructor: instrument.

(2) Aeronautical knowledge training:

- (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least the following ground training on the applicable knowledge areas listed in paragraphs (b), (c), (d) and (e);
- (i) 20 hours of training for an initial issuance of a ground instructor certificate; or
 - (ii) 10 hours of training for an additional ground instructor rating;
- (b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that ground training includes the following aeronautical knowledge areas:
- (i) learning process;
 - (ii) elements of effective teaching;
 - (iii) student evaluation and testing;
 - (iv) course development;
 - (v) lesson planning; and
 - (vi) classroom training techniques;
- (c) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that ground training for a basic ground instructor licence includes the aeronautical knowledge areas applicable to a private pilot;
- (d) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that ground training for an advanced ground instructor rating includes the aeronautical knowledge areas applicable to a private, commercial, and airline transport pilot;
- (e) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that ground training for an instrument ground instructor rating includes the aeronautical knowledge areas applicable to an instrument rating; and
- (f) an approved training organization certificate with level 1 flight training specifications may credit a student who satisfactorily completed 2 years of study on the principles of education at a college or university with 10 hours of the training required in paragraph (a)(i);

(3) Stage checks and end-of-course tests:

Each student, to graduate from a ground instructor course shall satisfactorily accomplish the stage checks and end-of-course tests, consisting of the applicable knowledge areas of paragraph (2).

Regulation 28(1)(a)(viii): Additional Aircraft Category or Class Rating Course

The following curriculum meets the minimum curriculum standard for an additional aircraft category rating course or an additional aircraft class rating course:

(1) Ratings:

- (a) aeroplane single-engine;
- (b) aeroplane multiengine;
- (c) rotorcraft helicopter;
- (d) rotorcraft gyroplane;
- (e) powered-lift;
- (f) glider;
- (g) lighter-than-air airship; and
- (h) lighter-than-air balloon.

(2) Eligibility for enrolment. A person shall hold the level of pilot licence for the additional aircraft category and class rating for which the course applies prior to enrolling in the flight portion of an additional aircraft category or additional aircraft class rating course.

(3) Aeronautical knowledge training. Each applicant for, and holder of, an approved training organization certificate with Level 1 Flight Training Specifications shall ensure that each course for an additional category rating and additional class rating includes the total number of hours of training in all the aeronautical knowledge areas appropriate to the aircraft rating and pilot license level sought.

(4) Flight training. Each applicant for, and holder of, an approved training organization certificate with Level 1 Flight Training Specifications shall ensure that each course for an additional aircraft category rating or additional aircraft class includes the total number of hours of flight training on all of the areas of operation of this paragraph appropriate to the aircraft rating and pilot licence level for which the course applies.

(5) Stage checks and end-of-course tests:

- (a) each student, to graduate from an additional aircraft category rating course or an additional aircraft class rating course shall satisfactorily accomplish the stage checks and end-of-course tests, consisting of the applicable areas of operation in paragraph (4); and
- (b) each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight.

Regulation 28(1)(a)(ix): Aircraft Type Rating Course

The following curriculum meets the minimum Level 1 Aviation Training Organization curriculum standard for an aircraft type rating course for:

(1) Ratings.

- (a) a type rating in an aeroplane category: single-engine class;
- (b) a type rating in an aeroplane category: multiengine class;
- (c) a type rating in a rotorcraft category: helicopter class;
- (d) a type rating in a powered-lift category; and
- (e) other aircraft type ratings specified by the Authority through the aircraft type certificate procedures.

(2) Eligibility for enrollment:

- (a) prior to enrolling in the flight portion of an aircraft type rating course, a person shall hold at least a private pilot licence;
- (b) an instrument rating in the category and class of aircraft that is appropriate to the aircraft type rating for which the course applies, provided the aircraft's type certificate does not have a visual flight rules limitation; or
- (c) be concurrently enrolled in an instrument rating course in an aircraft of the type rating sought, and pass the required instrument rating practical test concurrently with the type rating practical test.

(3) Aeronautical knowledge training:

- (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least 10 hours of ground training on the applicable aeronautical knowledge areas listed in paragraph (b);
- (b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that ground training includes the following aeronautical areas:
 - (i) subjects requiring a practical knowledge of the aircraft type and its powerplant, systems, components, operational, and performance factors;

- (ii) the aircraft's normal, abnormal, and emergency procedures, and the operations and limitations relating thereto;
- (iii) appropriate provisions of the approved aircraft's flight manual;
- (iv) location of and purpose of inspecting each item on the aircraft's checklist that relate to the exterior and interior preflight; and
- (v) use of the aircraft's prestart checklist, appropriate control system checks, starting procedures, radio and electronic equipment checks, and the selection of proper navigation and communication radio facilities and frequencies.

(4) Flight training:

- (a) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each course includes at least—
 - (i) flight training on the applicable areas of operation of subparagraph (b) in the aircraft type for which the course applies; and
 - (ii) at least 5 hours shall be instrument training in the aircraft for which the course applies;
- (b) each applicant for, and holder of, an approved training organization certificate with level 1 flight training specifications shall ensure that each type rating course includes the flight training on the following areas of operation:
 - (i) preflight preparation;
 - (ii) preflight procedures;
 - (iii) take-off and departure phase;
 - (iv) in-flight manoeuvres;
 - (v) instrument procedures;
 - (vi) landings and approaches to landings;
 - (vii) normal and abnormal procedures;
 - (viii) emergency procedures; and
 - (ix) postflight procedures.

(5) Stage checks and end-of-course tests: Each student, to graduate from an aircraft type rating course shall satisfactorily accomplish the stage checks and end-of course tests, consisting of the applicable areas of operation for the Airline Transport Pilot Licence.

Regulation 28(1)(a)(x): Flight Engineer Course

(1) Each flight engineer training course holder shall comply with the following:

- (a) training course outline:
 - (i) format: An applicant shall prepare separate course outlines for each type of aeroplane;
 - (ii) ground course outline;
 - (iii) the Authority will accept any arrangement of subjects if all the subject material listed in Table A is included and at least the minimum programmed hours are assigned to each subject;
 - (iv) if any flight engineer training course holder desires to include additional subjects in the ground course curriculum, the hours allotted to these additional subjects may not be included in the minimum programmed classroom hours;
 - (v) all subjects, except theory of flight and aerodynamics and regulations, shall apply to the same type of aeroplane in which the flight engineer training course holder presents training;

	Subject Area	Classroom Hours
Civil Aviation Regulations		10
Theory of Flight and 10 Aerodynamics		10
Aeroplane Familiarization, to include as applicable	Specifications	90
Engine Familiarization, to include as applicable	Construction features Flight controls Hydraulic systems Pneumatic systems Electrical systems Anti-icing and deicing systems, Pressurization and air-conditioning systems Vacuum systems Pilot static systems Instrument systems Fuel and oil systems Emergency equipment	45
Normal Operations (Ground and Flight) to include as appropriate	Servicing methods and procedures, Operation of all the aeroplane systems, Operation of all the engine systems Loading and centre of gravity computations Cruise control (normal, long range, maximum endurance) Power and fuel computation, Meteorology as applicable to engine operation	50
Emergency Operations to include	Landing gear, brakes, flaps, speed brakes and leading edge devices Pressurization and airconditioning Portable fire extinguishers Fuselage fire and smoke control Loss of electrical power Engine fire control Engine shut-down and restart Oxygen	80
Total (exclusive of final tests)		285

(b) flight course outline;

- (i) the flight training curriculum shall include at least 10 hours of flight instruction in an aeroplane. A student may not credit the flight time required for the practical test as part of the required flight instruction;
- (ii) the flight engineer training course holder shall present all of the flight training in the same type aircraft;
- (iii) as appropriate to the aircraft type, the flight engineer training course holder shall teach the following subjects in the flight training course provided in Table B hereunder:

Table B

Subject Area	
Normal Duties, Procedures and Operations	To include as appropriate— Aeroplane preflight. Engine starting, power checks, pretake-off, postlanding and shut-down procedures. Power control. Temperature control. Engine operation analysis. Operation of all systems. Fuel management. Logbook entries. Pressurization and air conditioning.
Subject Area	
Recognition and correction of In Flight Malfunctions	Analysis of abnormal engine operation. Analysis of abnormal operation of all systems. Corrective action.
Emergency Operations In Flight	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) the Authority may allow the school to teach the flight training time in a flight simulator;
- (v) to obtain credit for flight training time in a flight simulator, the student shall occupy the flight engineer station and operate the controls.

(2) Revisions: Each flight engineer training course holder shall request revisions of the course outlines, facilities or equipment by following the procedures for original approval of the course.

(3) Ground school credits:

- (a) a flight engineer training course holder may grant credit to a student in the ground school course for comparable previous training or experience that the student can show by written evidence;
- (b) a flight engineer training course holder shall meet the quality of instruction described in this standard;
- (c) before granting credit for previous training or experience, the flight engineer training course holder shall ensure that the student passes a test given by the flight engineer training course holder on the subject for which the credit is to be given;
- (d) the flight engineer training course holder shall incorporate results of the test, the basis for credit allowance, and the hours credited as part of the student's records.

(4) Records and reports:

- (a) the flight engineer training course holder shall 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;
- (b) except as provided in subparagraph (c), the flight engineer training course holder shall submit to the Authority, not later than January 31 of each year, a report for the previous calendar year's training, to include—
 - (i) name, enrolment and graduation date of each student;
 - (ii) ground school hours and grades of each student;
 - (iii) flight and flight simulator hours, and grades of each student; and
 - (iv) names of students failed or dropped, together with their school grades and reasons for dropping;
- (c) upon request, the Authority may waive the reporting requirements of subparagraph (b) of this paragraph for an approved flight engineer course that is part of an approved training course under the Civil Aviation [(No. 3) Air Operator Certification and Administration] Regulations, 2004.

(5) Quality of instruction:

- (a) the Authority shall revoke approval of a flight engineer training course holder's ground course whenever less than 80 per cent of the students pass the Authority's knowledge test on the first attempt;
- (b) the Authority shall revoke approval of a flight engineer training course holder's flight course whenever less than 80 per cent of the students pass the Authority's practical test on the first attempt;
- (c) notwithstanding subparagraphs (a) and (b), the Authority may allow continued approval of a ground or flight course when the Authority finds—
 - (i) that the failure rate was based on less than a representative number of students; or
 - (ii) that the flight engineer training course holder has taken satisfactory means to improve the effectiveness of the training.

(6) Time limitation: Each student shall apply for the written test and the flight test within 90 days after completing the ground school course.

(7) Statement of course completion:

- (a) each flight engineer training course holder shall give to each student who successfully completes an approved flight engineer ground school training course, and passes the Authority's knowledge test, a statement of successful completion of the course that indicates the date of training, the type of aeroplane on which the ground course training was based, and the number of hours received in the ground school course;
- (b) each flight engineer training course holder shall give each student who successfully completes an approved flight engineer flight course, and passed the Authority's practical test, a statement of successful completion of the flight course that indicates the dates of the training, the type of aeroplane used in the flight course, and the number of hours received in the flight course;
- (c) a flight engineer training course holder 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 subparagraphs (a) and (b) of this subclause are included; and
- (d) the requirements of this paragraph do not apply to a holder of an Air Operator Certificate with an approved training course under the Civil Aviation [(No. 3) Air Operator Certification and Administration] Regulations, 2004, providing the student receives a flight engineer licence upon completion of that course.

(8) Duration: Except for a course operated as part of an approved training course under the Civil Aviation [(No.3) Air Operator Certification and Administration] Regulations, 2004, the approval to operate a flight engineer ground course or flight course terminates 24 months after the last day of the month of issue.

Regulation 28(1)(b): Special Preparation Courses

The following curriculum meets the minimum curriculum standard for the special preparation courses that are listed in regulation 28(1)(b):

(1) Eligibility for enrolment: Prior to enrolling in the flight portion of a special preparation course, a person shall hold a pilot licence, flight instructor certificate, or ground instructor licence that is appropriate for the exercise of the operating privileges or authorizations sought.

(2) General requirements:

- (a) to be approved, an applicant for a special preparation course shall present to the Authority a proposal that:
 - (i) meets the appropriate requirements of this standard;
 - (ii) prepares the graduate with the necessary skills, competency, and proficiency to exercise safely the privileges of the certificate, rating, or authorization for which the course is established;
 - (iii) includes ground and flight training on the operating privileges or authorization sought.

(3) Stage check and end-of-course tests: Each person, to graduate from a special preparation course shall satisfactorily accomplish the stage checks and end-of-course tests, consisting of the areas of operation that are appropriate to the operating privileges or authorization sought, and for which the course applies.

(4) Agricultural aircraft operations course: A special preparation course for pilots in agricultural aircraft operations shall include at least the following:

- (a) 25 hours of training on—
 - (i) agricultural aircraft operations;

- (ii) safe piloting operating practices and procedures for handling, dispensing, and disposing of agricultural and industrial chemicals, including operating in and around congested areas; and
- (iii) applicable provisions of the Act or Regulations made thereunder; and

(b) 15 hours of flight training on agricultural aircraft operations.

(5) Rotorcraft external-load operations course: A special preparation course for pilots of external-load operations shall include at least the following:

(a) 10 hours of training on—

- (i) rotorcraft external-load operations;
- (ii) safe piloting operating practices and procedures for external-load operations, including operating in and around congested areas; and
- (iii) applicable provisions of the Act or Regulations made thereunder; and

(b) 15 hours of flight training on external-load operations.

(6) Test pilot course: Each applicant for, and holder of, a special preparation course for test pilot duties shall include at least the following:

(a) aeronautical knowledge training on—

- (i) performing aircraft maintenance, quality assurance, and certification test flight operations; and
- (ii) applicable parts of these Regulations that pertain to aircraft maintenance, quality assurance, and certification tests; and

(b) 15 hours of flight training.

(7) Special operations course:

(a) a special preparation course for pilots in special operations that are mission-specific for certain aircraft shall include at least the following:

(i) aeronautical knowledge training on—

- (A) performing that special flight operation;
- (B) safe piloting operating practices and procedures for performing that special flight operation;
- (C) applicable parts of these Regulations that pertain to that special flight operation; and
- (D) pilot-in-command duties and responsibilities for performing that special flight operation; and

(ii) flight training on that special flight operation.

(8) Pilot refresher course: Each applicant for, and holder of, a special preparation pilot refresher course for a pilot licence, aircraft category and class rating, or an instrument rating shall include at least the following:

(a) 4 hours of aeronautical knowledge training on—

- (i) the aeronautical knowledge areas that are applicable to the level of pilot licence, category rating, class rating, or instrument rating sought;
- (ii) safe piloting operating practices and procedures; and
- (iii) applicable provisions of the Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004 and the Civil Aviation [(No. 3) Air Operator Certification and Administration] Regulations, 2004;

- (b) 6 hours of flight training on the areas of operation that are applicable to the level of pilot licence, aircraft category and class rating, or instrument rating, as appropriate, for performing pilot-in command duties and responsibilities.

(9) Flight instructor refresher course: Each applicant for, and holder of, a special preparation flight instructor refresher course shall include at least a combined total of 16 hours of aeronautical knowledge training, flight training, or any combination of ground and flight training on the following:

- (a) aeronautical knowledge training on—
 - (i) the aeronautical knowledge areas that apply to student, private, and commercial pilot licences and instrument ratings;
 - (ii) the aeronautical knowledge areas that apply to flight instructor certificates;
 - (iii) safe piloting operating practises and procedures, including airport operations and operating in the Trinidad and Tobago airspace system; and
 - (iv) applicable provisions of the Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004 and the Civil Aviation [(No. 3) Air Operator Certification and Administration] Regulations, 2004;
- (b) flight training, to review—
 - (i) the areas of operations applicable to student, private, and commercial pilot licences and instrument ratings; and
 - (ii) the skills, competency, and proficiency for performing flight instructor duties and responsibilities.

(10) Ground instructor refresher course: A special preparation ground instructor refresher course shall include at least 16 hours of aeronautical knowledge training on—

- (a) the aeronautical knowledge areas that apply to student, private, and commercial pilots and instrument rated pilots and ground instructors;
- (b) safe piloting operating practices and procedures, including airport operations and operating in the Trinidad and Tobago airspace system; and
- (c) applicable provisions of the Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004 and the Civil Aviation [(No. 3) Air Operator Certification and Administration] Regulations, 2004.

Regulation 28(1)(c): Pilot Ground School Course

The following curriculum meets the minimum curriculum standard for a pilot ground school course:

(1) General requirements: Each applicant for, and holder of, an approved training course for a pilot ground school shall include training on the aeronautical knowledge areas that are—

- (a) needed to safely exercise the privileges of the certificate, rating, or Authority for which the course is established; and
- (b) conducted to develop competency, proficiency, resourcefulness, self confidence, and self-reliance in each student.

(3) Aeronautical knowledge training requirements: Each applicant for, and holder of, an Approve

- (a) the aeronautical knowledge training that is appropriate to the aircraft rating and pilot licence level for which the course applies; and
- (b) an adequate number of total aeronautical knowledge training hours appropriate to the aircraft rating and pilot licence level for which the course applies.

(4) Stage checks and end-of-course tests: Each person, to graduate from a pilot ground school course shall satisfactorily accomplish the stage checks and end-of course tests, consisting of the areas of operation that are appropriate to the operating privileges or authorization that graduation from the course will permit.

Regulation 33(2) Level 2 Aviation Training Organization Instructor Training and Testing requirements

(1) Prior to initial designation, each flight and simulator flight instructor shall complete the following requirements:

(a) complete at least 8 hours of ground training on the following subject matter:

- (i) instruction methods and techniques;
- (ii) training policies and procedures;
- (iii) the fundamental principles of the learning process;
- (iv) instructor duties, privileges, responsibilities, and limitations;
- (v) proper operation of simulation controls and systems;
- (vi) proper operation of environmental control and warning or caution panels;
- (vii) limitations of simulation;
- (viii) minimum equipment requirements for each curriculum;
- (ix) revisions to the training courses; and
- (x) cockpit resource management and crew co-ordination;

(b) satisfactorily complete a knowledge test—

- (i) on the subjects specified in subparagraph (a); and
- (ii) that is accepted by the Authority as being of equivalent difficulty, complexity, and scope as the tests provided by the Authority for the flight instructor aeroplane and instrument flight instructor knowledge tests.

(2) Each certificate holder shall ensure that each instructor who instructs in a flight simulator that the Authority has approved for all training and all testing for the airline transport pilot licensing test, aircraft type rating test, or both, has met at least one of the following requirements:

- (a) each instructor shall have performed 2 hours in flight, including three take-offs and three landings as the sole manipulator of the controls of an aircraft of the same category and class, and, if a type rating is required, of the same type replicated by the approved flight simulator in which that instructor is designated to instruct;
- (b) each instructor shall have participated in an approved line observation programme as specified in the Civil Aviation [(No. 2) Operations] Regulations, 2004 and that—
 - (i) was accomplished in the same aeroplane type as the aeroplane represented by the flight simulator in which that instructor is designated to instruct; and
 - (ii) included line-oriented flight training of at least 1 hour of flight during which the instructor was the sole manipulator of the controls in a flight simulator that replicated the same type aircraft for which that instructor is designated to instruct.

Regulation 36(2) Approved Training Organization with Level 1 Flight Training Specification Chief Flight Instructor Qualification

(1) Each Approved Training Organization shall designate a supervisory instructor for a flight training course who shall meet one or more of the following requirements, as applicable:

- (a) hold a commercial pilot licence or an airline transport pilot licence, and, except for a chief instructor for a training course solely for a lighter-than-air rating, a current flight instructor with appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course;
- (b) meet the pilot-in-command recent flight experience requirements of the Civil Aviation [(No. 2) Operations] Regulations, 2004 as applicable;
- (c) pass a knowledge test on—
 - (i) teaching methods;
 - (ii) applicable provisions of the Authority's provided aeronautical information publications;
 - (iii) applicable provisions of the Civil Aviation [(No. 1) General Application and Personnel Licensing], Regulations, 2004, the Civil Aviation [(No. 2) Operations] Regulations, 2004 and the Civil Aviation [(No. 9) Approved Training Organization] Regulations, 2004; and
 - (iv) the objectives and approved course completion standards of the course for which the person seeks to obtain designation; and
- (d) pass a proficiency test on instructional skills and ability to train students on the flight procedures and manoeuvres appropriate to the course.

(2) Except for a training course for gliders, balloons, or airships, the chief instructor shall meet the applicable requirements in paragraphs (3), (4), and (5).

(3) For a training course for a private pilot licence or rating, a chief instructor shall have—

- (a) at least 1,000 hours as pilot-in-command; and
- (b) primary flight training experience as a flight instructor or an instructor in a military pilot flight training programme, or a combination thereof, consisting of at least 2 years and a total of 500 flight hours.

(4) For a training course for an instrument rating or a rating with instrument privileges, a chief instructor shall have—

- (a) at least 100 hours of flight time under actual or simulated instrument conditions;
- (b) at least 1,000 hours as pilot-in-command; and
- (c) instrument flight instructor experience or an instructor in a military pilot flight training programme, or a combination thereof, consisting of at least—
 - (i) 2 years and a total of 250 flight hours; or
 - (ii) 400 flight hours of instrument flight instruction.

(5) For a training course for other than a private pilot licence or rating, or an instrument rating or a rating with instrument privileges, a chief instructor shall have—

- (a) at least 2,000 hours as pilot-in-command; and
- (b) flight training experience as a flight instructor or an instructor in a military pilot flight training programme, or a combination thereof, consisting of at least 3 years and a total of 1,000 flight hours.

(6) A chief instructor for a training course for gliders or balloons is required to have only 40 per cent of the hours required in paragraphs (3) and (5).

(7) A chief instructor for a training course for airships is required to have only 40 per cent of the hours required in paragraphs (3), (4), and (5).

(8) To be eligible as chief instructor for a ground school course, a person shall have one year of experience as a ground school instructor at a certified level 1 approved training organization.

Regulation 37(2) Approved Training Organization with Level 1 Flight Training Specification—Assistant Chief Flight Instructor Qualification

(1) To be eligible for designation as an assistant chief instructor, a person shall meet the following requirements:

- (a) hold a Commercial Pilot Licence or an Airline Transport Pilot Licence and, except for the assistant chief instructor for a training course for a lighter-than-air rating, a current flight instructor licence with appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course;
- (b) meet the pilot-in-command recent flight experience requirements of the Civil Aviation [(No. 2) Operations] Regulations, 2004, as applicable;
- (c) pass a knowledge test on—
 - (i) teaching methods;
 - (ii) applicable provisions of the Trinidad and Tobago-provided aeronautical information publications;
 - (iii) applicable provisions of Civil Aviation [(No. 1) General Application and Personnel Licensing], Regulations, 2004, the Civil Aviation [(No. 2) Operations] Regulations, 2004 and the Civil Aviation [(No. 9) Aviation Training Organization] Regulations, 2004; and
 - (iv) the objectives and approved course completion standards of the course for which the person seeks to obtain designation;
- (d) pass a proficiency test on the flight procedures and manoeuvres appropriate to that course;
- (e) meet the applicable requirements in paragraphs (2), (3), and (4), except that an assistant chief instructor for a training course for gliders, balloons, or airships is required to have only 40 per cent of the hours required in paragraphs (2) and (3).

(2) For a training course for a private pilot licence or rating, an assistant chief instructor shall have—

- (a) at least 500 hours as pilot-in-command; and
- (b) flight training experience as a flight instructor or an instructor in a military pilot flight training programme, or a combination thereof, consisting of at least 1 year and a total of 250 flight hours.

(3) For a training course for an instrument rating or a rating with instrument privileges, an assistant chief flight instructor shall have—

- (a) at least 50 hours of flight time under actual or simulated instrument conditions;
- (b) at least 500 hours as pilot-in-command; and
- (c) instrument flight instructor experience as a flight instructor or an instructor in a military pilot flight training programme, or a combination thereof, consisting of at least 1 year and a total of 125 flight hours.

(4) For a training course other than for a private pilot licence or rating, or an instrument rating or a rating with instrument privileges, an assistant chief instructor shall have—

- (a) at least 1,000 hours as pilot-in-command; and
- (b) flight training experience as a flight instructor or an instructor in a military pilot flight training programme, or a combination thereof, consisting of at least 1 1/2 years and a total of 500 flight hours.

(5) To be eligible for designation as an assistant chief instructor for a ground school course, a person shall have 6 months of experience as a ground school instructor at a certified level 1 approved training organization.

Regulation 38(2) Approved Training Organization with Level 1 Flight Training Specification—Check Instructor Qualifications

(1) To be designated as a check instructor for conducting student stage checks, end of course tests, and instructor proficiency checks under this Part, a person shall, meet the following requirements, as applicable:

- (a) pass a test, given by the chief instructor, on:
 - (i) teaching methods;
 - (ii) applicable provisions of the Trinidad and Tobago-provided aeronautical information publications;
 - (iii) applicable provisions of the Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004, the Civil Aviation [(No. 2) Operations] Regulations, 2004 and the Civil Aviation [(No. 9) Approved Training Organization] Regulations, 2004; and
 - (iv) the objectives and course completion standards of the approved training course for the designation sought;
- (b) for flight checks and tests—
 - (i) meet the requirements in paragraph (1)(a);
 - (ii) hold a commercial pilot licence or an airline transport pilot licence and, except for a check instructor for a training course for a lighter-than-air rating, a current flight instructor licence, with appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course;
 - (iii) meet the pilot-in-command recent flight experience requirements of the Civil Aviation [(No. 2) Operations] Regulation, 2004, as applicable; and
 - (iv) pass a proficiency test, given by the chief instructor or assistant chief instructor, on the flight procedures and manoeuvres of the approved training course;
- (c) for checks and tests that relate to ground training—
 - (i) meet the requirements in paragraph (1)(a);
 - (ii) except for a training course for a lighter-than-air rating, hold a current flight instructor licence or ground instructor licence with ratings appropriate to the category and class of aircraft used in the course; and
 - (iii) for a training course for a lighter-than-air rating, hold a commercial pilot licence with a lighter-than-air category rating and the appropriate class rating.

(2) Before functioning as a check instructor, a person who meets the eligibility requirements in paragraph (a) shall—

- (a) be designated in writing by the chief instructor to conduct student stage checks, end-of-course tests, and instructor proficiency checks; and
- (b) be approved by the Authority.

(3) A check instructor may not conduct a stage check or an end-of-course test of any student for whom the check instructor has—

- (a) served as the principal instructor; or
- (b) recommended for a stage check or end-of-course test.

Regulation 42(2) Transfer Privileges

(1) An approved training organization with level 1 Flight Training Specifications receiving a student from another level 1 Approved Training Organization may credit that pilot's previous experience towards the curriculum requirements of a course subject to the following conditions:

- (a) if the credit is based upon regulation 42 or regulation 53, the gaining Approved Training Organization may credit that student not more than 50 per cent of the curriculum requirements;
- (b) if the credit is not based upon regulation 42 or regulation 53, the gaining Approved Training Organization may credit that student not more than 25 per cent of the curriculum requirements.

Note: The receiving Approved Training Organization shall determine the amount of course credit to be credited under subparagraph (a) or subparagraph (b), based on a proficiency test or knowledge test, or both, of the student.

(2) The receiving Approved Training Organization may grant credit for training specified in paragraph (1)(a) or paragraph (1)(b) only if the previous provider of the training has certified the kind and amount of training provided, and the result of each stage check and end-of-course test, if applicable, given to the student.

(3) An AMT training course holder may evaluate and grant credit for an entrant's previous training provided—

- (a) the AMT training course holder determines that the training is verifiable and comparable to portions of the training programme; and
- (b) the individual requesting credit passes an examination given by the AMT training course holder, which is equivalent to those examinations given by the AMT training course holder for the same subject in the training programme.

Regulation 45 Training Course: Contents

(1) Each applicant for, and holder of, an approved training organization certificate with level 1 Flight Training Specifications shall ensure that each training course contains—

- (a) a description of each flight simulator or flight training device used for training;
- (b) a listing of the airports at which training flights originate and a description of the facilities, including pilot briefing areas that are available for use by the school's students and personnel at each of those airports;
- (c) a description of the type of aircraft including any special equipment used for each phase of training;
- (d) the minimum qualifications and ratings for each instructor assigned to ground or flight training; and
- (e) a training syllabus that includes—
 - (i) the prerequisites for enrolling in the ground and flight portion of the course that include the pilot licence and rating (if required by this part), training, pilot experience, and pilot knowledge;
 - (ii) a detailed description of each lesson, including the lesson's objectives, standards, and planned time for completion;
 - (iii) course learning objectives;
 - (iv) stage learning objectives and standards; and
 - (v) a description of the checks and tests to be used to measure learning after each stage of training.

(2) An approved training organization with level 2 specifications may—

- (a) include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and the training is given by an authorized instructor; and
- (b) permit a student to credit training in a flight simulator that meets the requirements of regulation 30 for a maximum of 25 per cent of the total flight training hour requirements of the approved course.

Regulation 50(2)(b), (4) and (5)

1. The following Implementing Standards identify the subject matter, the time in which each topic and the level to which the topics are to be covered:

Level 1—denotes a basic understanding of a subject. Trainees should have a basic understanding of the subject but are not expected to be able to apply it in practice;

Level 2—denotes understanding of the subject and the ability, where applicable, to apply it in practice with the help of reference materials and instructions; and

Level 3—denotes a thorough understanding of the subject and the ability to apply it with speed, accuracy and judgement appropriate to the circumstances

(a) Knowledge training areas for the Aircraft Maintenance Engineer Licence categories:

(i) A—Airframe, Fixed wing:

Civil aviation requirements, laws and regulations

	<i>Hours</i>	<i>Level</i>
1 International and State aviation law	10	3
2 Airworthiness requirements	10	3
3 Civil aviation operating regulations	10	3
4 Air transport operations	10	3
5 Organization and management of the operator	10	3
6 Operator economics related to maintenance	10	3
7 Approved maintenance organizations (AMOs)	30	3
8 Aircraft maintenance licence requirements	10	3
9 The role of the State aviation regulatory body	10	3
10 Aircraft certification, documents and maintenance	10	3

Natural science and general principles of aircraft

1 Mathematics	75	1
2 Physics	70	1
3 Technical Drawing	70	1
4 Chemistry	30	1
5 Fixed wing aerodynamics and flight control	100	2

Aircraft engineering and maintenance: Airframe

1 Maintenance practices and materials: Airframe/ Power Plant	200	3
2 Aircraft systems and structures: Fixed wing	250	3
3 Airship systems and structures	100	3

Human performance and limitations—Required knowledge, skills and attitudes

1	General programme overview	3	3
2	Human Factors knowledge Communication skills	3	3
4	Teamwork skills	3	3
5	Performance management	3	3
6	Situation awareness	3	3
7	Human error	3	3
8	Reporting and investigating errors	3	3
9	Monitoring and auditing	3	3
10	Document design	3	3

(ii) A—Airframe, Rotary wing:

Civil aviation requirements, laws and regulations

	<i>Hours</i>	<i>Level</i>
1	International and State aviation law	10 3
2	Airworthiness requirements	10 3
3	Civil aviation operating regulations	10 3
4	Air transport operations	10 3
5	Organization and management of the operator	10 3
6	Operator economics related to maintenance	10 3
7	Approved maintenance organizations (AMOs)	30 3
8	Aircraft maintenance licence requirements	10 3
9	The role of the State aviation regulatory body	10 3
10	Aircraft certification, documents and maintenance	10 3

Natural science and general principles of aircraft

1	Mathematics	75	1
2	Physics	70	1
3	Technical drawing	70	1
4	Chemistry	30	2
5	Rotary wing aerodynamics and flight control	100	2

Human performance and limitations—Required knowledge, skills and attitudes

1	General programme overview	3	3
2	Human Factors knowledge	3	3
3	Communication skills	3	3
4	Teamwork skills	3	3
5	Performance management	3	3
6	Situation awareness	3	3
7	Human error	3	3
8	Reporting and investigating errors	3	3
9	Monitoring and auditing	3	3
10	Document design	3	3

(iii) C—Engine, Piston:

Civil aviation requirements, laws and regulations

1 International and State aviation law	10	3
2 Airworthiness requirements	10	3
3 Civil aviation operating regulations	10	3
4 Air transport operations	10	3
5 Organization and management of the operator	10	3
6 Operator economics related to maintenance	10	3
7 Approved maintenance organizations (AMOs)	30	3
8 Aircraft maintenance licence requirements	10	3
9 The role of the State aviation regulatory body	10	3
10 Aircraft certification, documents and maintenance	10	3

Natural science and general principles of aircraft

	<i>Hours</i>	<i>Level</i>
1 Mathematics	75	1
2 Physics	70	1
3 Technical drawing	70	1
4 Chemistry	30	1

**Aircraft engineering and maintenance: Engines/
Power Plants**

1 Piston engines	250	3
2 Propellers	100	3
3 Fuel systems	100	3

**Human performance and limitations—Required
knowledge, skills and attitudes**

1 General programme overview	3	3
2 Human Factors knowledge	3	3
3 Communication skills	3	3
4 Teamwork skills	3	3
5 Performance management	3	3
6 Situation awareness	3	3
7 Human error	3	3
8 Reporting and investigating errors	3	3
9 Monitoring and auditing	3	3
10 Document design	3	3

(iv) C—Engine, Turbo-jet, Turbo-shaft and Turbo-propeller:

Civil aviation requirements, laws and regulations

Civil aviation requirements, laws and regulations

1 International and State aviation law	10	3
2 Airworthiness requirements	10	3
3 Civil aviation operating regulations	10	3

4 Air transport operations	10	3
5 Organization and management of the operator	10	3
6 Operator Economics related to maintenance	10	3
7 Approved maintenance organizations (AMOs)	30	3
8 Aircraft maintenance licence requirements	10	3
9 The role of the State aviation regulatory body	10	3
10 Aircraft certification, documents and maintenance	10	3

Natural science and general principles of aircraft

1 Mathematics	75	1
2 Physics	70	1
3 Technical Drawing	70	1
4 Chemistry	30	1

(iv) C—Engine, Turbo-jet, Turbo-shaft and Turbo-propeller—*Continued*

**Aircraft engineering and maintenance: Engines/
Power Plants**

	<i>Hours</i>	<i>Level</i>
1 Propellers	100	3
2 Gas turbine engines	300	3
3 Fuel systems	100	3

**Human performance and limitations—Required
knowledge, skills and attitudes**

1 General programme overview	3	3
2 Human Factors knowledge	3	3
3 Communication skills	3	3
4 Teamwork skills	3	3
5 Performance management	3	3
6 Situation awareness	3	3
7 Human error	3	3
8 Reporting and investigating errors	3	3
9 Monitoring and auditing	3	3
10 Document design	3	3

(v) E—Avionics Systems, Electrical, Instruments and Radio Systems:

Civil aviation requirements, laws and regulations

1 International and State aviation law	10	3
2 Airworthiness requirements	10	3
3 Civil aviation operating regulations	10	3
4 Air transport operations	10	3
5 Organization and management of the operator	10	3
6 Operator economics related to maintenance	10	3
7 Approved maintenance organizations (AMOs)	30	3
8 Aircraft maintenance licence requirements	10	3
9 The role of the State aviation regulatory body	10	3
10 Aircraft certification, documents and maintenance	10	3

Natural science and general principles of aircraft

1	Mathematics	75	1
2	Physics	70	1
3	Technical drawing	70	1
4	Chemistry	30	1

**Aircraft engineering and maintenance: Avionics/
Electrical and Instrument**

1	Maintenance practices and materials	200	3
2	Electrical and electronic fundamentals	450	2
3	Digital techniques, computers and associated devices	200	2
4	Aircraft electrical systems	250	3
5	Aircraft instrument systems	250	3

(v) E—Avionics Systems, Electrical, Instruments and Radio Systems—*Continued*

**Aircraft engineering and maintenance: Avionics—
Navigation/Radio**

1	Aircraft inertial navigation systems (INS)	60	3
2	Aircraft radio and radio navigation systems	450	3

**Human performance and limitations—Required
knowledge, skills and attitudes**

	<i>Hours</i>	<i>Level</i>	
1	General programme overview	3	3
2	Human Factors knowledge	3	3
3	Communication skills	3	3
4	Teamwork skills	3	3
5	Performance management	3	3
6	Situation awareness	3	3
7	Human error	3	3
8	Reporting and investigating errors	3	3
9	Monitoring and auditing	3	3
10	Document design	3	3

(vi) E2—Avionics Systems, Electrical, Instruments, Auto-Flight, Flight Management and Radio Systems:

Civil aviation requirements, laws and regulations

1	International and State aviation law	10	3
2	Airworthiness requirements	10	3
3	Civil aviation operating regulations	10	3
4	Air transport operations	10	3
5	Organization and management of the operator	10	3
6	Operator economics related to maintenance	10	3
7	Approved maintenance organizations (AMOs)	30	3
8	Aircraft maintenance licence requirements	10	3
9	The role of the State aviation regulatory body	10	3
10	Aircraft certification, documents and maintenance	10	3

Natural science and general principles of aircraft

1	Mathematics	75	1
2	Physics	70	1
3	Technical drawing	70	1
4	Chemistry	30	1

**Aircraft engineering and maintenance: Avionics/
Electrical and Instrument**

1	Maintenance practices and materials	200	3
2	Electrical and electronic fundamentals	450	2
3	Digital techniques, computers and associated devices	200	2
4	Aircraft electrical systems	250	3
5	Aircraft instrument systems	250	3

**Aircraft engineering and maintenance: Avionics—
AFCS/Navigation/Radio**

1	Automatic flight control systems (AFCS): Fixed wing	200	3
2	Automatic flight control systems (AFCS): Rotary wing	75	3
3	Aircraft inertial navigation systems (INS)	60	3
4	Aircraft radio and radio navigation systems	450	3

(vi) E2—Avionics Systems, Electrical, Instruments, Auto-Flight, Flight Management and Radio Systems:—*Continued*

**Human performance and limitations—Required
knowledge, skills and attitudes**

	<i>Hours</i>	<i>Level</i>
1	General programme overview	3 3
2	Human Factors knowledge	3 3
3	Communication skills	3 3
4	Teamwork skills	3 3
5	Performance management	3 3
6	Situation awareness	3 3
7	Human error	3 3
8	Reporting and investigating errors	3 3
9	Monitoring and auditing	3 3
10	Document design	3 3

(b) Skills training areas for the Aircraft Maintenance Engineer Licence categories:

(i) A—Airframe, Fixed Wing and Rotary Wing:

Practical maintenance skills—Airframe

1	Basic workshop and maintenance practices— Airframe	725	3
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2 Basic workshop and maintenance practices— Repair, maintenance and function testing of aircraft systems and components	1000	3
3 Job and task documentation and control practices	100	3

(ii) C—Engine, Piston and Turbo-jet, Turbo-prop and Turbo-Shaft:

Practical maintenance skills—Engine and Propeller

1 Basic workshop and maintenance practices— Engine and propeller	450	3
2 Basic workshop and maintenance practices— Engine, propeller systems, component and function testing	450	3
3 Job and task documentation and control practices	100	3

(iii) E1—Avionics Systems:

Practical maintenance skills—Electrical, Instruments and Radio

1 Basic workshop and maintenance practices— Avionics Electrical	775	3
2 Basic workshop and maintenance practices— Avionics Instruments	1000	3
3 Basic workshop and maintenance practices— Avionics Radio	875	3
4 Repair, maintenance and function testing of aircraft avionics systems and components	100	3
5 Job and task documentation and control practices	100	3

(iv) E2—Avionics Systems:

**Practical maintenance skills—Electrical, Instruments,
Auto-flight and Radio**

	<i>Hours</i>	<i>Level</i>
1 Basic workshop and maintenance practices— Avionics Electrical	775	3
2 Basic workshop and maintenance practices— Avionics Instruments	1000	3
3 Basic workshop and maintenance practices— Avionics Auto Flight	225	3
4 Basic workshop and maintenance practices— Avionics Radio	875	3
5 Repair, maintenance and function testing of aircraft avionics systems and components	100	3
6 Job and task documentation and control practices	100	3

(c) Training for a type rating shall be in accordance with the manufacturer's type rating course.

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