For reference only

Appendix A to CCAR Part 141 Private Pilot Certification Course

1. Applicability

This appendix prescribes the minimum curriculum for a private pilot certification course required for the following rating:

(a) Aeroplane single-engine
(b) Aeroplane multiengine
(c) Rotorcraft helicopter
(d) Rotorcraft gyroplane
(e) Primary Aeroplane
(f) Glider
(g) Lighter-than-air airship
(h) Lighter-than-air balloon

2. Eligibility for Enrolment

A person shall hold at least a student pilot license prior to enrolling in the flight portion of the private pilot license course.

3. Aeronautical Knowledge Training

(a) Each approved course must includes at least the following training on the applicable aeronautical knowledge areas listed in paragraph (b) of this section, appropriate to the aircraft category and class rating:
  (1) 35 hours for aeroplane and gyroplane category rating
  (2) 15 hours for a glider category rating
  (3) 10 hours for lighter-than-air category with a balloon class rating
  (4) 35 hours for lighter-than-air category with an airship class rating
  (5) 30 hours for an primary aeroplane category rating

(b) Ground training must include the following aeronautical knowledge areas:
  (1) Applicable CAAC regulations that apply to private pilot privileges, limitation and flight operations.
  (2) Navigation equipment, airport lighting, visual aid equipment, airspace, ATC procedures, emergency procedures, factors affecting flight safety, human factors, aeronautical chart etc and other suitable parts.
  (3) Aeronautical charts for VFR navigation using pilotage, dead reckoning and navigation
  (4) Radio Communication Procedures
  (5) Recognition of critical weather situations from the ground and in flight, windshear avoidance and the procurement and use of aeronautical weather reports and forecasts;
  (6) Safe and efficient operation of aircraft, including collision avoidance and recognition and avoidance of wake turbulence
  (7) Effects of density altitude on takeoff and climb performance;
  (8) Weight and balance computations
  (9) Principles of aerodynamics, powerplants and aircraft systems

(10)If the training course is for an aeroplane category or glider category, stall awareness, spin entry, spins and spin recovery technique

(11) Aeronautical decision making and judgement and

(12)Pre-flight preparation, includes:-

(i) Obtaining information on runway lengths, data on take-off and landing distances, weather reports and forecasts and fuel requirements and

(ii) Planning for alternatives if a planned flight cannot be completed or delays are encountered.

(13) Human Performances and Limitations of a Private Pilot

4. Flight Training

(a) Every approved course must include this section and the section 5 of this appendix on the approved areas of operation listed in paragraph (d), appropriate to the aircraft category and class rating:-

(1) 35 hours of aeroplane, gyroplane and airship category rating

(2) 25 hours of primary aeroplane category rating

(3) 6 hours of glider category rating

(4) 8 hours of lighter-than-air balloon category rating

(b) Every approved course will include the following flight training:

(1) **For an aeroplane single engine course:** 20 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(1) that includes at least :-

(i) 3 hours of cross country flight training on a single engine aeroplane

(ii) 3 hours of night flight training on a single engine aeroplane that includes:-

(A) One cross country flight of more than 180 kilometre (100 nautical miles) total distance and

(B) 10 takeoffs and 10 landings to a full stop at an airport, with each landing involving a flight in the traffic pattern.

(iii) 3 hours of instrument training on a single engine aeroplane

(iv) 3 hours in a single engine aeroplane in preparation for the practical test within 60 days proceeding the date of the test.

(2) **For an multiengine aeroplane course:** 20 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(2) that includes at least :-

(i) 3 hours of cross country flight training on a multiengine aeroplane

(ii) 3 hours of night flight training on a multiengine aeroplane that includes:-

(A) One cross country flight of more than 180 kilometre (100 nautical miles) total distance and

(B) 10 takeoffs and 10 landings to a full stop at an airport, with each landing involving a flight in the traffic pattern.

(iii) 3 hours of instrument training on a multiengine aeroplane

(iv) 3 hours in a multiengine aeroplane in preparation for the practical test within 60 days proceeding the date of the test.

(3) **For a helicopter course:** 20 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(3) that includes at least :-

(i) 3 hours of cross country flight training on a helicopter

(ii) 3 hours of night flight training on a helicopter that includes:-

(A) One cross country flight of more than 90 kilometre (50 nautical miles) total distance and

(B) 10 takeoffs and 10 landings to a full stop at an airport, with each landing involving a flight in the traffic pattern

(iii) 3 hours in a helicopter in preparation for the practical test within 60 days proceeding the date of the test.

(4) **For a rotorcraft gyroplane course:** 20 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(4) that includes at least :-

(i) 3 hours of cross country flight training on a gyroplane

(ii) 3 hours of night flight training on a gyroplane that includes:-

(A) One cross country flight of more than 90 kilometre (50 nautical miles) total distance and

(B) 10 takeoffs and 10 landings to a full stop at an airport, with each landing involving a flight in the traffic pattern

(iii) 3 hours in a gyroplane in preparation for the practical test within 60 days proceeding the date of the test.

(5) **For a primary aeroplane course:** 15 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(5) that includes at least :-

(i) 3 hours of cross country flight training on a primary aeroplane that include one cross country flight of more than 120 kilometre (65 nautical miles) total distance and

(ii) 3 hours in a primary aeroplane in preparation for the practical test within 60 days proceeding the date of the test.

(6) **For a glider course:** 4 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(6) that includes at least :-

(i) Under the supervision of a licensed flight instructor, complete five training flight on a glider using the approved manual takeoff or launch/ tow procedures for the course and in the applicable areas of operation listed in paragraph (d)(6)

(ii) Under the supervision of a licensed flight instructor, three training flight in a glider in preparation for the practical test within 60 days proceeding the date of the test.

(7) **For a lighter-than-air airship course:** 20 hours from a commercial pilot with an airship rating on the areas of operation listed in paragraph (d)(7) that includes:-

(i) 3 hours of cross country flight training on a lighter-than-air airship

(ii) 3 hours of night flight training on a lighter-than-air airship that includes:-

(A) One cross country flight of more than 50 kilometre (25 nautical miles) total distance and

(B) 5 takeoffs and 5 landings to a full stop at an airport, with each landing involving a flight in the traffic pattern.

(iii) 3 hours of instrument training on a multiengine aeroplane

(iv) 3 hours in a lighter-than-air airship in preparation for the practical test within 60 days

proceeding the date of the test.

(8) For a lighter-than-air balloon course: 8 hours, including at least five flights, from a commercial pilot with a balloon rating on the areas of operation listed in paragraph (d)(8) that includes:-

(i) If the training is being performed in a gas balloon:-

(A) Two flights of 1 hour each

(B) One flight involving a controlled ascent to 900 metre (3,000 feet) above the launch site

(C) Two flights in preparation for the practical test within 60 days proceeding the date of the test.

(ii) If the training is being performed in a balloon with an airborne heater:-

(A) Two flights of 30 minutes each

(B) One flight involving a controlled ascent to 600 metre (2,000 feet) above the launch site

(C) Two flights in preparation for the practical test within 60 days proceeding the date of the test.

(c) Use of the Flight Simulator and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 20% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 15% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (c)(2) and (c)(3) of this section, if combine training takes place, a maximum of 20% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (c)(3) of this section.

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

(1) For an aeroplane single engine course –

(i) Preflight preparation

(ii) Preflight procedure

(iii) Airport and seaplane base operations

(iv) Takeoffs, landings and go-arounds

(v) Performance manoeuvres

(vi) Ground reference manoeurves
(vii) Navigation
(viii) Slow flight and stalls
(ix) Basic instrument manoeuvres
(x) Emergency operations
(xi) Night operations
(xii) Postflight procedures

(2) For an aeroplane multiengine course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport and seaplane base operations
(iv) Takeoffs, landings and go-arounds
(v) Performance manoeuvres
(vi) Ground reference manoeurves
(vii) Navigation
(viii) Slow flight and stalls
(ix) Basic instrument manoeuvres
(x) Emergency operations
(xi) Multiengine operation
(xii) Night operations
(xiii) Postflight procedures

(3) For a helicopter course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport and helicopter base operations
(iv) Hovering manoeurves
(v) Takeoffs, landings and go-arounds
(vi) Performance manoeuvres
(vii) Navigation
(viii) Emergency operations
(ix) Night operations
(x) Postflight procedures

(4) For a rotorcraft gyroplane course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport operations
(iv) Takeoffs, landings and go-arounds
(v) Performance manoeuvres
(vi) Ground reference manoeuvres
(vii) Navigation
(viii) Flight at slow airspeed

(ix) Emergency operations
(x) Night operations
(xi) Postflight procedures

(5) For an primary aeroplane course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport and seaplane base operations
(iv) Takeoffs, landings and go-arounds
(v) Performance manoeuvres
(vi) Ground reference manoeuvres
(vii) Navigation
(viii) Slow flight and stalls
(ix) Emergency operations
(x) Postflight procedures

(6) For a glider course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport operations
(iv) Manual takeoffs, launching/tow and landing
(v) Performance speed
(vi) Soaring techniques
(vii) Performance manoeuvres
(viii) Navigation
(ix) Slow flight and stalls
(x) Emergency operations
(xi) Postflight procedures

(7) For a lighter-than-air airship course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport operations
(iv) Takeoffs, landings and go-arounds
(v) Performance manoeuvres
(vi) Ground reference manoeuvres
(vii) Navigation
(viii) Emergency operations
(ix) Postflight procedures

(8) For a lighter-than-air balloon course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport operations

(iv) Launches and landings
(v) Performance manoeuvres
(vi) Navigation
(vii) Emergency operations
(viii) Postflight procedures

5 Solo Flight Training

Each Approved course shall include 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 applicable areas of operation in section 4, paragraph (d)(1),that includes the following:

(1) 5 hours of solo cross country flight

(2) One solo cross country flight of at least 180 kilometre (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 90 kilometre (50 nautical miles) between the takeoff and landing location and

(3) Three takeoffs 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.** 10 hours of solo flight training in a multiengine aeroplane on the applicable areas of operation in section 4, paragraph (d)(2) that includes the following:

(1) 5 hours of solo cross country flight

(2) One solo cross country flight of at least 180 kilometre (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 90 kilometre (50 nautical miles) between the takeoff and landing location and

(3) Three takeoffs 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.** 10 hours of solo flight training in a rotorcraft helicopter on the applicable areas of operation in section 4, paragraph (d)(3) that includes the following:

(1) 5 hours of solo cross country flight

(2) One solo cross country flight of at least 90 kilometre (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 45 kilometre (25 nautical miles) between the takeoff and landing location and

(3) Three takeoffs 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.** 10 hours of solo flight training in a rotorcraft gyroplane on the applicable areas of operation in section4, paragraph (d)(4) that includes

the following:

(1) 5 hours of solo cross country flight

(2) One solo cross country flight of at least 90 kilometre (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 45 kilometre (25 nautical miles) between the takeoff and landing location and

(3) Three takeoffs 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 primary aeroplane course.** 10 hours of solo flight training in an initial aeroplane on the applicable areas of operation in section 4, paragraph (d)(5) that includes the following:

(1) 5 hours of solo cross country flight

(2) One solo cross country flight of at least 120 kilometre (65 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 kilometre (25 nautical miles) between the takeoff and landing location and

(3) Three takeoffs 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.

(f) **For a glider course.** Two solo flights in a glider on the applicable areas of operation in section 4, paragraph (d)(6) of this appendix 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 section 4, paragraph (d)(7) of this appendix in an airship performing the functions of pilot in command while under the supervision of a commercial pilot with an airship rating.

(h) **For a lighter-than-air balloon course.**
Two solo flights in a balloon with an airborne heater or al 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. Training on the applicable areas of operation in section 4, paragraph (d)(8) of this appendix.

6 Stage Check and End-of-Course Tests

(a) Each student, to graduate from a private pilot course shall satisfactory accomplish the stage checks and end-of-course tests, consisting of the applicable areas of operation listed in section 4, paragraph 4(d) of this appendix for the aircraft category and class rating.

(b) Each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight

Appendix B Instrument Rating Course

1 Applicability

This appendix prescribes the minimum curriculum for an instrument rating course and additional instrument rating course, required under this part for the following rating:

(a) Instrument: aeroplane

(b) Instrument: helicopter

2 Eligibility for Enrolment

A person shall hold at least a private pilot license with an aircraft category and class rating appropriate to the instrument rating for which the course applies prior to enrolling in the flight portion of the instrument rating course

3 Aeronautical Knowledge Training

(a) Each approved course includes at least the following hours of ground school on the aeronautical knowledge areas listed in paragraph (b) of this section appropriate to the instrument rating sought:

(i) 30 hours for an initial instrument rating

(ii) 20 hours for an additional instrument rating

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

(1) Applicable Civil Aviation Regulation of China for IFR flight operations;

(2) Navigation facilities, airport lighting, visual aid equipment, airspace, ATC procedures, emergency procedures, factors affecting flight safety, human factors, aeronautical chart etc and other suitable parts.

(3) Air traffic control system and procedures for instrument flight operations

(4) IFR navigation and instrument approaches to an airport by the use of navigation systems

(5) Use of IFR enroute and instrument approach procedure chart

(6) 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

(7) Safe and efficient operation of aircraft under IFR conditions

(8) Recognition of critical weather situations and windshear avoidance;

(9) Aeronautical decision making and judgement and

(10) Crew resource management, to include crew communication and co-ordination

(11) Human Performance and limitation relevant to instrument rating.

4 Flight Training

(a) Each applicant shall ensure that each course includes at least the following hours of flight training on the applicable areas of operation listed in paragraph (d) of this section

(1) 35 hours for an initial instrument rating

(2) 15 hours for an additional instrument rating

(b) Use of Flight Simulator and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 50% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 40% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (b)(2) and (b)(3) of this section, if combine training takes place, a maximum of 50% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (b)(3) of this section.

(c) Every approved training course will include the following flight training:

(1) **For an instrument aeroplane course:** Instrument training from a licensed flight instructor with an instrument rating on the applicable areas of operation in paragraph (d) of this section including at least one cross country flight that

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

(ii) Is a distance of at least 470 kilometre (250 nautical miles) with one segment of the flight consisting of at least a straight-line distance of 180 kilometre (100 nautical miles) between airports

(iii) involves an instrument approach at each airport and

(iv) involves three approaches using different kind of navigation systems (VOR, ADF and ILS)

(2) **For an instrument helicopter course:** Instrument training from a licensed flight instructor with an instrument rating on the applicable areas of operation in paragraph (d) of this section including at least one cross country flight that

(i) Is performed in a helicopter under IFR

(ii) Is a distance of at least 180 kilometre (100 nautical miles) with one segment of the flight consisting of at least a straight-line distance of 90 kilometre (50 nautical miles) between airports

(iii) involves an instrument approach at each airport and

(iv) involves three approaches using different kind of navigation systems (VOR, ADF and ILS)

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

(1) Preflight preparation

(2) Preflight procedure

(3) Air traffic control clearances and procedures
(4) Flight by reference to instruments
(5) Navigation systems
(6) Instrument approach procedures
(7) Emergency operations
(8) Postflight procedures

5. Stage Check and End-of-Course Tests

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

Appendix C Commercial Pilot Licensing Course

1. Applicability

This appendix prescribes the minimum curriculum for a commercial pilot licensing course required for the following rating:

(a) Aeroplane single-engine
(b) Aeroplane multiengine
(c) Rotorcraft helicopter
(d) Rotorcraft gyroplane
(e) Primary Aeroplane
(f) Glider
(g) Lighter-than-air airship
(h) Lighter-than-air balloon

2. Eligibility for Enrolment

A person shall hold at least a private pilot license with the relevant commercial pilot licensing eligibility prior to enrolling in the flight portion of this course.

3. Aeronautical Knowledge Training

(a) Each applicant shall ensure that each course includes at least the following training on the applicable aeronautical knowledge areas listed in paragraph (b):
(1) 35 hours for aeroplane category rating
(2) 65 hours for lighter-than-air category with an airship class rating
(3) 30 hours for a rotorcraft category rating
(4) 20 hours for a glider category rating
(5) 20 hours for a lighter-than-air category with a balloon class rating

(b) Ground training shall include the following aeronautical knowledge contents:
(1) Applicable Civil Aviation Authority of China that apply to commercial pilot privileges, limitation and flight operations.
(2) Basic aerodynamics and the principles of flight
(3) Meteorology, to include recognition of critical weather situations, windshear recognition and avoidance, and to obtain and the use of aeronautical weather reports and forecasts
(4) Safe and efficient operation of aircraft
(5) Weight and balance computations
(6) Use of the performance charts
(7) Significance and effects of exceeding aircraft performance limitations
(8) Use of aeronautical charts and a magnetic compass for pilotage and dead reckoning
(9) Use of air navigation facilities
(10) Aeronautical decision making and judgement

(11) Principles and functions of aircraft systems
(12) Manoeuvres, procedures and emergency operations appropriate to the aircraft
(13) Night and high altitude operations
(14) Regulations and procedures for operating within the Airspace System
(15) Procedures for flight and ground training for lighter-than-air ratings
(16) Human Performances and limitations relevant to commercial pilot.

4. Flight Training

(a) Each approved course must includes at least the following hours of flight training on the applicable areas of operation listed in this section, section 5 of this appendix, paragraph (d) of this section that are appropriate to the aircraft category and rating
(1) 120 hours for an aeroplane rating
(2) 155 hours for an airship rating
(3) 65 hours for a rotorcraft rating
(4) 65 hours for primary aeroplane rating
(5) 6 hours for a glider rating
(6) 10 hours and 8 training flight for a balloon rating

(b) Each course includes at least the following flight training:
(1) **For an aeroplane single engine course**: 55 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(1) that includes at least :-
(i) 5 hours of instrument training in a single engine aeroplane
(ii) 10 hours of training in a single engine aeroplane that has retractable landing gear, flaps and a controllable pitch propeller (or is turbine powered)
(iii) One cross country flight in a single-engine aeroplane of at least 2 hours duration, a total straight line distance of more than 180 kilometer (100 nautical miles) from the original point of departure and occurring in day VFR conditions;
(iv) One cross country flight in a single-engine aeroplane of at least 2 hours duration, a total straight line distance of more than 180 kilometer (100 nautical miles) from the original point of departure and occurring in night VFR conditions and;
(v) 3 hours in a single engine aeroplane in preparation for the practical test within 60 days proceeding the date of the test
(vi) 5 hours of flight training on special skill, inclusive of at least spin awareness, spin entry and spin recovery.

(2) **For an aeroplane multiengine course**: 55 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(2) that includes at least :-
(i) 5 hours of instrument training in a multiengine aeroplane
(ii) 10 hours of training in a multiengine aeroplane that has retractable landing gear, flaps and a controllable pitch propeller (or is turbine powered)
(iii) One cross country flight in a multiengine aeroplane of at least 2 hours duration, a total straight line distance of more than 180 kilometer (100 nautical miles) from the

original point of departure and occurring in day VFR conditions;

(iv) One cross country flight in a multiengine aeroplane of at least 2 hours duration, a total straight line distance of more than 180 kilometer (100 nautical miles) from the original point of departure and occurring in night VFR conditions and;

(v) 3 hours in a multiengine aeroplane in preparation for the practical test within 60 days proceeding the date of the test,

(vi) Student without a single engine aeroplane rating, 5 hours of flight training on special skill, inclusive of at least spin awareness, spin entry and spin recovery.

(3) **For a helicopter course**: 30 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(3) that includes at least:-

(i) 5 hours of instrument training

(ii) One cross country flight in a helicopter of at least 2 hours duration, a total straight line distance of more than 90 kilometer (50 nautical miles) from the original point of departure and occurring in day VFR conditions;

(iii) One cross country flight in a helicopter of at least 2 hours duration, a total straight line distance of more than 90 kilometer (50 nautical miles) from the original point of departure and occurring in night VFR conditions and;

(iv) 3 hours in a helicopter in preparation for the practical test within 60 days proceeding the date of the test

(4) **For a gyroplane course:** 30 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(4) that includes at least:-

(i) 5 hours of instrument training

(ii) One cross country flight in a gyroplane of at least 2 hours duration, a total straight line distance of more than 90 kilometer (50 nautical miles) from the original point of departure and occurring in day VFR conditions;

(iii) One cross country flight in a gyroplane of at least 2 hours duration, a total straight line distance of more than 90 kilometer (50 nautical miles) from the original point of departure and occurring in night VFR conditions and;

(iv) 3 hours in a gyroplane in preparation for the practical test within 60 days proceeding the date of the test

(5) **For primary aeroplane course:** 20 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(5) that includes at least:-

(i) 5 hours of instrument training on an initial aeroplane

(ii) One cross country flight in an initial aeroplane of at least 2 hours duration, a total straight line distance of more than 120 kilometer (65 nautical miles) from the original point of departure and occurring in day VFR conditions;

(iii) 3 hours in a gyroplane in preparation for the practical test within 60 days proceeding the date of the test

(6) **For a glider course:** 4 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (d)(F) that includes at least:-

(i) Five training flights in a glider on launch/ tow procedures approved for the course and on the appropriate areas of operation listed in paragraph (d)(F) by a licensed flight instructor

(ii) Three training flights in a glider in preparation for the practical test within the 60 days proceeding the date of the test

(7) **For a lighter-than-air airship course:** 55 hours of training in airships from a commercial with an airship rating on the areas of operation listed in paragraph (d)(G) that includes at least:-

(i) 3 hours of instrument training in an airship

(ii) One cross country flight in an airship of at least 1 hours duration, a total straight line distance of more than 45 kilometer (25 nautical miles) from the original point of departure and occurring in day VFR conditions;

(iii) One cross country flight in an airship of at least 1 hours duration, a total straight line distance of more than 45 kilometer (25 nautical miles) from the original point of departure and occurring in night VFR conditions and;

(iv) 3 hours in an airship in preparation for the practical test within 60 days proceeding the date of the test

(8) **For a lighter-than-air balloon course:** Flight training from a commercial pilot with a balloon rating on the areas of operation in paragraph (d)(8) that includes at least:-

(i) For a gas balloon training

(A) Two flight of 1 hour each

(B) One flight involving a controlled ascent to at least 1,500 metre (5,000 feet) above the launch site

(C) Two flights in preparation for the practical test within 60 days proceeding the date of the test

(ii) For a balloon with an airborne heater training

(A) Two flight of 30 minutes each

(B) One flight involving a controlled ascent to at least 900 metre (3,000 feet) above the launch site

(C) Two flights in preparation for the practical test within 60 days proceeding the date of the test

(c) Use of Flight Simulators and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 30% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 20% (select the minimum figure) of the approved

course or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (c)(2) and (c)(3) of this section, if combine training takes place, a maximum of 30% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (c)(3) of this section.

(d) Each applicant shall ensure that each course includes the flight training on the following areas of operation:-

(1) For an aeroplane single engine course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport and seaplane base operations
(iv) Takeoffs, landings and go-arounds
(v) Performance manoeuvres (steep turns, spiral dive, chandelles and lazy 8)
(vi) Navigation
(vii) Slow flight and stalls
(viii) Emergency operations
(ix) High altitude operations and
(x) Postflight procedures

(2) For an aeroplane multiengine course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport and seaplane base operations
(iv) Takeoffs, landings and go-arounds
(v) Performance manoeuvres (steep turns, spiral dive, chandelles and lazy 8)
(vi) Navigation
(vii) Slow flight and stalls
(viii) Emergency operations
(ix) Multiengine operations
(x) High altitude operations and
(xi) Postflight procedures

(3) For a helicopter course –

(i) Preflight preparation
(ii) Preflight procedure
(iii) Airport and helicopter base operations
(iv) Hovering manoeuvres
(v) Takeoffs, landings and go-arounds
(vi) Performance manoeuvres
(vii) Navigation
(viii) Emergency operations

(ix) Special operations

(x) Postflight procedures

(4) For a rotorcraft gyroplane course –

(i) Preflight preparation

(ii) Preflight procedure

(iii) Airport operations

(iv) Takeoffs, landings and go-arounds

(v) Performance manoeuvres

(vi) Navigation

(vii) Flight at slow airspeeds

(viii) Emergency operations

(ix) Postflight procedures

(5) For an initial aeroplane course –

(i) Preflight preparation

(ii) Preflight procedure

(iii) Airport and seaplane base operations

(iv) Takeoffs, landings and go-arounds

(v) Performance manoeuvres

(vi) Ground reference manoeuvres

(vii) Navigation

(viii) Slow flight and stalls

(ix) Emergency operations

(x) Postflight procedures

(6) For a glider course –

(i) Preflight preparation

(ii) Preflight procedure

(iii) Airport and gliderport operations

(iv) Takeoffs, launches/tows and landings

(v) Performance speeds

(vi) Soaring techniques

(vii) Performance manoeuvres

(viii) Navigation

(ix) Slow flight and stalls

(x) Emergency operations

(xi) Postflight procedures

(7) For a lighter-than-air airship course –

(i) Fundamentals of instructing

(ii) Technical subjects

(iii) Preflight Preparation

(iv) Preflight lesson of a manoeuvre to be performed in flight

(v) Preflight procedure

(vi) Airport operations

(vii) Takeoffs, landings and go arounds

(viii) Performance manoeuvres

(ix) Navigation
(x) Emergency operations
(xi) Postflight procedures

(8) For a lighter-than-air balloon course –

(i) Fundamentals of instructing
(ii) Technical subjects
(iii) Preflight preparation
(iv) Preflight lesson of a manoeuvre to be performed in flight
(v) Preflight procedure
(vi) Airport operations
(vii) Takeoffs and landings
(viii) Performance manoeuvres
(ix) Navigation
(x) Emergency operations
(xi) Postflight procedures

4. Solo Training

Each approved course includes at least the following solo flight training:-

(a) For aeroplane single engine course: 60 hours (it can include no more than 50 hours of pilot in command flight training) of solo flight training in a single engine aeroplane on the areas of operation in section 4, paragraph (d)(1) that include at least-

(1) One solo cross country flight with landings at a minimum of three points and one segment of flight consisting of a straight-line distance of at least 450 kilometre (250 nautical miles) between takeoff and landing location
(2) 5 hours in night VFR conditions with 10 takesoffs and 10 landing with each landing involving a flight with a traffic pattern at an airport with an operating control tower

(b) **For aeroplane multiengine course:** 10 hours (it can include pilot in command flight training) of solo flight training on a multiengine aeroplane and 50 hours (it can include pilot in command flight training) of solo flight training in an aeroplane on the areas of operation in section 4, paragraph (d)(2) of this appendix that include at least-

(1) One solo cross country flight with landings at a minimum of three points and one segment of flight consisting of a straight-line distance of at least 450 kilometre (250 nautical miles) between takeoff and landing location
(2) 5 hours in night VFR conditions with 10 takesoffs and 10 landing with each landing involving a flight with a traffic pattern at an airport with an operating control tower

(c) **For a rotorcraft helicopter course**: 25 hours (it can include no more than 15 hours of pilot in command flight training) of solo flight training in a rotorcraft helicopter on the applicable areas of operation in section 4, paragraph (d)(3) of this appendix that includes the following:

(1) One solo 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 90 kilometre (50 nautical miles) between the takeoff and landing location and
(2) 5 hours in night VFR conditions with 10 takesoffs and 10 landing with each landing involving a flight with a traffic pattern at an airport with an operating control tower

(d) **For a rotorcraft gyroplane course.** 20 hours (it can include no more than 10 hours of pilot in command flight training) of solo flight training in a rotorcraft gyroplane on the applicable areas of operation in section 4, paragraph (d)(4) of this appendix that includes the following:

(1) One solo 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 90 kilometre (50 nautical miles) between the takeoff and landing location and

(2) 5 hours in night VFR conditions with 10 takesoffs and 10 landing with each landing involving a flight with a traffic pattern at an airport with an operating control tower

(e) **For a primary aeroplane course.** 20 hours (it can include no more than 10 hours of pilot in command flight training) of solo flight training in an initial aeroplane on the applicable areas of operation in section 4, paragraph (d)(5) of this appendix that includes one solo 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 90 kilometre (50 nautical miles) between the takeoff and landing location and

(f) **For a glider course.** Five training flight on the glider on the applicable areas of operation in section 4, paragraph (d)(6) of this appendix and the launch and tow procedures appropriate for the approved course.

(g) **For a lighter-than-air airship course.** 20 hours of flight training in the applicable areas of operation shown in section 4, paragraph (d)(7) of this appendix in an airship performing the functions of pilot in command while under the supervision of a commercial pilot with an airship rating.

(1) One solo 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 45 kilometre (25 nautical miles) between the takeoff and landing location and

(2) 5 hours in night VFR conditions with 10 takesoffs and 10 landing with each landing involving a flight with a traffic pattern at an airport with an operating control tower

(h) **For a lighter-than-air balloon course.**

Two solo flights in a balloon with an airborne heater or al 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. Training on the applicable areas of operation in section 4, paragraph (d)(8) of this appendix.

6. Stage Check and End-of-Course Tests

(a) Each student, to graduate from a commercial pilot licensing course shall satisfactory accomplish the stage checks and end-of-course tests, consisting of the applicable areas of operation listed in section 4, paragraph (d) of this appendix for the aircraft category and class rating.

(b) Each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight

Appendix D Airline Transport Pilot Licensing Course

1. Applicability

This appendix prescribes the minimum curriculum for a airline transport pilot licensing course for the following ratings:-

(a) Aeroplane single engine
(b) Aeroplane multiengine
(c) Rotorcraft helicopter

2. Eligibility for Enrolment

Prior to enrolling in the flight portion of the airline transport pilot licensing course, a person shall-

(a) Meet the requirement prescribe in CCAR-61, section G
(b) Hold at least a commercial pilot license and an instrument rating
(c) Hold a foreign airline transport pilot license or foreign commercial pilot license and an instrument rating, issued by a contracting State to the Convention on International Civil Aviation.

3. Aeronautical Knowledge Areas

(a) Each course includes at least 40 hours of ground training on the applicable aeronautical knowledge areas listed in paragraph (b) of this section, appropriate to the aircraft category and class rating:
(b) The ground training includes the following aeronautical knowledge areas:-
(1) Applicable Civil Aviation Authority of China that relate to airline transport pilot privileges, limitations and flight operations
(2) Meteorology, including knowledge of and effects of fronts, frontal characteristics, cloud formations, icing, and upper air data
(3) General system of weather and NOTAM collection, dissemination, interpretation and use
(4) Interpretation and use of weather charts, maps, forecasts, sequence reports, abbreviations, symbols,
(5) National Weather Service functions as they pertain to operations in the National Airspace System
(6) Windshear and microburst awareness, identification and avoidance
(7) Principles of air navigation under instrument meteorological conditions in the China Airspace System
(8) 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
(9) Aerodynamics relating to an aircraft's flight characteristics and performance in normal and abnormal flight regimes
(10) Human factors
(11) Aeronautical decision making and judgement and

(12) Crew resource management to include crew communication and co-ordination

4. Flight Training

(a) Each each course includes at least 25 hours of flight training on the applicable areas of operation listed in paragraph (c), including at least 15 hours of be instrument flight training and

(b) Use of Flight Simulator and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 50% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 25% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (b)(2) and (b)(3) of this section, if combine training takes place, a maximum of 50% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (b)(3) of this section.

(c) Each applicant shall ensure that each course includes flight training on the following areas of operation, as applicable:

(1) Preflight preparation
(2) Preflight procedures
(3) Takeoff and departure phase
(4) In-flight manoeuvres
(5) Instrument procedures
(6) Landing and approaches to landings
(7) Normal and abnormal procedures
(8) Emergency procedures and
(9) Postflight procedures

5. Stage checks and End-of-Course Tests

(a) Each student, to graduate from a air transport pilot licensing course shall satisfactory accomplish the stage checks and end-of-course tests, consisting of the applicable areas of operation listed in section 4, paragraph (c) of this section for the aircraft category and class rating.

(b) Each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight

Appendix E Flight Instructor Licensing Course

1. Applicability

This appendix prescribes the minimum curriculum for a flight instructor licensing course and additional flight instructor rating course required under the following rating:-

(a) Aeroplane single engine

(b) Aeroplane multiengine

(c) Rotorcraft helicopter

(d) Rotorcraft gyroplane

(e) Primary aeroplane

(f) Glider aeroplane

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

3. Aeronautical Knowledge Training

(a) Each course must includes at least the following ground training in the aeronautical knowledge areas listed in paragraph (d) of this section

  (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) The ground training includes the following:-

  (1) The fundamentals of instructing, including:-

    (i) The learning process

    (ii) Elements of effective teaching

    (iii) Student evaluation and testing

    (iv) Course development

    (v) Lesson planning and

    (vi) Classroom training techniques

  (2) The aeronautical knowledge areas required for training:-

    (i) A private and commercial pilot license that is appropriate to the category and class rating sought and

    (ii) An instrument rating that is appropriate to the aircraft category and class rating for which the course applies

(c) The pilot school may credit a student who satisfactorily completes his education at a college or university that is recognised by CAAC with no more than 20 hours of the training required in paragraph (a)(1)

4. Flight Training

(a) Each approved course must includes at least the following flight training on the applicable areas of operation of paragraph(c), suitable and related instructor course details. The training hours should not be lesser than the following:
(1) 25 hours for an aeroplane and rotorcraft rating
(2) 15 hours for primary aeroplane rating
(3) 10 hours for a glider rating including 10 training flight

(b) Use of Flight Simulators and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 10% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 5% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (b)(2) and (b)(3) of this section, if combine training takes place, a maximum of 10% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (b)(3) of this section.

(c) For the category and class aircraft shown below, shall ensure that each course includes flight training in the following areas of operation, as applicable:

(1) For single engine aeroplane course

(i) Fundamentals of instructing
(ii) Technical subject areas
(iii) Preflight preparation
(iv) Preflight lesson on a manoeuvre to be performed in flight
(v) Preflight procedure
(vi) Airport and seaplane base operations
(vii) Takeoffs, 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
(xiv) Postflight procedures

(2) For multiengine aeroplane course

(i) Fundamentals of instructing

(ii) Technical subject areas
(iii) Preflight preparation
(iv) Preflight lesson on a manoeuvre to be performed in flight
(v) Preflight procedure
(vi) Airport and seaplane base operations
(vii) Takeoffs, 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
(xiv) Multiengine operations
(xv) Postflight procedures

(3) For helicopter course

(i) Fundamentals of instructing
(ii) Technical subject areas
(iii) Preflight preparation
(iv) Preflight lesson on a manoeuvre to be performed in flight
(v) Preflight procedure
(vi) Airport and helicopter base operations
(vii) Hovering manoeurves
(viii) Takeoffs, landings and go-arounds
(ix) Fundamentals of flight
(x) Performance manoeuvres
(xi) Emergency operations
(xii) Special operations
(xiii) Postflight procedures

(4) For Rotorcraft gyroplane course

(i) Fundamentals of instructing
(ii) Technical subject areas
(iii) Preflight preparation
(iv) Preflight lesson on a manoeuvre to be performed in flight
(v) Preflight procedure
(vi) Airport operations
(vii) Takeoffs, landings and go-arounds
(viii) Fundamentals of flight
(ix) Performance manoeuvres
(x) Flight at slow airspeeds
(xi) Ground reference manoeuvres
(xii) Emergency operations
(xiii) Postflight procedures

(5) For primary aeroplane course

(i) Fundamentals of instructing

(ii) Technical subject areas
(iii) Preflight preparation
(iv) Preflight lesson on a manoeuvre to be performed in flight
(v) Preflight procedure
(vi) Airport and seaport base operations
(vii) Takeoffs, landings and go-arounds
(viii) Fundamentals of flight
(ix) Performance manoeuvres
(x) Ground reference manoeuvres
(xi) Slow flight, stalls and spins
(xii) Basic instruments flight
(xiii) Emergency operations
(xiv) Postflight procedures

(6) For glider course

(i) Fundamentals of instructing
(ii) Technical subject areas
(iii) Preflight preparation
(iv) Preflight lesson on a manoeuvre to be performed in flight
(v) Preflight procedure
(vi) Airport operations
(vii) Launch/tow takeoffs or manual takeoffs, landings and go-arounds (if applicable)
(viii) Fundamentals of flight
(ix) Performance speed
(x) Soaring techniques
(xi) Performance manoeuvre
(xii) Slow flight, stalls and spins
(xiii) Emergency operations
(xiv) Postflight procedures

5. Stage checks and End-of-Course Tests

(a) Each student, to graduate from a flight instructor course shall satisfactory accomplish the stage checks, end-of-course tests, inspection and examination consisting of the applicable areas of operation listed in section 4, paragraph (c) of this appendix.

(b) A student enrolled in a flight instructor aeroplane rating or flight instructor glider rating course shall have:

(1) Received a logbook endorsement from a licensed 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

(2) Demonstrated instructional proficiency in stall awareness, spin entry, spins and spin recovery procedures.

Appendix F Flight Instrument Instructor Rating
(Aeroplane and Helicopter Instrument Instructor Rating)

1. Applicability

This appendix prescribes the minimum curriculum for a airline transport pilot licensing course for the following ratings:-

(a) Aeroplane instrument flight instructor

(b) Helicopter instrument flight instructor

2. Eligibility for Enrolment

An instructor shall hold, prior to enrolling in the flight portion of the course:-

(a) A commercial pilot license or an airline transport pilot licenses, must have the appropriate category and class rating sought when applying for the position

(b) For other pilot license holders, an instrument rating that is appropriate to the rating sought

3. Aeronautical Knowledge Training

(a) Each applicant shall ensure that each course includes at least 15 hours of ground training on the applicable aeronautical knowledge areas listed in paragraph (b)

(b) The ground training will include the following:

(1) The fundamental of instructing, including:

(i) The learning process

(ii) Elements of effective teaching

(iii) Student evaluation and testing

(iv) Course developement

(v) Lesson planning

(vi) Classroom training techniques

(2) 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 shall ensure that each course includes at least 15 hours of flight training in the applicable areas of operation of paragraph (c)

(b) Use of Flight Simulators and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 10% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 5% (select the minimum figure) of the approved course

or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (b)(2) and (b)(3) of this section, if combine training takes place, a maximum of 10% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (b)(3) of this section.

(c) Each approved course for the flight instructor-instrument rating includes flight training for the related aeroplane category and rating on the following areas:

(i) Fundamentals of instructing
(ii) Technical subject areas
(iii) Preflight preparation
(iv) Preflight 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
(x) Postflight procedures

5. Stage checks and end-of-course tests

Each student, to graduate from a flight instructor instrument course shall satisfactorily accomplish the stage check, end-of-course test, inspection and examination consisting of the applicable areas of flight instructor instrument rating operation listed in section 4, paragraph (c) of this section.

Appendix G Ground Instructor License Course

1. Applicability

This appendix prescribes the minimum curriculum for a ground instructor license course and an additional ground instructor rating course, issued under the following ratings:-

(a) Ground Instructor: Basic

(b) Ground Instructor: Advanced

(c) Ground Instructor: Instrument

2. Aeronautical Knowledge Training

(a) Each course must include at least the following ground training on the applicable knowledge areas listed in paragraph (b), (c), (d) and (e) of this section, appropriate to the ground instructor rating:-

(i) 20 hours of training for an initial issuance of a ground instructor certificate

(ii) 10 hours of training for an additional ground instructor rating

(b) The ground training will include the following:-

(i) Learning Process

(ii) Elements of effective teaching

(iii) Student evaluation and testing

(iv) Course Development

(v) Lesson Planning

(vi) Classroom training technique

(c) The ground training for a basic ground instructor license includes the aeronautical knowledge area applicable to a private pilot.

(d) The ground training for an advanced ground instructor license includes the aeronautical knowledge area applicable to a private, commercial and airline transport pilot.

(e) The ground training for an instrument ground instructor license includes the aeronautical knowledge area applicable to an instrument rating.

(f) A pilot school may credit a student who satisfactory completed the education at a college or university recognised by the CAAC with 10 hours of the training required in paragraph (a)(1).

3. Stage Check and End-of-Course Test

Each student, to graduate from a ground instructor course shall satisfactory accomplish the stage checks, end-of-course tests, inspection and examination consisting of the applicable areas of operation listed in section 2, paragraph (b), (c), (d) and (e).

Appendix H Additional Aircraft Category or Class Rating Course

1. Applicability

This appendix prescribes the minimum curriculum for an additional aircraft category rating course or an additional aircraft class rating course required for the following:-

(a) Aeroplane single-engine
(b) Aeroplane multiengine
(c) Rotorcraft helicopter
(d) Rotorcraft gyroplane
(e) Primary Aeroplane
(f) Glider
(g) Lighter-than-air airship
(h) Lighter-than-air balloon

2. Eligibility for Enrolment

A person shall hold the level of pilot license 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 approved course for an additional aircraft category rating or additional aircraft 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 sough under appendix (A), (C) and (D).

4. Flight Training

(a) Each course for an additional aircraft category rating or additional aircraft class rating includes the total number of hours of flight training in all of the areas of operation of the appendix A, C and D appropriate to the aircraft rating and pilot license level for which the course applies.

(b) Use of Flight Simulators and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 30% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 20% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (b)(2) and (b)(3) of this section, if combine training takes place, a maximum of 30% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (b)(3) of this section.

5. Stage Check and End-of-Course Tests

(a) Each student, to graduate from a commercial pilot licensing course shall satisfactory accomplish the stage checks and end-of-course tests, consisting of the applicable areas of operation listed in paragraph 4 for the aircraft category and class rating.

(b) Each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight

Appendix I Aircraft Type Rating Course (Not ATPL)

1. Applicability

This appendix prescribes the minimum curriculum for an aircraft type rating course for:

(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
(d) Other aircraft type rating specified by the CAAC through the aircraft type certificate procedures

2. Eligibility for Enrolment

Prior to enrolling in the flight portion of an aircraft type rating course, a person shall hold at least a private or a commercial pilot license and

(a) 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 VFR limitation or
(b) Be concurrently enrolled in an instrument rating course in an aircraft of the type of rating sought and pass the required instrument rating practical test concurrently with the type rating practical test.

3. Aeronautical Knowledge Training

(a) Each course includes at least 10 hours of ground training on the applicable aeronautical knowledge areas listed in paragraph (b)
(b) The ground training includes the following aeronautical areas:-
(1) Proper control of the airspeed, configuration, direction, altitude and attitude according to procedures and limitations stated in the aircraft flight manual, checklist or other approved materials appropriate to the aircraft type.
(2) Compliance with approved enroute, instrument approach, missed approach, ATC or other applicable procedures that apply to the aircraft type.
(3) Subjects requiring a practical knowledge of the aircraft type and its powerplant, systems, components, operational and performance factors
(4) The aircraft's normal, abnormal and emergency procedures and the operations and limitation relating thereto,
(5) Appropriate provision of the approved aircraft's flight manual
(6) Location of and purpose of inspecting each item on the aircraft's checklist that relate to the exterior and interior pre-flight and
(7) Use of the aircraft's prestart check list, appropriate control system checks, starting procedures, radio and electronic equipment checks and the selection of proper navigation and communication radio facilities and frequencies.

3. Flight Training

(a) Each approved training course must includes at least:

(1) Flight training on the applicable areas of operation of paragraph (c) in the aircraft type for which the course applies and

(2) 10 hours of flight training, including at least 5 hours of instrument training in the aircraft for which the course applies

(b) Use of Flight Simulators and Flight Training Devices

(1) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(2) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 50% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(3) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 25% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(4) Training conducted in both the flight simulator or flight training devices describe in paragraphs (b)(2) and (b)(3) of this section, if combine training takes place, a maximum of 50% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (b)(3) of this section.

(c) Each approved type rating course must includes the flight training on the following areas of operation-

(1) For single engine aeroplane type rating course

(i) Preflight preparation

(ii) Preflight procedures

(iii) Takeoff and departure phrase

(iv) In-flight manoeuvres

(v) Instrument procedures

(vi) Landing and approaches to landings

(vii) Normal and abnormal procedures

(viii) Emergency Procedure

(ix) Postflight Procedure

(2) For multiengine aeroplane type rating course

(i) Preflight preparation

(ii) Preflight procedures

(iii) Takeoff and departure phrase

(iv) In-flight manoeuvres

(v) Instrument procedures

(vi) Landing and approaches to landings

(vii) Normal and abnormal procedures

(viii) Emergency Procedure

(ix) Postflight Procedure

(3) For rotorcraft helicopter type rating course
(i) Preflight preparation
(ii) Preflight procedures
iii) Takeoff and departure phrase
(iv) In-flight maneuvers
(v) Instrument procedures
(vi) Landings and approaches to landings
(vii) Normal and abnormal procedures
(viii) Emergency procedures and
(ix) Postflight procedures

(4) Other aircraft type rating specified by the Administrator
(i) Preflight preparation
(ii) Preflight procedures
(iii) Takeoff and departure phrase
(iv) In-flight maneuvers
(v) Instrument procedures
(vi) Landings and approaches to landings
(vii) Normal and abnormal procedures
(viii) Emergency procedures and
(ix) Postflight procedures

5. Stage Check and End-of-Course Tests

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

Appendix J Special Preparation Course

1. Applicability

This appendix prescribes the minimum curriculum for the special preparation courses that are listed in section 141.13

2. Eligibility for Enrolment

Prior to enrolling in the flight portion of a special preparation course, a person shall hold a pilot license, flight instructor certificate or ground school license that is appropriate for the exercise of the operating privileges or authorisations sought.

3. General Requirement

(a) Applicant for the special preparation course should fulfilled the following requirement:

(1) Meet the appropriate requirements of this Appendix

(2) Prepare the graduate with the necessary skills, competency and proficiency to exercise safely the privileges of the certificate, rating or authorisation for which the course is established.

(b) An approved special preparation course must include ground and flight training on the operating privileges or authorisation sought, developed competency, proficiency, resourceful, self confidence and self reliance in the student

4. Use of Flight Simulators and Flight Training Devices

(a) The training would include lesson conducted either in the simulator or flight training devices, it must represent the aircraft for which the training is conducted and will be or is specifically qualified and approved by the authority. It is used only for training given by an authorised instructor

(b) Training conducted in the simulator that meet the requirement stated in section 141.55(a) can credit no more than 10% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(c) Training conducted in the flight training device that meet the requirement stated in section 141.55(b) can credit no more than 5% (select the minimum figure) of the approved course or regulation total flight hours requirement.

(d) Training conducted in both the flight simulator or flight training devices describe in paragraphs (b)(2) and (b)(3) of this section, if combine training takes place, a maximum of 10% (select the minimum figure) of the total flight training hours of the approved course can be credited. However, the credit for training conducted in the flight training device that meets the requirement of 141.55(b) cannot exceed the limitation stated in paragraph (b)(3) of this section.

5. Stage checks and end-of-course tests

Each student, to graduate from a special preparation course shall satisfactorily accomplish the stage check, end-of-course test, inspection and examination consisting of the applicable areas of special preparation course operation according to the school approved training course.

6. Agricultural Aircraft Operations Course

A special preparation course for the pilots in agricultural aircraft operations shall include at the following:

(a) 25 hours of flight training including:

(1) Agricultural aircraft operations

(2) Safe piloting operating practices and procedures for handling, dispensing and disposing agricultural and industrial chemicals, including operating in and around congested areas and

(3) Applicable provision of CCAR 91, section M

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

7. Rotorcraft external load operation course

A special preparation course for the pilots of external load operations shall include at least the following:

(a) 10 hours training on the following:

(1) Rotorcraft external-load operations

(2) Safe piloting operating practices and procedures for external load operations, including operating in and around congested areas and

(3) Applicable provision of CCAR 91, section N

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

8. Test Pilot Course

A special preparation course for the test pilot duties should include at least the following:

(a) Aeronautical Knowledge Training

(1) Performing aircraft maintenance, quality assurance and certification test flight operations

(2) Safe piloting operating practices and procedures for external load operations, including operating in and around congested areas and

(3) Applicable parts of the CAAC regulations that pertain to aircraft maintenance, quality assurance and certification tests.

(4) Duties and responsibilities of a test pilot

(b) 15 hours of flight training on the duties and responsibilities of a test pilot.

9. Special Operations Course

A special preparation course for pilots in special operations that are mission –specific for certain aircraft shall include at the least the following:

(a) Aeronautical Knowledge training on:

(1) Performing that special flight operation

(2) Safe piloting operating practices and procedures for performing that special flight operation.

(3) Applicable part of CAAR regulations that pertain to that special flight operation and

(4) Pilot in command duties and responsibilities for performing that special flight operation.

(b) Flight Training
(1) Flight training on that special flight operation
(2) Safe piloting operating practices and procedures for performing that special flight operation.

10. Pilot Refresher Course

A special preparation pilot refresher course for a pilot license, aircraft category and class rating or an instrument rating shall include at least the following:
(a) 4 hours of aeronautical knowledge training on:
(1) The aeronautical knowledge areas that are applicable to the level of pilot license, category rating, class rating or instrument rating sought
(2) Safe piloting operating practices and procedures and
(3) Applicable provision of CCAR 61 and CCAR 91 pertaining to pilot regulations
(b) 6 hours of flight training on the areas of operation that are applicable to level of pilot license, aircraft category and class rating or instrument rating, as appropriate for performing pilot-in-command duties and responsibilities

11. Flight Instructor Refresher Course

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-
(1) The aeronautical knowledge areas that apply to student, private, commercial pilot licenses and instrument rating under CCAR 61
(2) The aeronautical knowledge areas that apply to flight instructor certificates under CCAR 61
(3) Safe piloting operating practices and procedures, including airport operations and operating in the Airspace system.
(4) Applicable provision of CCAR 61 and CCAR 91
(b) Review the following Flight Training
(1) the areas of operations applicable to student, private and commercial pilot licenses and instrument rating and
(2) The skills, competency and proficiency for performing flight instructor duties and responsibilities.

12. 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 under CCAR 61.
(b) the aeronautical knowledge area that apply to ground instructor under CCAR 61.
(c) Safe piloting operating practices and procedures, including airport operations and operating in the Airspace system.
(d) Applicable provision of CCAR 61 pertaining to flight and ground instructor.

Appendix K Pilot Ground School Course

1. Applicability

This appendix prescribes the minimum curriculum for a pilot ground school course.

2. General Requirements

An approved training course for a pilot ground school shall include training on the aeronautical knowledge areas that are:

(a) Need to safely exercise the privileges of the certificate, rating and 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 Requirement

An approved pilot ground school course shall include the following:

(a) The aeronautical knowledge training that is appropriate to the aircraft rating and pilot license level for which the course applies

(b) An adequate number of total aeronautical knowledge training hours appropriate to the aircraft rating and pilot license level for which the course applies

4. Stage Check and End-of-Course Tests

Each person, to graduate from a pilot ground school course shall satisfactorily accomplish the stage checks, end-of-course tests, inspection and examinations consisting of areas of operation that are appropriate to the operating privileges or authorisation that graduation from the course will permit