
APPENDIX R62.08
NATIONAL PILOT LICENCE
GYROPLANES
THEORETICAL KNOWLEDGE COURSE

1. Aim of training course

The aim of the course is to train a candidate to the level of proficiency required for the issue of a category rating for gyroplanes, and to provide the training necessary to act as pilot-in-command of any gyroplane for which he or she holds a valid type rating, engaged in non-revenue flights under visual flight rules.

2. Theoretical knowledge course

2.1 The theoretical knowledge course must cover the subjects as detailed in the syllabus:

- (a) Principles of Flight
- (b) Aviation Legislation
- (c) Navigation
- (d) Meteorology
- (e) Aircraft Technical General
- (f) Human factors and passengers care

2.2 Restricted Radio Telephony Operator's Certificate as prescribed in AIC 30.9

3. Theoretical knowledge course syllabus

(a) **PRINCIPLES OF FLIGHT**

- (1) Physics and Mechanics
- (2) The forces on an aircraft in flight.
- (3) Aerofoils.
- (4) Propeller theory
- (5) Flying controls.
- (6) Rotor system lifting and operation principles.
- (7) Rotor stalls principles.
- (8) Characteristics at the stall including factors affecting blade stall conditions and gyroplane behavior at blade stall.
- (9) Avoidance of blade stall
- (10) Equilibrium.
- (11) Mass and Balance.
- (12) Stability.
- (13) Climbing and descending.
- (14) Turning.
- (15) Manoeuvres, including high- and low speed flight.

(16) Aircraft Performance.

(b) AVIATION LEGISLATION

- (1) All applicable Acts, Regulations, Standards and other statutory promulgated documents with particular emphasis on operation of non-type certificated aircraft, related to-
- (2) The hierarchy, interaction applicability and administrative functions of the controlling bodies promulgating these statutory rules and regulations.
- (3) The processes for proposed amendment to these.
- (4) Classification of aircraft.
- (5) Aircraft documentation.
- (6) Documents and records to be maintained and produced on request.
- (7) Offences in relating to documents and records.
- (8) Airworthiness.
- (9) Flight crew licensing.
- (10) Recreational pilot license - Privileges and limitations.
- (11) Logbooks.
- (12) Classification of Airspace.
- (13) General flight rules.
- (14) Incident/accident reporting.
- (15) Prohibition of international operations

(c) NAVIGATION

- (1) Form of the earth.
- (2) Magnetic variation.
- (3) Compass deviation.
- (4) Principles of navigation.
- (5) Maps and charts.
- (6) Map reference information.
- (7) Map reading.
- (8) Methods of map reading.
- (9) Flight preparation.
- (10) Flight planning.
- (11) Weather forecasts and reports.
- (12) Practical navigation.
- (13) Global Positioning Systems
 - (i) Form of the earth, including principles for direction and distance measuring.

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- (ii) Aeronautical maps and charts, including projections and their unique properties and the interpretation of all features.
- (iii) All principles of navigation, including all aspects of track plotting, heading measurement, wind effect, map reading, keeping a track plot, position fixes, and situational awareness.
- (iv) All principles of flight planning, including selection of proper maps and charts, weather and other information services, safety heights, fuel and alternate landing considerations, filing a flight plan and keeping a nav log.
- (v) Principles, and use of Global Positioning System as an aid to confirm position on map and not as main VMC navigation

(d) METEOROLOGY

- (1) The atmosphere.
- (2) Air pressure / temperature / density.
- (3) Pressure systems and wind.
- (4) Humidity and precipitation.
- (5) Cloud formation.
- (6) Thunderstorms.
- (7) Visibility.
- (8) Air masses.
- (9) Frontal systems.
- (10) Micro-meteorology.
- (11) Climatology.
- (12) Altimetry.
- (13) Effects of density altitude on aircraft performance.
- (14) Flight over mountainous areas.
- (15) Ice accretion on aircraft.
- (16) The World Meteorology Organization.
- (17) Weather forecasting.
- (18) Weather information for flight planning /METAR / TAF.
- (19) Meteorological broadcasts for aviation / ATIS / SIGMET

(e) AIRCRAFT TECHNICAL GENERAL

- (1) All aspects of rotating wing (rotor) design principles, handling, care and inspection.
- (2) All aspects of the airframe design principles, airframe systems and their ancillaries, including handling and care.
- (3) All aspects of the power plant and ancillary systems

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- (4) All aspects of flight and engine instruments
- (5) All aspects of installed and / or mobile radio aids and radio navigation systems.
- (6) Description and use of fire extinguisher, first aid kit and other safety equipment

(f) HUMAN FACTORS AND PASSENGERS CARE

- (1) All aviation physiological medical aspects related to the microlight pilot.
- (2) Toxic hazards, including tobacco smoking, alcohol and drugs.
- (3) Stress and management of stress.
- (4) All aviation psychology aspects related to flight operations, including personality styles, compulsive behavior.
- (5) Human performance and limitations.
- (6) Judgement and decision making.
- (7) Risk assessment.
- (8) Development of situational awareness

Briefing and care of passengers

- (1) Pre-flight briefing, including all applicable legal aspects like indemnities (the pilot can NOT contract out of negligence!).
- (2) Description of aircraft and basic principles of flying and airmanship.
- (3) Mounting, dismounting and the dangers of loose articles