

# Syllabus

## DE Lehrplan

The following table and list contains the syllabus for **theoretical knowledge instruction** for the BPL:

Note:

The content of Subjects 5 (Principles of flight), 6 (Operational procedures), 7 (Flight performance and planning), and 8 (Aircraft general knowledge, envelope and systems and emergency equipment) should contain aspects as relevant for the class of balloon used for the training, unless a certain element is specifically marked as relevant for one particular class only.

1. Air Law and ATC Procedures	2. Human Performance	3. Meteorology
4. Communications	5. Principles of flight	6. Operational Procedures
7. Flight performance and planning	8. Aircraft General knowledge, envelope and systems and emergency equipment	9. Navigation

## 1. AIR LAW and ATC Procedures

- 1.1. International law: conventions, agreements and organisations
- 1.2. Airworthiness of aircraft
- 1.3. Aircraft nationality and registration marks
- 1.4. Personnel licensing
- 1.5. Rules of the air
- 1.6. Procedures for air navigation: aircraft operations
- 1.7. Air traffic regulations: airspace structure
- 1.8. Air traffic services (ATS) and air traffic management (ATM)
- 1.9. Aeronautical information services (AIS)
- 1.10. Aerodromes, external take-off sites
- 1.11. Search and rescue
- 1.12. Security
- 1.13. Accident reporting
- 1.14. National law

## **2. HUMAN PERFORMANCE**

- 2.1. Human factors: basic concepts
- 2.2. Basic aviation physiology and health maintenance
- 2.3. Basic aviation psychology
- 2.4. Use of oxygen

## **3. METEOROLOGY**

- 3.1. The atmosphere
- 3.2. Wind
- 3.3. Thermodynamics
- 3.4. Clouds and fog
- 3.5. Precipitation
- 3.6. Air masses and fronts
- 3.7 Pressure systems
- 3.8. Climatology
- 3.9. Flight hazards
- 3.10. Meteorological information

## **4. COMMUNICATIONS**

- 4.1. Definitions
- 4.2. VFR communications
  - 4.2.1 VFR communication at uncontrolled airfields
  - 4.2.2. VFR communication at controlled airfields
  - 4.2.3. VFR communication with ATC (en-route)
- 4.3. General operating procedures
- 4.4. Relevant weather information terms (VFR)
- 4.5. Action required to be taken in case of communication failure

4.6. Distress and urgency procedures

4.7. General principles of VHF propagation and allocation of frequencies

## **5. PRINCIPLES OF FLIGHT**

5.1. Principles of flight

5.2. Aerostatics

5.3. Loading limitations

5.4. Operational limitations

## **6. OPERATIONAL PROCEDURES**

6.1. General requirements

6.2. Special operational procedures and hazards (general aspects)

6.3. Emergency procedures

## **7. FLIGHT PERFORMANCE AND PLANNING**

7.1. Mass

7.1.1. Purpose of mass considerations

7.1.2. Loading

7.2. Performance

7.2.1. Performance: general

7.3. Flight planning and flight monitoring

7.3.1. Flight planning: general

7.3.2.1. Fuel planning (hot-air balloons only)

7.3.2.2. Ballast planning (gas balloons only)

7.3.3. Pre-flight preparation

7.3.4. ICAO flight plan (ATS flight plan)

7.3.5. Flight monitoring and in-flight re-planning

## **8. AIRCRAFT GENERAL KNOWLEDGE, ENVELOPE AND SYSTEMS AND EMERGENCY EQUIPMENT**

- 8.1. System design, loads, stresses and maintenance
- 8.2. Envelope
- 8.3.1. Burner (hot-air balloon only)
- 8.3.2. Basket
- 8.4.1 Fuel cylinders (hot-air balloons only)
- 8.4.2. Lifting gas (gas balloons only)
- 8.5. Ballast (gas balloons only)
- 8.6. Fuel (hot-air balloons only)
- 8.7. Instruments
- 8.8. Emergency equipment

## **9. NAVIGATION**

- 9.1. General navigation
- 9.2. Basics of navigation
- 9.3. Magnetism and compasses
- 9.4. Charts
- 9.5. Dead reckoning navigation
- 9.6. In-flight navigation
- 9.7. Use of GNSS
- 9.8. Use of ATS

## **Source**

AMC1 BFCL.130 BPL — Training course and experience requirements

THEORETICAL KNOWLEDGE INSTRUCTION FOR THE BPL

Source: Annex I to ED Decision 2020/003/R

## General

The training should cover aspects related to non-technical skills in an integrated manner, taking into account the particular risks associated with the licence and the activity. The theoretical knowledge instruction provided by the declared training organisation (DTO) or approved training organisation (ATO) should include a certain element of formal classroom work but may also include other methods of delivery — for example, interactive video, slide or tape presentation, computer-based training and other media distance-learning courses. The training organisation responsible for the training has to check whether all the appropriate elements of the training course of theoretical knowledge instruction have been completed to a satisfactory standard before recommending the applicant for the examination.

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