



## **Irish Powered Paragliding & Hanggliding Association**

Below is a summary of the IPPHA syllabus for EP / CP / P/ AP for Paragliding Hill Training which is combined with and part of the IPPHA FLPA (SPHG) syllabus as a complete system.

# **EP Syllabus**

Please Note: All exercises must be completed in order laid out below (except Phase 5, theory)

## **Phase 1 - Ground Training**

**Exercise 1:- Introductory Talk**

**Exercise 2:- Site Assessment and Briefing**

**Exercise 3:- Introduction to Canopy and Equipment**

**Exercise 4:- Avoiding/Minimizing Injury (parachute landing falls or PLF's)**

Time Scale: approx. 2.00 hrs into your training. At this point the student has a basic understanding of the equipment and training environment. The student should now be ready to progress to the ground based exercises as laid out below.

## **Phase 2 - Ground Handling**

**Exercise 5:- Briefing - Pre flight checks and control basics**

**Exercise 6:- Preparation -Attaching preparing equipment**

**Exercise 7:- Inflation and moving with inflated canopy**

**Exercise 8:- Directional Control - Initiating turn and looking ahead**

Time Scale: approx. 3 .5 hrs into your training. At this point the student should have a good knowledge of how to prepare the canopy for flight and understand the take off techniques "Forward / Reverse launches" which are required to achieve their first flights.

## Phase 3 - First Hops

**Exercise 9:- Getting Airborne** - We will now expand the skills learned in phase 2 and you will achieve flights showing good take-offs, steering, airspeed control and landing flare. This will take at least 12 flights or as many as it takes until perfect. Time Scale: - 1.5 full days of training or until perfect. At this point the student will be ready to make flight with up to 50ft of ground clearance. The next phase contains all the exercises needed to achieve EP, but is broken down into progressive exercises.

## Phase 4 - Flight exercises

**Exercise 10:- Eventualities Briefing**

**Exercise 11:- Communications Briefing - Radios, Bats etc..**

**Exercise 12:- Responsibilities Briefing**

These exercises are a very important part of your training and ensure safe progress.

**Exercise 13:- Maintaining course and airspeed** - Max 15m/50ft (above ground level) a minimum of 4 successful (perfect) flights must be achieved. Time Scale: - 2+ days into training or until perfect.

**Exercise 14:- Introducing Turn** - Max 30m/100ft (above ground level) with turn of between 45° and 90°. A minimum of 4 successful (perfect) flights must be achieved. Time Scale: 3 – 3.5 days into training or until perfect.

**Exercise 15:- Completing Flight Plans** - Expand all things previously learned and consolidate your skills. Student will show the required skills in unassisted launches, airspeed control, turns of 90 or more, and controlled landings in a designated area. This takes your flying abilities to Hill EP Level. Time Scale: 4 – 4.5 days into training or until perfect.

## Phase 5 - Theory and Examination

**Exercise 16:- Theory - Meteorology**

**Exercise 17:- Theory - Principles of Flight**

**Exercise 18:- Theory - Rules of the Air**

**Exercise 19:- Elementary Pilot Exam - Multiple Choice**

**Exercise 20:- Final Assessment by Instructor.**

Time Scale: This takes 1+ day of tuition. Total EP training time to 5.5+ Days or as long as it takes until perfect.

**IPPHA Elementary Pilot PG Hill completed.** NB. Times above are approximate and are best case scenario and normally will take longer due to the combined constraints of

the weather / student ability / frequency of attendance / site suitability etc....This syllabus is to be completed on as long as it takes until perfect basis

**Below is a summary of the IPPHA syllabus for Club Pilot Paragliding Hill Training which is combined with and part of the IPPHA FLPA (SPHG) syllabus as a complete system.**

## CP Syllabus.

These exercises are laid out in a logical sequence; the instructor may vary the order to suit site and weather constraints. In some circumstances site constraints may make it unsuitable to progressively increase height/turns exactly as indicated in the text. In those situations the Instructor may exercise reasonable judgement from a safety standpoint.

The total training time for the CP Syllabus: Can take another 6+ days of instruction after completing EP. It is not possible to list times of each exercise as due to the combined constraints of the weather / student ability / frequency of attendance / site suitability etc....

### Phase 6 - Pre Soaring

**Exercise 21:- Theory** - Expanded and refreshed theory of all aspect of paragliding taught on the EP syllabus.

**Exercise 22:- 180° Turns** - This will be the first time the student turn the glider through 180 or more, and possibly flying the glider down wind. The student should be aware of the dangers of this manoeuvre close to the hill.

**Exercise 23:- Planned Approaches** - You will be able to plan a short flight and be aware of the techniques behind both s-turn and constant aspect approaches. You will also be required to land within a 10m area. A minimum of 4 successful (perfect) flights must be achieved.

### Phase 7 - Soaring

**Exercise 24:- Soaring Flights** - You will reach a reasonable and consistent level of confidence at utilizing ridge lift to maintain height. This will include flying beats in a controlled manner and with good look out. A minimum of 3 flights of 10 minutes (or equivalent) must be made; at least one of which must be on either a separate hill or a separate day.

**Exercise 25:- Top Landings** - You will show good skills at top landing, including good flight planning, accurate approaches and good canopy control. A minimum of 4 successful flight must be made , at least one of witch must be on either a separate hill or a separate day.

**Exercise 26:- Flying with others** - You should show awareness of other aircraft and their characteristics, and be aware of the collision avoidance rules.

## **Phase 8 - Improving Skills**

**Exercise 27:- Exploring the Speed range** - The student should understand the hazards associated with flying to fast or to slow. As well as having a basic understanding of the speed to fly concept.

**Exercise 28:- Accelerator System** - Understand the uses and dangers of using an accelerator system (speedbar).

**Exercise 29:- Forward Launch** - Show good skill at forward launching

**Exercise 30:- Reverse Launching** - Show good skill at reverse launching.

**Exercise 31:- Weight Shift and Pitch-Roll co-ordination in turns** - You will have to show good weight shifts and pitch-roll co-ordination.

**Exercise 32:- Cross wind and Slope landings** - You should reach a reasonable and consistent level of competence at cross wind and slope landing and should be aware of the hazards associated with these hazards.

## **Phase 9- Instability and Emergencies**

**Exercise 33:- Theory** - Emergencies such as landing in water or trees and line breakage's. As well as the procedures for coping with such eventualities as a tuck or a spin.

**Exercise 34:- Active Flying** - Minor pitch oscillations induced then corrected.

**Exercise 35:- Rapid descent techniques** - This will include closing the tip cells (small B ears), weight shift steering, and re-inflating the tips. The dangers and uses of this exercise will also need to be fully explained.

**Exercise 36:- Dealing with an asymmetric tuck** - You will have to induce, fly with and correct an asymmetric tuck of between 15 - 35% ( Big ear). Initial training will be carried out on the ground and the exercise only will be carried out at a suitable altitude.

## **Phase 10 - Theory and Examination.**

**Exercise 37:- Theory - Meteorology**

**Exercise 38:- Theory - Principles of Flight**

**Exercise 39:- Theory - Rules of the Air**

**Exercise 40:- General Airmanship Knowledge**

**Exercise 41:- CP Examination - Multiple choice**

**Exercise 42:- Declaration by an IPPHA Instructor**

**IPPHA Club Pilot PG Hill completed** NB.The above text is a very much shortened version of the full syllabus and timings\_are approximate and are best case scenario and normally will take longer due to the\_combined constraints of the weather / student ability / frequency of attendance / site\_suitability constraints etc....

**This syllabus is to be completed on as long as it takes until perfect basis.**

**Below is a summary of the IPPHA syllabus for Pilot Paragliding Hill Training.**

## **Pilot Stage**

This rating is similar to Stage 4 of the FAI Para Pro and Safe Pro schemes.

After attaining Club Pilot rating:

A The TOW pilot must complete:

- 1) A minimum of 75 flights (at least 30 to above 800 feet agl).
- 2) 10 flights in each of 4 different wind directions.
- 3) 3 flights from each of 2 different sites.
- 4) 5 flights of over 10 minutes duration (PA – 5 minutes) after releasing at a height not exceeding 1500 feet agl.

B The HILL pilot must complete:

- 1) 3 take offs and 3 landings in winds of less than 5 mph.
- 2) 2 top landings at each of three different sites.
- 3) Flights from 5 different sites, at least 3 to be inland sites.
- 4) At least 3 flights of over 1 hour duration.
- 5) A minimum of 50 flights logged.
- 6) A minimum of 25 hours logged.

C ALL pilots must:

- 1) Complete 5 controlled landings in a designated area from flights of not less than 3 minutes duration. (15 metres radius for HG. 10 metres radius for PG.)
- 2) Safely demonstrate slow flight awareness and discuss the relevant symptoms and dangers. (WARNING: PG – deliberate stalls must be avoided.)
- 3) Fly co-ordinated 360° turns in both directions.
- 4) 3 flights during which thermalling height gains exceeding 1000ft are achieved (barographs are not necessary).
- 5) Pass the Pilot written examination paper.
- 6) Display an ability to fly competently and safely in the company of others; maintaining a good look-out, complying with the Rules of the Air and exhibiting good airmanship.
- 7) Demonstrate the correct attitude to continue a flying career both safely and competently.

D All PG pilots must:

- 1) Discuss and be able to explain the actions to be taken to recover from an asymmetric tuck, showing in particular full awareness of the dangers of over-countering.
- 2) Discuss and be able to explain the techniques for avoiding and recovering from stalls and spins; and emergency rapid descent techniques (B line stall and spiral dive).

# The Pilot Exam Syllabus

Any keen pilot who devotes a few evenings' study to the matter should have no problems with this exam.

Most of the required information is contained in the Pilot Handbook, although close study of an up-to-date aeronautical chart (especially the legend) is essential. Background reading is always advisable, and attendance at club lecture evenings is strongly recommended.

Once you have completed all the flying tasks for the Pilot rating, you will need to arrange a time and place to sit the exam with your club's coaching officer, a coach who has already passed the exam, or a qualified instructor. Clubs often arrange sessions where several candidates can sit their exams at once.

## **Air law and navigation**

You should:

- be able to name the official documents, sources and promulgation methods of Irish aviation law
- be able to interpret aeronautical charts (including scales, differences in the level of information depicted, validity periods, and symbols)
- understand the basic structure of Zones, Areas and Airways
- know the dimensions of ATZs and MATZs
- understand the usage of various altimeter settings (QFE, QNH, 1013.2 mb)
- know the Rules of the Air (especially the low-flying rules, the right-hand traffic rule, and the aerial collision avoidance rules)
- be able to define VMC and VFR (minima, rules)
- know the legal definitions of night, sunset and sunrise and the relevant flying restrictions relating to them
- be able to define IMC and IFR (basic differences from VMC rules)
- appreciate the factors affecting compasses (deviation and variation)
- be able to interpret warning signs
- understand commonly used abbreviations and initials
- be able to distinguish between types of airspace that permit glider entry and those that don't (e.g. AIAAs, MATZs, Danger Areas).

## **Meteorology**

You should:

- understand the relationship between wind direction and areas of high and low pressure
- be able to describe in detail a cold front and a warm front (typical clouds, conditions, pressure changes, wind changes)
- be able to identify some common high, medium and low cloud types, and give their approximate heights
- fully understand convection (the birth and development of a thermal, through to plotting the progress of a thermal given the ELR and initial temperature)
- understand, and be able to define and use, meteorological terms such as stability, instability, veer, back,

ELR, DALR, SALR, tephigram, anabatic, katabatic

- be able to describe the usual conditions associated with high- and low-pressure weather systems
- understand the causes of: valley winds throughout the day, sea breezes and sea-breeze fronts, wave lift, fog (of various types)
- fully understand and be able to interpret a synoptic chart - to the extent of being able to describe the current weather at selected locations, and to forecast likely changes
- be able to link cloud types to precipitation.

### **Flight theory and instruments**

You should:

- be able to explain in detail how a wing creates lift, including the relevance of venturi tubes and Bernoulli's theorem
- be able to define and use terms such as chord line, angle of attack, aspect ratio, centre of pressure, washout
- be able to describe the aerodynamics of the stall
- be able to simply describe factors affecting stability in pitch, roll and yaw
- understand the relationship between glide ratio and l/d ratio
- understand the effect of ballast
- be able to name the forces on a glider in steady flight and explain their relationship
- be able to name the various types of drag and explain their causes
- be able to describe the relationship between the induced, parasitic and total drag and airspeed using drag curves
- understand and be able to use a polar curve
- understand the basic working principles of altimeters and variometers