



## **QUICK GUIDE TO PASSING YOUR PPL ( General Information )**

### **Private Pilot License Training**

If you have never flown before in a light aircraft, it is a good idea to experience a taster of what to expect before committing to lessons. Nearly all flight schools offer trial lessons lasting for either 30 minutes, or one hour. You can also carry out a 'Land Away' option consisting of a lesson with a landing at another airfield, followed by a further lesson on your return trip back to your initial departing airfield. These costs will depend on the destination of your 'land away'. Obviously, the further away the other airfield is, the more expensive it will become.

The purpose of your trial lesson is to introduce you to the joy of flying. On the day you will be given a pre-flight talk on how the airplane works and how you will be able to control it. You will then go out to the aircraft with your instructor who will show you around the outside and inside of the aircraft, before starting up the airplane to taxi.

During your first lesson, the instructor will start to teach you how to fly, and you will be able to see if learning to fly is what you would like to do. At the end of the lesson, you will usually be issued a certificate, with all the details of your flight. Do ensure that you keep a hold of this.

If after the trial lesson you catch the 'flying bug' then the training for your PPL will follow a structured progressive path. The course is based upon the Joint Aviation Authority (JAA) program, which is divided into two parts. One part concerns the theoretical knowledge required (ground exams) and the other is the actual flight training. The good news here is that your trial lesson will count towards the course requirements and it will be the very first entry in your PPL logbook. You can expect the whole PPL course duration (weather and personal circumstances permitting) to be between 4 to 18 months or shorter if you commit the time and effort, see our article on Success Stories at PPL.

### **PPL Flying Syllabus**

Everyone who studies for their PPL finds the flight training part of the course the most exciting; you should be aware that you will need a great deal of determination, motivation and patience, particularly in the early stages.

During your flying training you will have to complete a minimum flight time of 45 hours. Of this 45 hours, a minimum of 25 hours will be under dual instruction, and at least 10 hours of solo flying must be carried out including at least 5 hours solo 'cross country' time; this will include a qualifying 'cross country' flight of at least 270 km (150 nm), during which you will land at two aerodromes other than your home airfield. You will absolutely love this part, real flying, just like a bush pilot.

The minimum dual and minimum solo hours equal 35 hours, which leaves 10 hours to be completed as either dual or solo flight, or partly of each.

Prior to each flight throughout the course, whether dual or solo, you will have a detailed pre-flight brief with your instructor, who will go through each element of the exercise. After the flight, there will be a thorough debrief, when you will be encouraged to discuss the flight with your instructor and when he/she will answer any questions you may have.

The early parts of your training will be spent in local areas around your home airfield, when you will learn how to handle the airplane in a safe fashion. This is followed by 'circuit training', this is where you learn how to take-off and land the airplane safely. When you have confidently flown your first solo circuit, you will then progress learning how to navigate your aircraft from point to point. A description of the air exercises that you will be instructed in to meet the JAA requirements are listed below.

<b>Exercise Topic</b>
Familiarization with the airplane
Emergency drills
Preparation for and action after flight
Air experience
Effects of controls
Taxiing
Taxiing emergencies
Straight and level flight
Climbing
Descending
Turning
Slow flight
Stalling
Spin avoidance
Take-off and climb to down-wind position
Circuit, approach and landing
Emergencies (on take-off/landing)
First solo
Advanced turning
Forced landing without power
Precautionary landings
Navigation
Navigation at lower levels and reduced visibility
Radio navigation
Basic instrument flight

There are no real age limits in learning to fly. Providing you are 14 years old or over, you can log all your flying towards the PPL course, although you must be at least 16 years old to be able to fly solo. The minimum age for the issue of a PPL is 17 years. But you can never be too old! All pilots must undergo an aviation medical check (Class 2 for PPL) conducted by an authorized medical practitioner, there is no upper age limit at all.

### **Theory Ground Exams**

Learning how to fly the airplane is only one part of the course. There are a number of theory subjects, which you will need to know in some detail in order to pass seven written exams. The subject matter is not difficult, although at first glance there may seem to be quite a lot of it! Nevertheless, having a good solid understanding of all aspects of aviation will make you a safe and competent pilot, as well as adding to the richness of a fascinating and fulfilling pastime. Once you have taken your first written exam, you will need to complete the other six written exams within a 12 month period. However, you do have 24 months from the date of that first pass in which to complete your flight training.

- Air Law (Must be passed before doing your first solo flight).
- Human Performance and Limitations
- Meteorology
- Navigation
- Flight Performance and Planning
- Aircraft General and Principles of Flight
- Radio Telephony



## Getting Started on Flight Training Everything you need to head skyward

BY DAN NAMOWITZ

Lori was a college senior preparing for a career in civil engineering. Gerry and his son Paul owned and operated a hardware store. Espen was a Norwegian high school student spending his senior year studying in the United States. Helene, a young English woman, was working as a crew member on a sailing ship and seeing the world. Gary was a boatbuilder and carpenter with some free time on his hands.

This representative sample of a recent group of student pilots — despite being from all walks of life, of diverse ages, and even from different parts of the world — had one thing in common: the dream of flight. Only one planned to become a professional aviator. The others just wanted to fly. Each had recently asked the question you are now turning over in your mind: "I want to fly. How do I get started?"

As a flight instructor, answering that question is part of my routine. And it is my pleasant duty to report that any concerns you may have had about complex prerequisites or long paper trails blocking your path to flying are unfounded. Your kid brother or sister in driver ed — or, for that matter, your older brother or sister in driver ed — probably has a tougher row to hoe before getting behind the wheel of a driving-school automobile. Aviation is a learn-by-doing proposition. Your first flight lesson will include your first flight. That is one reason that 94,947 people, 12 percent of them women, held student pilot certificates in 1996. What you need now is a road map for getting started, some answers to basic questions about how flight training works, and some guidelines for choosing the right kind of program.

Interested, but not sure you'll enjoy the training? I am confident that you will; few things in life offer such a combination of reaching for new personal frontiers and mastering new skills — all while experiencing the thrill of flight. But don't take my word for it. Go up for an introductory flight with a certificated flight instructor (CFI) from the flight school or aviation company at your local airport. The time-honored tradition of the *intro flight* has been responsible for countless enrollments in flight training programs. Even the most experienced instructors love an opportunity to give a prospective new student that first exhilarating ride. They love to see the elated grin and the determined nod of the head from the once-doubtful prospect. But don't come prepared to be a mere spectator. After a briefing by the instructor and a walk-around inspection of the airplane, during which he or she will explain the actions pilots take to prepare for flight, you will strap into the left front seat — the pilot's seat — and do most of the flying. The CFI will introduce you to the *four fundamentals* of maneuvering an airplane: climbs, straight-and-level flight, turns and descents. Then you will try a few. After you land, chances are you will be impatient to schedule your second lesson.

Aviation training consists of flight and ground lessons, but you will quickly see that they merge into a cohesive whole, each facilitating the other. Your training program is designed to use each new step — and for most people, flight training is a new experience all around — as a building block for what will follow. The subjects you will have to study, and the flight experience you will have to acquire before being able to take your final flight examination for your private pilot certificate, are set forth in the Federal Aviation Regulations (reading the relevant FARs, as pilots call the regs, will be one of your first homework assignments).

People train to be pilots under a variety of circumstances, so enormous flexibility exists for fashioning the kind of training plan that is right for you. It depends mostly on your location, schedule, and goals. Aircraft rental costs and hourly instructional rates vary widely from one region of the country to another, so only the broadest estimates of your outlay can be made here. Schools that specialize in aviation training come in all shapes and sizes, offering everything from accelerated courses to four-year degree programs. They advertise in aviation publications, quoting



rates for various training plans and in many cases giving toll-free telephone numbers for taking inquiries.

Should you train at home or away? If you want to earn your private pilot certificate on the fast track, taking time out from your daily life and going away to school may be the plan for you. It may also be right for the new pilot seeking professional pilot credentials, and certainly is the choice for someone seeking a degree in aeronautics. If you wish to blend private-pilot training with work and family life, it is possible to fly a few times a week in your local area and attend ground school at the offices of an aviation company operating at your local airport. (Some local public adult-ed programs also offer pilot ground schools.) Another plan — one of the most budget-minded methods — is to join a local flying club. In a club, the members jointly own or lease one or more airplanes, helping to hold down costs by providing a rental rate that does not include a profit margin, and you hire an instructor who will train you in the club's aircraft.

To find out what resources are available for you, go on a fact-finding outing to the airports within the radius you are willing to consider as your training zone. Visit the offices of fixed-base operators (FBOs) at the airports, and talk to local fliers. Don't be shy about this — aircraft owners and local pilots love to talk about their interest. Or look under "Aircraft Schools" in the Yellow Pages and start with a telephone call. If you are acquainted with a professional pilot, he or she may be able to start you on your journey.

How does an aviation newcomer make judgments as a consumer about the quality of the product being offered? In the case of the flight schools, ask for background information on the company's longevity and the number of students trained. Compare literature on location, cost, and programs. Arrange an inspection visit if possible. Do costs include accommodations? Are courses guaranteed? Will you have the same instructor throughout your training? If you are going to train locally, compare rates, inspect the aircraft, and talk to the flight instructors and management before making your choice.

Make your schedule's limitations clear from the outset and ask for a commitment that instructors and aircraft will be available when you need them. Addressing such needs from the very beginning is one of the best ways to keep your training moving. With your schedule, your instructor's schedule, other uses of company aircraft, and aircraft "down time" for inspections and maintenance, many delays can crop up. To avoid discouragement and expensive backtracking, it is important to keep your momentum going, especially during critical stages of your training such as pre-solo and your final preparation for your flight examination. Other causes of delay, such as bad weather, can't be helped, so the more you can do to create an efficient schedule from the beginning, the better. How cooperative your prospective instructor is in addressing this issue will be a good indication of the quality of service you can expect throughout your program.

Solicit quality reviews from any graduates you may happen to know. Interview your prospective instructor — you are, after all, the CFI's employer — about his/her experience, aviation goals, the scheduling questions discussed above, and the rate at which his or her students have been passing their written and flight exams. During your chat, assess the instructor's ability to communicate and teach. By all means ask for a copy of the course syllabus and inspect training materials and facilities such as books, videos, and classrooms (which should be comfortable and private).

A wide variety of government-issue training manuals, textbooks by private publishers, video courses, and combination packages — in an equally wide price range — can be purchased for your training. Which format and presentation to choose is largely a matter of personal preference and budget. Just make sure that, in the rapidly changing aviation world, the product you buy is the latest, most up-to-date version available. Excellent additional reference books on such subjects as weather, aerodynamics and flight technique, written for all pilots, can complement your library and add the wisdom of these experienced pilot/writers to your aviation education. Chances are you will add such materials to your library as your training progresses and specific issues call themselves to your attention through experience. Visit your local airport's pilot shop or consult the catalogs of mail-order companies to see what is available.

Now let's look at the requirements for earning your private pilot certificate. Essentially, you have to be 16 years old to solo, and at least 17 to receive a private pilot certificate. You must be

healthy enough to pass a simple medical examination. At some time before you take your final flight exam you must pass the *Private Pilot Knowledge Test*, given at designated computer testing centers in your area. (Scores from the knowledge test, formerly known as the Private Pilot written test, are valid for 24 months; if more time passes before you are ready for your flight test, you will have to take it again.)

The FAA offers a combined medical certificate and student pilot certificate; you must have it to solo, but you can start your training without it. For a student, recreational, or private pilot, only a Third Class Medical Certificate is required. It is good for 24 months. Many students solo after about 10 to 20 hours of flight training, so don't wait too long before making an appointment with a doctor designated by the FAA as an Aviation Medical Examiner in your area. You don't want to drag your feet and spend money on training, only to discover that something disqualifies you from receiving the medical certificate.

At your examination, you will be asked to fill out a medical-history form that the examiner will use to determine whether any disqualifying conditions exist under Federal Aviation Regulation 67.301, which covers eligibility for the Third Class Medical. Cardiovascular and ear, nose, and throat examinations will be conducted, as will an examination of any possible "organic, functional or structural disease, defect or limitation" that, in the opinion of the examiner, makes you unable to safely perform as a pilot, now or within two years of the examination. You will be tested for vision (visual acuity and color perception), and hearing (the ability to hear "an average conversational voice in a quiet room, using both ears, at a distance of six feet from the examiner,"); a urinalysis is also required. Second Class and First Class medical certificates — valid for 12 months and six months, respectively — are required for commercial pilot and Airline Transport Pilot trainees. Prospective career pilots should apply for the grade of medical certificate they will need.

A common question is: Which should come first, flight training or ground training?

Many students are surprised to learn that it is not necessarily advantageous for them to complete ground school before beginning flight training. Opinions differ on timing, but I hold with those who urge that a parallel program of flight and ground training is most efficient, allowing each portion to complement the other in a balanced approach to learning. For example, a student who has had some practical in-flight experience with navigation and its associated equipment probably will absorb ground lessons on flight planning more readily than someone who has never flown and is relying on an abstract understanding of the concepts. A student who has flown an airplane and experienced climbs, descents, level flight, turns, and the training aircraft's "feel" at different airspeeds may have a more intuitive grasp of basic aerodynamics than someone who has not yet flown. I am skeptical of flight instructors who tell the student to get in touch after completing ground school.

How have other students tackled ground training? Going back to the students profiled above, Espen and Lori, members of the same flying club, attended an adult-education program's evening ground school when they began flight training, and took their knowledge exams at the end of the course. Paul and Gerry attended ground school at the offices of the aviation company where they did their flight training, also taking the knowledge test at the end of the term. Gary chose home study and some one-on-one review with me, and when he was ready, I gave him the required written endorsement to take the knowledge test. Other students elect home study combined with a weekend test-prep course, a number of which are offered by national companies that periodically schedule the seminars in different regions of the country. Several well-known home study courses that offer videos plus study guides and books of sample exam questions also provide "graduation certificates" and the required endorsement for taking the test at the end of your study program. Another such offering uses CD-ROM or computer disks as its medium. The cost of the various offerings ranges from about \$100 to \$200, and the programs come with a range of performance guarantees.

No matter which study method you choose, do not conclude that this ground training is strictly "prep" for the required test. Ground school is where you acquire the aeronautical knowledge prescribed in the FARs for private pilots. Generally speaking, aeronautical knowledge covers two basic areas: the theory of how airplanes fly and details of the environment in which they fly. By environment I refer to both the physical environment — weather, for example — and the man-

made environment, such as the various kinds of airspace and airports, the air traffic control system, sources of flight information for pilots, and the regulatory limits and privileges conferred on you, the pilot, by the type and grade of your pilot certificate. Each time you fly, you will see your increasing knowledge of this material at work in the air.

And, speaking of the air — let's strap on an airplane and go flying.

To earn a private pilot certificate, you will fly a minimum of 40 hours in training, including at least 10 hours of solo flight time. (The requirement used to be 20 solo hours; it was changed in a sweeping revision of pilot-certification requirements in 1997.) These are minimum figures; in reality, most students I know have somewhere in the vicinity of 55 to 65 hours at the completion of their training. Early flight lessons usually run about an hour and are dedicated to familiarizing you with basic aircraft control. Next, you will explore the airplane's handling in other realms of flight, such as the slow-speed range (which a pilot experiences on every flight, during takeoff runs and landing approaches) and at steeper angles of bank (an airplane is banked — i.e., a wing is lowered — to make a turn; the steeper the bank angle, the quicker the rate of turn). You will explore flight in different aircraft *configurations* such as when wing flaps are extended. Flaps allow airplanes to fly at lower speeds; they can also be used to give a steeper approach angle during landing. Since normal landings are made at the lowest safe airspeeds, flaps are usually employed during the landing approach. The next phase will be learning to maneuver the aircraft with reference to objects on the ground; this teaches you how the aircraft's speed over the ground is affected by flying into the wind, downwind, at an angle to the prevailing flow, and how the pilot must adjust his course to maintain the desired "track," or direction of flight.

Once the trainee is familiar with these basic ideas and has mastered them in the airplane, it is on to practicing takeoffs and landings and airport traffic-pattern operations, where all of the skills recently learned come into play. After several hours of practice, the student's landings usually take on a consistently acceptable quality — and when that happens, the first solo is not far down the road. That solo flight is one of aviation's magic moments; no matter how far a pilot goes in aviation, that golden occasion when you rose from the runway for the first time, alone with your trusty ship, will remain one of your fondest memories.

Now that you are soloing in the local area, dual flights with your instructor will enter a new phase: point-to-point flying in the air traffic control system, known as *cross-country* training when the flight exceeds 50 nautical miles. With your instructor, you will begin to plan, and fly, cross-countries in preparation for doing at least five hours of cross-country solo flying en route to earning your private pilot ticket. During this new chapter, you will use aeronautical charts and your aircraft's performance manuals to plan your flights, thus applying your ground-school knowledge of aircraft systems, aviation weather, navigation, and the air traffic system. The cross-country phase also provides tremendous opportunities for you to grow as a pilot, as your instructor challenges you to continually assess the progress of your flight, make in-flight command decisions, and communicate over the aircraft radio.

Night flying, including at least three hours of flight time, one flight of at least 100 miles total distance, and 10 takeoffs and landings, is also part of the training program (a student who lacks this requirement can be issued a private pilot certificate on which night flying is prohibited).

Another training requirement is learning how to keep the aircraft under control solely by reference to its flight instruments as an emergency-only method of handling an unexpected encounter with clouds (pilots are prohibited from flying in clouds unless they have gone on to acquire an instrument rating; this is often the next step up the training ladder for a newly certificated private pilot). The new rules mandate that at least three hours of instrument work be included in your training.

As you close in on the required flight-time minimums for each of the various required flight operations, it is time to focus on your upcoming flight examination, which is a combined oral and flight test. During the "test prep" phase, you will put it all together. Among the training books you acquired when you began was a small booklet titled *Practical Test Standards* (PTS). This is the rulebook for the flight test that explains how to prepare and what to bring and defines the knowledge requirements and performance standards for every item on the test. As you practice in

solo sessions and with your instructor, there should be no doubt as to whether your performance is acceptable—if it meets PTS standards, you will pass the test.

Using the *practical test checklist provided* in the rear of the PTS booklet, you and your instructor will also spend some time in the classroom putting the finishing touches on your flight-planning skills and your knowledge of aircraft systems, aerodynamics, regulations, weather — all the things you have been studying. Armed with a written recommendation from your flight instructor, you are ready for your flight test, or *checkride*, as pilots call it, during which you demonstrate your knowledge and skill to an FAA examiner.

At the end of it all, with the flight test behind you and the newly issued temporary pilot certificate in your pocket (the permanent one comes from the FAA's airman certification office in Oklahoma City; it won't arrive for a few weeks) you can look back on a rewarding, satisfying, challenging experience — and ahead to a lifetime of enjoyment in the skies.

As for the students you have met here, Lori graduated from college, obtained her pilot certificate shortly thereafter, got her first job in civil engineering, and became an officer and active member of her flying club. Espen returned to Norway as a new private pilot, entered the service, made the cut for airman training, and soon will be flying an F65 for his country's air force. Helene worked on her flight training wherever the *Ticonderoga* docked, finally finishing up in Florida. Paul and Gerry completed their training, bought a Cessna 150, traded up to a Cessna 172, and fly whenever they can take time out from their busy hardware business. Paul also went on to earn instrument and multiengine ratings. Gary passed his checkride, became a floatplane pilot, and dreams of a certain trout-filled pond in the wilderness.

Clearly, for all of these folks and thousands more like them, earning a pilot certificate wasn't the end of a project, it was the beginning of a lifelong love. Speaking for them all, I can sincerely say,

**"Welcome aboard!"**