



## LEARN TO FLY!!

To invent a plane is nothing.  
To build one is something.  
To fly is everything.  
-- Otto Lilienthal

Flying can become an exciting part of your life. The sensation of breaking the bounds of the earth and navigating above the towns and fields, to see our world in a way that few have experienced, can only be understood by those who have done it.

Flying challenges you, provides continuous learning, builds confidence, and makes you a member of an exclusive and wonderful family called “Pilots.”

## TAKE YOUR FIRST FLIGHT

People in aviation love aviation—and want to share it. Visit your local airport and ask for an introductory flight. To your amazement, the flight instructor will let you take the controls (they'll be there to assist, of course), help you find your house from the sky (and probably fly over it), and show you how beautiful your hometown looks from above.

### What are the Basic Requirements for an Airplane Private Pilot License?

The requirements for being issued a private pilot license are governed by the Federal Aviation Administration (FAA) of the U.S. Department of Transportation.

To get a private pilot's license, you must

- be at least 17 years
- have a current FAA third-class medical certificate
- log at least 40 hours of flight
- have at least 20 hours of flight with an instructor
- have at least 10 hours of solo flight
- pass the FAA Private Pilot Airmen Knowledge written test
- pass a FAA Private Pilot flight exam

Details of these requirements are later in this document. [Can't wait!](#)

Although the minimum required flight time is 40 hours, the national average is approximately 65 hours and most additional time is due to instruction.

The amount of flight time necessary to achieve your license is, in part, a function of how often you fly. Students who fly twice a week are likely to earn their license with fewer logged hours than those flying only two or three times a month.

## Keeping Your License Current

Remember, a private pilot license is really only a license to learn, and to maintain and improve flight proficiency. You should be prepared to fly at least 50 hours every year to maintain your skills.

The legal requirements for flight reviews and recent flight experience are governed by FAA FAR (Federal Aviation Regulations) [Sec. 61.56 and Sec 61.57](#).

In general, in order to keep your license current, so that you can operate an airplane as “pilot in command,” the FAA requires that you complete a Biennial Flight Review (BFR) with a certified flight instructor every two years. This review requires a minimum of 1 hour of ground instruction and 1 hour of flight instruction to review flight maneuvers and emergency procedures.

In order to carry passengers, you must also have completed at least three takeoffs and three landings as the sole manipulator of the flight controls in an aircraft of the same category and class within the preceding 90 days. To fly at night (one hour after sunset to one hour before sunrise), you must have completed, within the preceding 90 days, at least three takeoffs and three landings to a full stop at night in the category and class of aircraft to be used.

## How Can I Prepare for the Written Exam?

There are many courseware packages available that give you the information that the FAA Private Pilot Exam covers. The following are a list of useful government manuals. Several of these manuals can be accessed on the [Landings](#) home page

.FARs [Federal Aviation Regulations](#)

- AIM (Airman's Information Manual)
- U.S. Government Printing Office (GPO), Aviation Weather
- U.S. Government Printing Office (GPO), Aviation Weather Services
- U.S. Government Printing Office (GPO), Flight Training Handbook (AC-61-21)

There is also information available about the [Airmen Knowledge Test Information](#) at this site which contains links to test question documents.

## Where Can I Go to Learn to Fly?

Take a trip to your local airport and visit the businesses on the airfield. If it isn't obvious where the flight schools are, local business, the Airport Manager, and the “guy at the gas pump” often know who gives lessons locally. You can often find flight school listings in the phone book.

When you find a flight school, spend the time to learn about their policies, the cost to join the club, monthly and yearly dues, what type of planes they have, how the planes are maintained, what their insurance coverage is, and who the flight instructors are.

Be sure to interview the flight instructor that you are thinking about taking instruction from. This is a person that you will be spending at least 20 hours in a plane with and a lot of time at a desk with, so you should feel comfortable with the instructor. The right instructor-student combination can make learning to fly very pleasant.

## What topics will I need to learn?

Here is a brief overview of **some** of the topics you will need to master in order to earn a pilot's license:

- **Aircraft systems:** the basic components of an airplane, engine, flight controls, instruments, and how they operate.
- **Aerodynamics:** basic principles of how an airplane is able to leave the ground, and how to control it once airborne.
- **Navigation:** how to use aviation maps and radio navigation aids to get you and your aircraft to your destination.
- **Weather:** basic concepts of weather formation and how to obtain and interpret weather information that may affect your flight.
- **Aircraft operations:** just as there are rules for operating automobiles on roads and highways, there are rules governing the operation of aircraft in the National Airspace System (NAS).
- **Regulations:** the applicable portions of the Code of Federal Regulations (CFR) which govern licensing of pilots and the licensing and operation of aircraft in the USA.

## Where should I go for flight training?

The first step to learning to fly an airplane is to find a place to train. A quick way to locate flight training facilities is to look in the Yellow Pages(tm) under "Aircraft Flight Instruction." However, not all schools advertise there, so the Yellow Pages won't tell you all your options. However, usually at least one school at each airport will advertise. So, from the Yellow Pages, you can at least learn the locations of all the local airports.

The best way to learn what schools are available is to visit your local airports. Small and mid-size airports usually have more flight training activity than major airline airports.

Flight training facilities go by several different names. Here are some of the most common types, and how they compare:

**Fixed Base Operator (FBO):** This type of business offers a full range of aviation services: aircraft sales and maintenance, fuel sales, aircraft charter, flight instruction, or any other services that transient or based aircraft and pilots might need. Aircraft rental and flight instruction may be only a small part of this business.

**Flight school:** a business whose primary business is flight training and aircraft rental. It may offer other related services such as aircraft maintenance and pilot supplies.

**Flying club:** a non-profit group of pilots and aircraft owners who join together to help reduce expenses and share resources. Some larger clubs may look just like FBOs or flight schools. Since clubs are non-profit, rental rates are usually lower than at FBOs or flight schools.

**Colleges and Universities:** many colleges and universities offer flight training as part of an aviation curriculum. If you intend to pursue a career in aviation, a college degree in aviation is a definite advantage.

Note that some FBOs and flight schools may call themselves flying clubs to imply non-profit status, give them a more "friendly" atmosphere, or provide an excuse to charge monthly dues.

## How do I choose a flight school?

Here are some factors to consider when selecting a flight school:

**Location:** you will be making many trips to the flight school, so it should be in a location convenient to you. Be sure to include travel time to and from the airport in your lesson scheduling plans.

**Insurance coverage:** it is very important to have adequate insurance coverage for any flight operations. Training aircraft can be valued anywhere from \$15,000 to over \$100,000, and even minor damage can be very expensive to repair. Ask the school for details about its insurance coverage, and whether you as a student/renter are included in the coverage. There should be coverage for damage to the aircraft itself (called "hull insurance"), damage to other property ("liability insurance," for damage to structures on the ground, for example), and medical coverage, should you or your instructor be injured. Like auto insurance, aircraft insurance usually has a deductible. Find out amount of the deductible, and if you are responsible for it. Also ask if the insurance policy has a "no-subrogation" clause. This clause is desirable, because it means the insurance company cannot try to recover damages from you (except the deductible) for any incident in which you may be involved.

Some schools carry insurance that covers only themselves and the aircraft owner. In case of an accident, you could be liable for all damages. If this is the case, you can purchase renter's insurance. For an annual fee, this type of insurance will cover you for any liabilities not covered by the school's policy, up to the stated amount on your policy. You can also purchase renter's insurance to cover the deductible of the school's policy.

**Scheduling:** Find out, how many aircraft and instructors the school has. Ask to see the school's schedule book, and see if there are aircraft and instructors that fit your schedule. Scheduling lessons one week in advance is fairly common, but if you have to schedule two or more weeks in advance, the school might have too many students for the number of aircraft and instructors.

**Instructors:** most flight schools will want to assign you the first available instructor. However, if you have specific requirements, don't hesitate to request a different instructor. It is best to make your initial selection before beginning any training, as many schools and instructors are reluctant to switch instructors during training. However, during your training, you find an instructor is not meeting your needs, approach the school's manager or chief instructor to discuss the problem.

**Aircraft maintenance:** the quality of aircraft maintenance is difficult for a new student to determine. Because of the overall age of the general aviation fleet (the average aircraft is 23 years old), even well-maintained aircraft may appear dingy and worn. Many training aircraft have seen a lot of use, and this shows as worn carpeting and labels worn off of switches and controls. Check around the nose and the engine. Well-maintained aircraft have meticulously clean engine compartments, much cleaner than the average automobile. Any sign of leaking oil or soot build-up could be a sign of problems.

One way to find out about maintenance problems is to talk to other students, preferably out of earshot of instructors or other school personnel.

**Rental rates and other expenses:** compare the aircraft rental rates at different facilities. Be sure you are comparing apples to apples (see the next section for an explanation of aircraft rental terms). Find out if there are any deposit requirements, monthly dues, and if you will be billed later, or required to pay at the time of your session. Also check for block discounts. Many facilities will offer a discount if you buy a "block" of 5 or 10 hours at once. Don't get too carried away with this, however. Flight schools have been known to go belly up and leave their prepaid "block" customers with nothing but a receipt. Also find out about the terms of a refund if you decide not to use all of your block.

## What do the aircraft rental rates mean?

Most aircraft are rented by the hour (to the nearest 1/10th, or 6 minutes), as measured by the length of time that the engine is running. A device called a **Hobbs meter** records the time, usually activated by the engine oil pressure. Rates for training aircraft usually include the cost of fuel for the airplane. This type of rental is called **wet Hobbs**. Some aircraft rental rates do not include fuel. This is known as **dry Hobbs**, and you must pay for fuel in addition to the rental rate. When comparing rental rates, be sure take into account any differences between wet and dry rentals.

More advanced aircraft are sometimes rented using slightly different measures. **Tach** time counts the number of revolutions of the engine rather than actual elapsed time. An hour of tach time will equal an hour of real time only when the engine is running at nearly full power. Otherwise, tach time will be less. Tach time can also be used if the aircraft does not have a Hobbs meter. **Air Hobbs** is frequently used for twin-engine aircraft and measures the time the aircraft is actually in the air. Both tach and air Hobbs can also be either wet or dry.

## I can't afford flight training right now. What can I do to work toward my license?

There are many things you can do before beginning flight training:

**Ground school:** most flight schools and community colleges offer inexpensive classes that teach you all of the "book work" you will need for your license. Many classes will finish by allowing you to take the actual FAA written examination. A passing score is good for up to two years.

**Simulators and ground trainers** Flight simulators on personal computers can be used to practice radio navigation and flight planning. Ground trainers (the disembodied airplane cockpits seen at many flight schools) can help you work on procedures and using checklists.

**Rides with other pilots:** riding along in an airplane is not only a lot of fun, but will help you become familiar with the appearance of your airport and local area from the air, and help you develop pilotage skills (navigation by reference to the ground) This will be of great benefit for when you strike out on your solo cross-country flights.

## Detailed Requirements for a Private Pilot License?

Well, here they are. The links in this section are to a very helpful Internet site.

Requirements regulating the licensing of private pilots are established by the Federal Aviation Administration of the U.S. Department of Transportation and set forth in [Federal Aviation Regulation, Part 61](#).

Sec. 61.109 Airplane Rating: Aeronautical Experience

An applicant for a private pilot certificate with an airplane rating must have had at least a total of 40 hours of flight instruction and solo time which must include the following:

(a) Twenty hours of flight instruction from an authorized flight instructor, including at least--

- Three hours of cross country;
- Three hours of instrument flight training;

- Three hours at night, including 10 takeoffs and landings for applicants seeking night flying privileges; and
- Three hours in airplanes in preparation for the private pilot flight test within 60 days prior to that test.

An applicant who does not meet the night flying requirement in paragraph (a)(2) of this section is issued a private pilot certificate bearing the limitation "Night flying prohibited." This limitation may be removed if the holder of the certificate shows that he has met the requirements of paragraph (a)(2) of this section.

(b) Ten hours of solo flight time, including at least:

- Five hours of cross-country flights, each flight with a landing at a point more than 50 nautical miles from the original departure point. One flight must be of at least 150 nautical miles with landings at a minimum of three points, one of which is at least 50 nautical miles from the original departure point.
- Three solo takeoffs and landings to a full stop at an airport with an operating control tower.

Sec 61.103 Eligibility requirements: General.

To be eligible for a private pilot certificate, a person must--

- Be at least 17 years of age, except that a private pilot certificate with a free balloon or a glider rating only may be issued to a qualified applicant who is at least 16 years of age;
- Be able to read, speak, and understand the English language, or have such operating limitations placed on his pilot certificate as are necessary for the safe operation of aircraft, to be removed when he shows that he can read, speak, and understand the English language;
- Hold at least a current third-class medical certificate issued under Part 67 of this chapter, or, in the case of a glider or free balloon rating, certify that he has no known medical defect that makes him unable to pilot a glider or free balloon, as appropriate;
- Pass a written test on the subject areas on which instruction or home study is required by Sec. 61.105;
- Pass an oral and flight test on procedures and maneuvers selected by an FAA inspector or examiner to determine the applicant's competency in the flight operations on which instruction is required by the flight proficiency provisions of Sec. 61.107; and
- Comply with the sections of this part that apply to the rating he seeks.

Sec 61.105 Aeronautical Knowledge (Airplanes and rotorcraft Sec 61.105(a) only)

An applicant for a private pilot certificate must have logged ground instruction from an authorized instructor, or must present evidence showing that he has satisfactorily completed a course of instruction or home study in at least the following areas of aeronautical knowledge appropriate to the category of aircraft for which a rating is sought.

Airplanes and Rotorcraft.

- The accident reporting requirements of the National Transportation Safety Board and the Federal Aviation Regulations applicable to private pilot privileges, limitations, and flight operations for airplanes or rotorcraft, as appropriate, the use of the "Airman's Information Manual," and FAA advisory circulars;
- VFR navigation using pilotage, dead reckoning, and radio aids;
- The recognition of critical weather situations from the ground and in flight, the procurement and use of aeronautical weather reports and forecasts;

- The safe and efficient operation of airplanes or rotorcraft, as appropriate, including high-density airport operations, collision avoidance precautions, and radio communication procedures;
- Basic aerodynamics and the principles of flight which apply to airplanes or rotorcraft, as appropriate; and
- Stall awareness, spin entry, spins, and spin recovery techniques for airplanes.

Sec. 61.107. Flight Proficiency: (Airplane Sec 61.107(a) only)

The applicant for a private pilot certificate must have logged instruction from an authorized flight instructor in at least the following pilot operations. In addition, his logbook must contain an endorsement by an authorized flight instructor who has found him competent to perform each of those operations safely as a private pilot.

In Airplanes.

- Preflight operations, including weight and balance determination, line inspection, and airplane servicing;
- Airport and traffic pattern operations, including operations at controlled airports, radio communications, and collision avoidance precautions;
- Flight maneuvering by reference to ground objects;
- Flight at slow airspeeds with realistic distractions, and the recognition of and recovery from stalls entered from straight flight and from turns;
- Normal and crosswind takeoffs and landings;
- Control and maneuvering an airplane solely by reference to instruments, including descents and climbs using radio aids or radar directives;
- Cross-country flying, using pilotage, dead reckoning, and radio aids;
- Maximum performance takeoffs and landings;
- Night flying, including takeoffs, landings, and VFR navigation; and
- Emergency operations, including simulated aircraft and equipment malfunctions.

Here are some other sites that are worth checking out

- [Be A Pilot](#)
- [Aero Com - The Future of Aviation Information](#)
- [The Air Affair](#)
- [AvWeb](#)

**Flying is the second-greatest thrill on earth. Landing is the first. 1/3 of the Earth is covered by land. 2/3 is covered by water. All of it is covered by air. Isn't it time you learned to fly?**

