THE COMPLETE PRIVATE PILOT

SYLLABUS

EIGHTH EDITION

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Flight and Ground Training
Private Pilot Certification Course: Airplane

Meets 14 CFR Part 141 and Part 61 Requirements
Includes Sport Pilot Certification Course: Airplane

AVIATION SUPPLIES & ACADEMICS, INC.
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The Complete Private Pilot Syllabus
Eighth Edition

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This syllabus is designed to be used the the textbook *The Complete Private Pilot* by Bob Gardner. Additional Reader Resources and updates for the textbook are available at asa2fly.com/ppt.

None of the material in this book supersedes any operational documents or procedures issued by the Federal Aviation Administration, aircraft and avionics manufacturers, flight schools, or the operators of aircraft.

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STUDENT INFORMATION

Name _____
Last *First* *Middle*

Address _____
Street *(If mailing address is P.O. Box, please list both.)*

_____
City *State* *Zip* *Country*

Phone _____
Home *Business* *Other*

Email _____

Emergency Contact _____
Name *Phone*

Private Pilot course enrollment _____ Sport Pilot course enrollment _____
Date *Date*

Enrollment notice to FAA (Part 141) _____
Date

Student Pilot Certificate: *Issue Date* _____

Medical Certificate: *Issue Date* _____ *Class* _____

Previous School _____

Training credit transfer _____ _____
Flight *Ground*

FAASafety.gov WINGS Program _____ _____
Login *Password*

Record of Aircraft Checkouts

Date	*Make/Model*	*Instructor Signature*

Remarks _____

Record of Course Completion

Private Pilot/Sport Pilot FAA Knowledge Examination _____ _____
Date *Score*

Graduation Certificate _____
Date Issued

Private Pilot/Sport Pilot FAA Practical Test _____ _____
Date *Results*

INTRODUCTION

The Complete Private Pilot Syllabus is designed to work with *The Complete Private Pilot* (Fourteenth Edition) by Bob Gardner. This textbook can be used in the ground training sessions outlined in Stages 1–3. In addition, recommended readings from ASA's *Private Pilot Test Prep* are given for the ground training sessions. Students are also encouraged to sign up for the WINGS Pilot Proficiency Program at FAASafety.gov to assist with ongoing training proficiency and improve your skills and knowledge as a pilot.

Enrollment Prerequisites

The student must be able to read, speak, write, and understand the English language and meet the physical standards for a third-class medical certificate prior to enrollment, and must possess a valid student pilot certificate and a third-class medical certificate (or higher) prior to completion of Flight Lesson 8, Stage 1. Students must be 16 years old to solo, and 17 years old to earn a private pilot certificate.

Training Course Objectives

The student will obtain the aeronautical skill and experience necessary to meet the requirements of a **private pilot** certificate with an **airplane** category and **single-engine land** class rating, and the aeronautical knowledge necessary to pass the FAA Knowledge Exam.

Course Completion Standards

The student will demonstrate through flight tests, written tests, and school records the necessary aeronautical skill, knowledge, and experience to pass the FAA Private Pilot Knowledge Exam and obtain a **private pilot** certificate with an **airplane** category and a **single-engine land** class rating. Each Task under each Area of Operation in the *Private Pilot Airman Certification Standards* will have been accomplished by the student.

The instructor will not sign off any Task until the student is able to explain and/or demonstrate the elements of the procedure or maneuver as required by the Airman Certification Standards.

Training Syllabus

The 35.0 hours of flight training and 35.0 hours of ground training, as required by 14 CFR Part 141 (40.0 hours of flight training and no minimum time for ground training is specified for Part 61 programs) will be accomplished in three stages. Each of these instructional units is described in the following pages. The aeronautical experience must include 35.0 hours in an airplane; however, a ground training device acceptable to the Administrator of the Federal Aviation Administration may be substituted for 20 percent of the required time if the ground trainer complies with 14 CFR Part 141.41(a), and may be substituted for 15 percent of the required time if the ground trainer complies with 14 CFR Part 141.41(b). A Basic Aviation Training Device (Basic ATD) may be used for 2.5 hours of the required time.

Hours shown for each lesson for flight training, preflight briefing, and post-flight critique are offered as a guide to the instructor. Specified minimum times for an entire stage must be complied with, but time used for an individual lesson may be adjusted to the student's needs. The instructor is responsible for ensuring all requirements are met.

At points where normal student progress should meet the requirements of the Airman Certification Standards for a Task included in an Area of Operation, the Area of Operation and Task are listed under Completion Standards; however, it is not mandatory that the instructor sign off the Task in order for the lesson to be considered complete.

PRIVATE PILOT COURSE HOURS

This syllabus complies with 14 CFR Part 141 requirements. To follow a Part 61 curriculum, add 5 hours of solo flight time, for a total of 40 hours. Part 61 requires 10 hours of solo time, including 5 hours of solo cross-country (with the long cross-country being 150 NM).

Ground instruction for Flight Lessons include preflight briefings and post-flight critiques.

*14 CFR Part 141 requires 20 hours of dual flight, 5 hours of solo flight, and a total of 35 hours flight time for the Private Pilot Certificate. Those flights tagged with an asterisk (*) indicate the flights which may be conducted either Dual or Solo, at the instructor's discretion.

Flight	Dual Flight	Solo Flight	Dual X/C	Solo X/C	Dual Night	Solo Night	Instrument Instruction	Ground Instruction
Stage 1								
Flight 1	1.0							1.0
Ground 1								1.5
Flight 2	1.0							0.5
Flight 3	1.0						0.25	0.5
Ground 2								1.5
Flight 4	1.0						0.25	0.5
Flight 5	1.0						0.25	0.5
Ground 3								1.5
Flight 6	1.0							0.5
Flight 7	1.0						0.25	0.5 + Pre-Solo Exam
Ground 4								1.5 + Stage 1 Exam
Flight 8	0.5	0.5						0.5
Flight 9: Stage Check	1.0						0.25	0.5
Stage 2								
Ground 5								1.5
Flight 10	1.5						0.25	0.5
Flight 11	0.5	0.5						0.5
Ground 6								1.5
Flight 12		1.0*						0.5
Flight 13		1.5						0.5
Ground 7								1.5
Flight 14		1.0*						0.5
Flight 15	1.0						0.25	0.5
Ground 8								1.5
Flight 16	1.0		1.0				0.25	1.0
Flight 17	2.0		2.0		2.0 (includes 5 TOL)		1.0	

Flight	Dual Flight	Solo Flight	Dual X/C	Solo X/C	Dual Night	Solo Night	Instrument Instruction	Ground Instruction
Stage 2 *(continued)*								
Ground 9								1.5+ Stage 2 Exam
Flight 18		2.5		2.5 (>100 NM, 3 TOL at towered airport)				1.0
Flight 19: Stage Check	1.0				1.0 (includes 5 TOL)	0.25	0.5	
Stage 3								
Ground 10								1.5
Flight 20		3.0*		3.0*				1.0
Flight 21		4.0*		4.0*				1.0
Ground 11								1.5
Flight 22	1.5						0.25	0.5
Flight 23		1.0*						1.0
Ground 12								1.5 + Stage 3 Exam + Final Exam
Flight 24: Stage Check	1.5						0.25	1.0
Flight 25	1.5						0.25	1.0
Totals 40 hrs (Part 61) 35 hrs (Part 141)	**20.0**† +10* optional	**5.0**• +10* optional	**3.0**	**2.5**◊	**3.0**≠		**3.0**	**35.0**

† Includes 3 hours prep for checkride.
• Part 61 programs require 10 hours of solo flight.
◊ Including 1 X/C more than 100 NM, 3 points for Part 141 programs. Part 61 programs require 5.0 hours solo X/C, with the long flight being 150 NM.
≠ Including 1 X/C of more than 100 NM and 10 takeoffs and landings (TOL).

STAGE 1
Solo Flight

Flight Training

8.5 Hours Dual (1.25 Hours Instrument)
0.5 Hour Solo

Objectives

The student will be instructed in all the basic flying procedures and skills necessary for the first solo flight.

Completion Standards

The Stage will be completed when the student satisfactorily passes the Stage 1 check and is able to conduct solo flights.

Ground Training

11.0 Hours
Pre-Solo Exam
Stage 1 Exam

Objective

In Stage 1 the student will be introduced to a typical general aviation airplane, learn the airplane's parts and how it is constructed. The student will learn the basics of aerodynamics, will be introduced to airplane engines and instruments, will learn how to perform weight and balance calculations, and how to use handbook information to predict aircraft performance.

Completion Standards

Stage 1 will be complete when the student has taken the Stage 1 written examination and has achieved a minimum passing score of 80 percent. The instructor will discuss and resolve all incorrect answers with the student before going on to Stage 2.

Flight Lesson 1

Dual 1.0 Hour
Pre/Postflight 1.0 Hour

Objectives

The student will be familiarized with the aircraft, its operating characteristics, cabin controls, instruments, systems, preflight procedures, use of checklists, and safety precautions. The student will practice climbs, straight-and-level flight, turns, and descents.

Content

1. Preflight discussion
2. Preflight inspection
   a. Aircraft status—maintenance writeups, etc.
   b. Aircraft and engine logbooks, inspection status
   c. External inspection
   d. Servicing procedures—fuel grade, oil type and quantity
   e. Ground handling and safety; propeller cautions
   f. Required documents—AROW
   g. Placards and limitation markings
   h. Seat adjustment and check of locking mechanism
   i. Hobbs meter/tachometer entries
   j. Stowage of tow bar, etc.
   k. All doors and hatches secured
3. Introduction
   a. Risk Management discussion: positive aircraft control, positive exchange of flight controls, stall/spin awareness, collision avoidance, wake turbulence avoidance, LAHSO, runway incursion avoidance, controlled flight into terrain, aeronautical decision making, checklist usage
   b. Starting and taxiing
   c. Runup; significance of items checked
   d. Takeoff, pattern departure, and initial climb
   e. Level off; straight-and-level flight; trim
   f. Medium banked turns
   g. Descents
   h. Traffic pattern entry, approach and landing
   i. Radio communication; microphone use
   j. Climbing turns (VR and IR)
      (1) Left-turning tendency; torque factors
      (2) Relate 10° bank (IR) to natural horizon
      (3) Rudder use for entry and recovery from banked flight
4. Fill out enrollment certificate. *See Page 108.*
5. Postflight critique and preview of next lesson

Completion Standards

The student will be able to maintain straight-and-level flight with a tolerance of ±200 feet in altitude and ±20° in heading, to perform climbs, descents, turn entries and turn recoveries with proper rudder use (1/2 ball width), and to explain proper control use for straight-and-level flight, turns, climbs, and descents. The student will understand and be able to explain pitch, bank, and airspeed limits.

Date of completion _____ Time flown _____

Instructor signature _____ Student initials _____

Ground Lesson 1

1.5 Hours

Reading Assignment

The Complete Private Pilot, Lesson 1

Lesson Content

Fuselage construction
Airplane components
Lift development; components of the lift equation
Lift, thrust, and drag
Axes of rotation; center of lift vs. center of gravity
Control effects
Stability, longitudinal and lateral
Turn dynamics
Stalls and spins
Glide ratio
Energy management

Date of completion _____ Lesson time _____

Instructor signature _____ Student initials _____

Recommended Reading: *Private Pilot Test Prep*, Chapter 1

Flight Lesson 2

Dual 1.0 Hour
Pre/Postflight 0.5 Hour

Objectives

The student will review the maneuvers covered in Lesson 1. The instructor will introduce climbing turns, slow flight, power-off stalls, and steep turns, as exercises in coordination.

Content

1. Preflight discussion
2. Starting and taxiing
   a. Use of checklist
   b. Engine start (discuss priming and flooded starts)
   c. Runup and pre-takeoff checklist. Student explains each action
3. Takeoff and departure; initial climb
   a. Application of power; rudder use
   b. Takeoff trim; elevator use and takeoff attitude
   c. Clearing turns while climbing
4. Straight-and-level flight
   a. Attitude, power setting and airspeed
   b. Use of trim
   c. Speed changes in level flight
5. Climbing turns (VR and IR)
   a. Use of attitude indicator banking scale vs. natural horizon
   b. Pitch and power coordination during entry
   c. Rudder use in left vs. right turns
   d. Pitch and power coordination during recovery
6. Slow flight
   a. Pitch and power relationship
   b. Use of flaps and flap limit speeds
   c. Loss of visibility at high pitch attitudes
   d. Recovery to cruise flight
   e. Power curve—lift vs. drag
7. Power-off stalls
   a. Clearing turns
   b. Recovery without power
   c. Recovery with power
   d. Effect of flaps on indicated stall speed
8. Steep turns
   a. Use of elevator and power
   b. Overbanking tendency
9. Approach and landing
10. Postflight critique and preview of next lesson

Completion Standards

The student will be able to use checklists, start the engine, taxi, and perform the preflight runup without assistance; take off and climb at the recommended climb speed ±10 knots; maintain level flight within ±150 feet of altitude and ±15° of heading; perform coordinated climbing turn entries and recoveries to the same tolerances; and recognize and recover from power-off stalls with or without power.

Airman Certification Standards

Preflight Preparation
- Pilot Qualifications
- Airworthiness Requirements

Preflight Procedures
- Preflight Assessment
- Flight Deck Management

Postflight Procedures
- After Landing, Parking and Securing

Date of completion _____ Time flown _____

Instructor signature _____ Student initials _____

Stage 1 Exam

1. What is true altitude?

A—The vertical distance of the aircraft above sea level.
B—The vertical distance of the aircraft above the surface.
C—The height above the standard datum plane.

2. What is pressure altitude?

A—The indicated altitude corrected for position and installation error.
B—The altitude indicated when the barometric pressure scale is set to 29.92.
C—The indicated altitude corrected for nonstandard temperature and pressure.

3. Under what condition is indicated altitude the same as true altitude?

A—If the altimeter has no mechanical error.
B—When at sea level under standard conditions.
C—When at 18,000 feet MSL with the altimeter set at 29.92.

4. Under what condition will true altitude be lower than indicated altitude?

A—In colder than standard air temperature.
B—In warmer than standard air temperature.
C—When density altitude is higher than indicated altitude.

5. If it is necessary to set the altimeter from 29.15 to 29.85, what change occurs?

A—70-foot increase in indicated altitude.
B—70-foot increase in density altitude.
C—700-foot increase in indicated altitude.

6. With regard to carburetor ice, float-type carburetor systems in comparison to fuel injection systems are generally considered to be

A—more susceptible to icing.
B—equally susceptible to icing.
C—susceptible to icing only when visible moisture is present.

7. The presence of carburetor ice in an aircraft equipped with a fixed-pitch propeller can be verified by applying carburetor heat and noting

A—an increase in RPM and then a gradual decrease in RPM.
B—a decrease in RPM and then a constant RPM indication.
C—a decrease in RPM and then a gradual increase in RPM.

8. What change occurs in the air-fuel mixture when carburetor heat is applied?

A—A decrease in RPM results from the lean mixture.
B—The air-fuel mixture becomes richer.
C—The air-fuel mixture becomes leaner.

9. Generally speaking, the use of carburetor heat tends to

A—decrease engine performance.
B—increase engine performance.
C—have no effect on engine performance.

10. One purpose of the dual ignition system on an aircraft engine is to provide for

A—improved engine performance.
B—uniform heat distribution.
C—balanced cylinder head pressure.

11. For internal cooling, reciprocating aircraft engines are especially dependent on

A—a properly functioning thermostat.
B—air flowing over the exhaust manifold.
C—the circulation of lubricating oil.

12. If the engine oil temperature and cylinder head temperature gauges have exceeded their normal operating range, the pilot may have been operating with

A—the mixture set too rich.
B—higher-than-normal oil pressure.
C—too much power and with the mixture set too lean.

13. Detonation occurs in a reciprocating aircraft engine when

A—the spark plugs are fouled or shorted out or the wiring is defective.
B—hot spots in the combustion chamber ignite the air-fuel mixture in advance of normal ignition.
C—the unburned charge in the cylinders explodes instead of burning normally.

14. On aircraft equipped with fuel pumps, the practice of running a fuel tank dry before switching tanks is considered unwise because

A—the engine-driven fuel pump or electric fuel boost pump may draw air into the fuel system and cause vapor lock.
B—the engine-driven fuel pump is lubricated by fuel and operating on a dry tank may cause pump failure.
C—any foreign matter in the tank will be pumped into the fuel system.

15. What type fuel can be substituted for an aircraft if the recommended octane is not available?

A—The next higher octane aviation gas.
B—The next lower octane aviation gas.
C—Unleaded automotive gas of the same octane rating.

16. The basic purpose of adjusting the air-fuel mixture at altitude is to

A—decrease the amount of fuel in the mixture in order to compensate for increased air density.
B—decrease the fuel flow in order to compensate for decreased air density.
C—increase the amount of fuel in the mixture to compensate for the decrease in pressure and density of the air.

17. (Refer to Figure 1-1.) How should a pilot determine the direction of bank from an attitude indicator such as the one illustrated?

A—By the direction of deflection of the banking scale (A).
B—By the direction of deflection of the horizon bar (B).
C—By the relationship of the miniature airplane (C) to the deflected horizon bar (B).

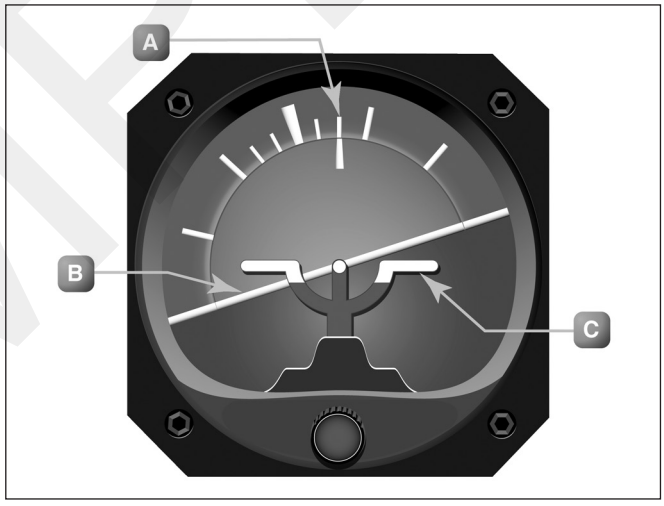

Figure 1-1

THE COMPLETE **PRIVATE PILOT**

SYLLABUS

EIGHTH EDITION

The Complete Private Pilot Syllabus is an integrated flight and ground training curriculum that meets all experience and knowledge requirements for Parts 61 and 141 programs. Used in conjunction with Bob Gardner's *The Complete Private Pilot* textbook, the syllabus will take the student from start to finish in an efficient and logical manner, with the ultimate goal of achieving Private Pilot Airplane certification. Stage Exams included.

The Complete Pilot Series can be used for home study, certified flight schools, or as a base for student kits.

Textbooks in the series:

The Complete Private Pilot
The Complete Advanced Pilot
The Complete Multi-Engine Pilot
The Complete Remote Pilot

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