

Private Pilot Study Guide/Training Structure

Pre-Solo:

- Principles of Flight – [PHAK Chapter 4](#)
- Aerodynamics – [PHAK Chapter 5](#)
- Flight Controls – [PHAK Chapter 6](#)
- Flight Instruments – [PHAK Chapter 8](#)
- Airport operations, signs, and markings. – [PHAK Chapter 14](#)
- Aircraft Systems – [PHAK Chapter 7](#)
- Weight and Balance – [PHAK Chapter 10](#)
- Aircraft Performance – [PHAK Chapter 11](#)
- Airspace – [PHAK Chapter 15](#)
- Maneuvers: Slow flight, approach to landing stall (power off stall), departure stall (power on stall), emergency approach and landing (simulated) at altitude, ground reference maneuvers – AFH Chapters [4](#), [6](#), [17](#)

Regulatory Requirements:

61.87(d) *Maneuvers and procedures for pre-solo flight training in a single-engine airplane.* A student pilot who is receiving training for a single-engine [airplane rating](#) or privileges must receive and log [flight training](#) for the following maneuvers and procedures:

- (1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation, and [aircraft](#) systems;
- (2) Taxiing or surface operations, including runups;
- (3) Takeoffs and landings, including normal and crosswind;
- (4) Straight and level flight, and turns in both directions;
- (5) Climbs and climbing turns;
- (6) [Airport](#) traffic patterns, including entry and departure procedures;
- (7) Collision avoidance, windshear avoidance, and wake turbulence avoidance;
- (8) Descents, with and without turns, using high and low drag configurations;
- (9) Flight at various airspeeds from cruise to slow flight;
- (10) Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall, and recovery from a full stall;
- (11) Emergency procedures and equipment malfunctions;
- (12) Ground reference maneuvers;
- (13) Approaches to a landing area with simulated engine malfunctions;
- (14) Slips to a landing; and
- (15) Go-arounds.

Cross-Country and Night:

- Navigation – [PHAK Chapter 16](#)
- Weather Theory and Weather Services – [PHAK Chapter 12, 13](#)
- Night Operations – [AFH Chapter 10](#)
- Aeronautical Decision-Making – [PHAK Chapter 2](#)
- Maneuvers – Maximum performance takeoff (short field takeoff), Soft field takeoff – [AFK Chapters 5, 8](#)

Regulatory Requirements:

61.93(e) *Maneuvers and procedures for cross-country flight training in a single-engine airplane.* A student pilot who is receiving training for cross-country flight in a single-engine [airplane](#) must receive and log [flight training](#) in the following maneuvers and procedures:

- (1) Use of aeronautical charts for [VFR](#) navigation using [pilotage](#) and dead reckoning with the aid of a magnetic compass;
- (2) Use of [aircraft](#) performance charts pertaining to cross-country flight;
- (3) Procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight;
- (4) Emergency procedures;
- (5) [Traffic pattern](#) procedures that include area departure, area arrival, entry into the [traffic pattern](#), and approach;
- (6) Procedures and operating practices for collision avoidance, wake turbulence precautions, and windshear avoidance;
- (7) Recognition, avoidance, and operational restrictions of hazardous terrain features in the geographical area where the cross-country flight will be flown;
- (8) Procedures for operating the [instruments](#) and equipment installed in the [aircraft](#) to be flown, including recognition and use of the proper operational procedures and indications;
- (9) Use of radios for [VFR](#) navigation and two-way communication, except that a [student pilot seeking a sport pilot certificate](#) must only receive and log [flight training](#) on the use of radios installed in the [aircraft](#) to be flown;
- (10) Takeoff, approach, and landing procedures, including short-field, soft-field, and crosswind takeoffs, approaches, and landings;
- (11) Climbs at best angle and best rate; and
- (12) Control and maneuvering solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids, and [ATC](#) directives.

Checkride Prep:

- Aeromedical factors – [PHAK Chapter 17](#)
- Flight Manuals – [PHAK Chapter 9](#)
- Maneuvers: steep turns, reviewing all maneuvers and refining them for checkride tolerances. – [AFH chapter 9](#)