

§61.87 Solo requirements for student pilots.

(a) *General.* A student pilot may not operate an aircraft in solo flight unless that student has met the requirements of this section. The term “solo flight” as used in this subpart means that flight time during which a student pilot is the sole occupant of the aircraft or that flight time during which the student performs the duties of a pilot in command of a gas balloon or an airship requiring more than one pilot flight crewmember.

(b) *Aeronautical knowledge.* A student pilot must demonstrate satisfactory aeronautical knowledge on a knowledge test that meets the requirements of this paragraph:

(1) The test must address the student pilot’s knowledge of—

(i) Applicable sections of parts 61 and 91 of this chapter;

(ii) Airspace rules and procedures for the airport where the solo flight will be performed; and

(iii) Flight characteristics and operational limitations for the make and model of aircraft to be flown.

(2) The student’s authorized instructor must—

(i) Administer the test; and

(ii) At the conclusion of the test, review all incorrect answers with the student before authorizing that student to conduct a solo flight.

(c) *Pre-solo flight training.* Prior to conducting a solo flight, a student pilot must have:

(1) Received and logged flight training for the maneuvers and procedures of this section that are appropriate to the make and model of aircraft to be flown; and

(2) Demonstrated satisfactory proficiency and safety, as judged by an authorized instructor, on the maneuvers and procedures required by this section in the make and model of aircraft or similar make and model of aircraft to be flown.

(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.

(e) *Maneuvers and procedures for pre-solo flight training in a multiengine airplane.* A student pilot who is receiving training for a multiengine airplane rating 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;