

# PRE-SOLO PREPARATION

There should be a standard for the solo. It should match the ACS.  
The standards should be clearly articulated to the student  
so no confusion exists about whether or not the student is ready

My student needs to be mentally ready for solo.

(Risk Management)

My student needs to be knowledgeable for solo

(Knowledge)

My student needs the skill to solo

(Skills)

IN ORDER TO SOLO, MY STUDENT MUST BE ABLE TO...

1. MAKE COMPETENT GO/NO-GO DECISIONS FOR EVERY FLIGHT.
2. DETERMINE THE LOCATION OF ALL OTHER TRAFFIC WHILE IN THE PATTERN.
3. 3. ESTABLISH AND MAINTAIN A STABILIZED APPROACH.
4. DETERMINE WIND DIRECTION AND MAKE PROPER RUDDER/AILERON INPUTS.
5. MANAGE THE AIRCRAFT'S ENERGY SO LANDINGS OCCUR AT THE TOUCHDOWN POINT.
6. LAND WITH; AND THEN MAINTAIN THE PROPER PITCH ATTITUDE.
7. KEEP THE LONGITUDINAL AXIS PARALLEL TO AND OVER THE RUNWAY CENTERLINE.
8. KEEP THE CENTERLINE BETWEEN THE MAIN WHEELS THROUGHOUT ALL TAKEOFFS AND LANDINGS.
9. CORRECTLY AND POSITIVELY RESPOND TO ANY ABNORMALITY OR EMERGENCY.
10. COMMUNICATE PROPERLY AND EFFECTIVELY WITH OTHER TRAFFIC/OR ATC.

IF MY STUDENT CANNOT PERFORM THESE FUNCTIONS WITHOUT ANY GUIDANCE OR ASSISTANCE FROM ME, THEY ARE NOT READY FOR SOLO YET.

WHEN I HAVE DETERMINED MY STUDENT'S TRAINING IS COMPLETE AND DOCUMENTED, MEETS THE STANDARDS FOR SOLO, AND I COMPLETED THE REQUIRED LOGBOOK ENTRIES AND ENDORSEMENTS...MY STUDENT CAN SOLO

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Poll Question:

How many solo landings will your student accomplish between first solo and Private Pilot Certificate?

- A. 10-20
- B. 20-30
- C. 30-40
- D. More than 40

Plan the solo

Where will it happen?

What do you want them to do?  
(I do three full stop/taxi back)

Dealing with abnormal Situations.

Remember as the Instructor, you are working your way out of a job,  
not perpetuating your need to be in the airplane!!!

For every configuration there is an appropriate corresponding speed that allows for a stabilized approach

In most pre-solo training, the only variable in configuration is the Flap setting

Could also include landing gear

The speed should always be correct for the configuration

Two basic skill sets are needed to perform a landing

The skill necessary to manage the relationship between pitch and power

The skill necessary to manage the relationship between rudder and ailerons

Correctly using these two skills sets, combined with a “continuous loop decision making process” to make corrections as required. A variation of the DECIDE model

DETECT that a change has occurred

ESTIMATE the need to counter or react

CHOOSE the desired outcome

IDENTIFY actions to control the change

DO (perform) the action

EVALUATE the success of the action

The Airplane Flying Handbook has now detailed when a go-around is required

If the approach is too high or too low, it may not be possible to establish a stabilized approach, and the pilot should execute a go around. Typically, pilots go-around if unable to establish a stabilized approach by 500 ft above airport elevation in visual meteorological conditions (VMC) or 1,000 ft above airport elevation in instrument conditions (IMC). For a typical GA piston aircraft in a traffic pattern, an immediate go-around should be initiated if the approach becomes unstabilized below 300 ft AGL.

Pilots may consider the following elements when attempting to set up and fly a stabilized approach to landing. The pilot should focus on the elements that lead to a stabilized approach rather than the order of the elements or the insistence on meeting all of the approach criteria. For a typical piston aircraft, an approach is stabilized when the following criteria are met:

1. Glide path. Typically a constant 3 degrees to the touchdown zone on the runway (obstructions permitting).
2. Heading. The aircraft tracks the centerline to the runway with only minor heading/pitch changes necessary to correct for wind or turbulence to maintain alignment. Bank angle normally limited to 15 degrees once established on final.
3. Airspeed. The aircraft speed is within +10 /-5 KIAS of the recommended landing speed specified in the AFM, 1.3VSO, or on approved placards/markings. If the pilot applies a gust factor, indicated airspeed should not decay below the recommended landing speed.
4. Configuration. The aircraft is in the correct landing configuration with flaps as required; landing gear extended, and is in trim.
5. Descent rate. A descent rate (generally 500-1000 fpm for light general aviation aircraft) makes for a safe approach. Minimal adjustments to the descent rate as the airplane approaches the runway provide an additional indication of a stabilized and safe approach. If using a descent rate in excess of 500 fpm due to approach considerations, the pilot should reduce the descent rate prior to 300 ft AGL.
6. Power setting. The pilot should use a power setting appropriate for the aircraft configuration and not below the minimum power for approach as defined by the AFM.
7. Briefings and checklists. Completing all briefings and checklists prior to initiating the approach (except the landing checklist), ensures the pilot can focus on the elements listed above.

The instructor is the sole determiner about whether or not the student is safe to solo.

YOUR reputation and certificate is at risk if you send them and they are not ready.

Do not allow anything to interfere with your decision:

- peer pressure

- money

- the flight school

DO NOT compromise the standards you have set