

Student Pilot Training

Basic Flight Training Phase I

Task #1 Ground support equipment, engine starting, & taxi training

Dual Control

Goals:

- Perform aircraft preparation and inspection.
- Perform engine start and radio checks.
- Perform taxi course.

Task #2 Orientation Flight

Dual Control

Goals:

- Observe orientation flight.
- Note ground and flight safety restrictions.

Task #3 Basic flight skills development

Dual Control

Goals:

- Become familiar with speed, yaw, pitch, and roll commands.
- Become familiar with flight trim techniques.
- Execute straight and level flight.
- Execute left and right turns.
- Initiate stall or unusual attitude recovery.

Task #4 Takeoff

Dual Control

Goals:

- Execute proper upwind takeoff runway alignment.
- Initiate takeoff throttle setting.
- Maintain runway centerline ground steering during takeoff acceleration.
- Execute takeoff rotation at proper speed.
- Execute proper climb speed, pitch, and bank angle.
- Perform a takeoff abort if required.

Task #5 Turns

Dual Control

Goals:

- Perform level shallow turns (left & right) at approximately a 20° bank angle.
- Perform level medium turns (left & right) at approximately a 40° bank angle.
- Perform level steep turns (left & right) at approximately a 60° bank angle.
- Execute shallow, medium, and steep turns (left & right), level flight, at low, medium, and full speeds.
- Execute turns in a designated area.

Task #6 Planning maneuvers

Dual Control

Goals:

- Perform level rectangular patterns (left & right) as well as figure eights over specific ground location(s).
- Apply crosswind technique to maintain proper ground tracking during planning maneuvers.

Task #7 Landing pattern and go-around

Dual Control

Goals:

- Execute upwind landing patterns.
- Execute crosswind landing patterns.
- Execute downwind landing patterns.
- Perform go-arounds at a 2 – meter height on final approach.

Task #8 Touch-and-go landing

Dual Control

Goals:

- Perform traffic pattern(s), final approach, and touchdown, followed by power application and pattern reentry.
- Perform normal and crosswind traffic patterns with touch-and-go maneuvers.

Task #9 Full stop landing and supervised solo

Dual / Solo Control

Goals:

- Execute full stop landing followed by taxi back and takeoff.
- Execute simulated engine failure landings.
- Perform a supervised solo flight.
- Be prepared for simulated engine failure calls from instructor regardless of position in pattern. Upon receiving call, immediately pull throttle to idle and safely land aircraft on runway.

Task #10 Supervised Solo Proficiency/Mid-phase Evaluation Review

Dual / Solo Control

Goals:

- Practice Task 1 – 9 maneuvers.
- Place additional emphasis on instructor-recommended areas of needed improvement.

Task #11 Mid-phase Evaluation Task

Solo Control

Goals:

- Perform the sequence of maneuvers required during the mid-phase evaluation.
- Review mid-phase I flight evaluation results and discuss strengths and weaknesses with instructors.

Task #12 Airspeed Control Maneuvers

Dual / Solo Control

Goals:

- Perform full, medium, and slow speed rectangular patterns (left and right) as well as figure eights from level flight.
- Execute a constant speed climbing rectangular pattern as well as figure eights.
- Execute a constant glide rectangular pattern as well as figure eights.
- Perform all maneuvers over designated ground locations.

Task #13 Power-On Spot Landing

Dual / Solo Control

Goals:

- Perform near stalled touchdowns on the runway with power on.
- Execute near stalled touchdowns within 2 meters of the runway centerline.
- Perform touchdowns initially within a 30-meter long touchdown zone, within 2 meters of runway centerline, graduating to a 15-meter long touchdown zone.
- Execute a go-around whenever overshoot landing conditions exist.

Task #14 Power-Off (Idle) Spot Landings

Dual / Solo Control

Goals:

- Perform a near stalled touchdown on the runway with power off (idle).
- Adjust landing pattern to touch down within 2 meters of runway centerline with power off (idle).
- Adjust landing pattern to touch down within 2 meters of runway centerline and within a 30-meter long touchdown zone.

Task #15 Final Flight Evaluation Demonstration, practice, evaluation, and critique

Dual / Solo Control

Goals:

- Practice all maneuvers accomplished during tasks 1-14 of Basic Flight Training Phase I.
- Perform the Phase I Final Evaluation Flight.
- Review flight test results and critique with instructor(s).

Student Pilot Training

Advanced Flight Phase II

Task #16 Introduction & Overview, Advanced Trainer Familiarization, Advanced Trainer Orientation Flight

Dual Control

Goals:

- Balance aircraft laterally and longitudinally within recommended C.G. range.
- Properly check and adjust flying surfaces, flight controls, and thrust alignment.
- Trim aircraft after level-off for hands-off, level, unaccelerated flight.

Task #17 Advanced Flight Maneuvers

Dual / Solo Control

Goals:

- Perform level flight, rectangular pattern, procedure turn, and figure eight over a specific ground location.
- Perform an immelman, split S, and chandelle, all of which are 180° directional change maneuvers.

Task #18 Advanced Flight Maneuvers

Dual / Solo Control

Goals:

- Perform one inside loop, progressing to three consecutive inside loops.
- Perform one aileron roll, progressing to three consecutive aileron rolls.
- Execute level inverted flight, flying straight ahead, progressing to left and right turns inverted.
- Execute a stall and spin recovery.

Task #19 Advanced Takeoff and Landing Patterns

Dual / Solo Control

Goals:

- Execute a takeoff maintaining centerline tracking, and rotating directly in front of the pilot position.
- Perform both rectangular and 360° overhead landing patterns in normal and crosswind conditions.
- Execute low speed upwind and crosswind landing patterns.
- Perform a touch-and-go, touching within a 3-meter x 15 meter touchdown zone.
- Execute a go-around if overshoot conditions exist.

Task #20 High Idle Landing Patterns

Dual / Solo Control

Goals:

- Execute a high engine idle trim airspeed emergency, landing near runway centerline within a 30-meter long touchdown zone, progressing to a touchdown within one wing span of centerline and within a 15-meter long touchdown zone.
- Perform a go-around if overshoot conditions exist.

Task #21 Engine Failure Flight Emergency

Dual / Solo Control

Goals:

- Perform an emergency runway landing after simulated engine failure at a high safe altitude.
- Perform a spot landing within 2 meters of runway centerline and within 20-meter long touchdown zone after simulated engine failure at a high safe altitude.
- Execute emergency landings after simulated engine failure in the traffic pattern and/or immediately after takeoff.

Task #22 Mid-phase II Evaluation Practice

Dual / Solo Control

Goals:

- Practice maneuvers covered in tasks 16 – 21 in preparation for the Mid-phase II Flight Evaluation.

Task #23 Mid-phase II Evaluation Flight

Solo Control

Goals:

- Execute Mid-phase II Flight Evaluation.

Task #24 Degraded Engine Performance Flight

Dual / Solo Control

Goals:

- Reduce the aircraft's engine thrust (on the student transmitter only) by approximately 30% for degraded engine performance flight skills development.
- Perform takeoff, figure eight, stall, spin recovery, maximum climb, chandelle, traffic pattern, touch-and-go, and spot landing in this reduced thrust configuration.

Task #25 Extended Visual Range Flight

Dual / Solo Control

Goals:

- Perform figure eight and rectangular patterns at approximately 600-meter slant range.
- Perform figure eight and rectangular patterns at approximately 1000-meter slant range.

Task #26 Engine Failure Flight Emergency

Dual / Solo Control

Goals:

- Perform a runway landing after an engine failure (actual) from approximately 1000 feet above ground level (AGL).

- Perform a runway landing after an engine failure (actual) from approximately 500 feet AGL.
- Perform a runway landing (if feasible) after an engine failure (actual) from anywhere in the traffic pattern. If a runway landing is not possible, land aircraft in the safest manner and location possible.

Task #27 Flight Trim Emergency

Dual / Solo Control

Goals:

- Fly figure eight, rectangular pattern, and traffic pattern with flight control trims slightly, then fully deflected to simulate flight control malfunctions.

Task #28 Final Evaluation Review

Dual / Solo Control

Goals:

- Practice maneuvers covered in tasks 23-26 in preparation for Phase II Final Evaluation.

Task #29 Final Evaluation Flight

Solo Control

Goals:

- Execute Phase II final evaluation flight.
- Complete course critique.