the finer points

# PRIVATE PILOT

(FLIGHT TRAINING SYLLABUS)

# Table of Contents

# General Course Introduction

Welcome, Aviator!

I am Jason Miller, an FAA award-winning Flight Instructor. I have been teaching flying full-time since 2002 and am passionate about helping pilots achieve excellence. During over 20 years as a flight instructor, I have developed a system for training pilots that is unmatched anywhere in the world. Through the use of effective sight pictures, standard operating procedures, and an approach that integrates skill building, demonstration, and scenarios, my students achieve a level of proficiency that few can equal. I've trained business leaders, tech investors, and the DEA. I've worked as an instructor for AOPA's Air Safety Institute and am an active member of the FAA Safety Team. As a thought leader in the industry, I know that I am at the cutting edge of flight training. The sum of my experience and a devotion to safety and excellence is woven into all that we do at The Finer Points.

In 2016, I brought a team together to begin to develop the technology that accompanies this course. The integrated flight training technology we developed is called The Ground School app. It includes ground knowledge, flight videos, written and oral test prep, and custom features that help guarantee your experience is fun, efficient, and effective. Pilots who use The Finer Points Ground School app are safer, more confident pilots.

To be where you are, learning to fly, I already know that you are an exceptional person. I am so proud to be able to bring you this technology and this syllabus, and that you and your CFI can let us be a part of your journey to becoming an exceptional pilot. Now, a little bit about the course.

This course is designed to help you succeed in training, to pass your checkride on the first try, and to never crash an airplane. You will learn the discipline required to transcend the ability to simply fly an airplane, and to evolve into an Aviator. Throughout this program, you'll find integrated Ground Training and Flight Training along with Written and Oral Test Preparation. Ground Training covers the knowledge required to pass the written test and builds the foundation of your aeronautical knowledge. Flight training is the lesson you do with your CFI, regardless of whether the lesson takes place on the ground or in an airplane.

The Ground chapters are not prerequisites, but rather assigned by Phase to be completed at the learner's pace and before the end of the Phase. Completing the Ground chapters before the lessons begin and reviewing them a second time during the lesson is recommended. Throughout each Phase, CFIs are encouraged to quiz the students on their recall of concepts covered earlier. CFIs and students should explore the "Learn More" links and deepen the student's knowledge during preflight briefings, walks to the airplane, downtime during fueling, post-flight debriefings, or any other non-sterile moments during the flight lesson.

## GROUND LESSONS

In our app, training is divided into two key components: the flight side and the ground side. The Ground Chapters consist of self-paced study at home, focusing on foundational knowledge and prepare you for the FAA written test . On the other hand, ground lessons—conducted in real time with a Certified Flight Instructor —are an essential part of Flight Training, covering practical topics such as preflight inspections, standard operating procedures, and cross-country flight planning. This structure ensures a comprehensive learning experience, integrating independent study and hands-on instruction.

## DRY TIME

You will save time and money in training by spending time in the airplane while it's on the ground without the engine ever being started. This is called "dry time", and most flight schools can accommodate this request. During dry time, you should run all the checklists for normal and emergency operations and rehearse your SOPs to be like a racehorse coming out of the gate at your next lesson. Dry time is not a requirement but is strongly recommended. We do not track dry time.

## DUAL FLIGHTS

A dual flight is one performed with your instructor. Your instructor is the pilot in command and will be teaching you to become PIC throughout the training process. Your CFI will use a 3-part Positive Exchange of Flight Controls system.

*"Your controls"*

*"My controls"*

*"Your controls"*

Each dual flight will follow the following format:

- Preflight Briefing
- Lesson
- Debriefing

During the preflight briefing, your CFI will answer any questions you bring from your studies and go over the learning objectives, the lesson route, the airspace, and the completion standards for the lesson.

If it's a skill-building day, a clearing turn should be performed before beginning and then again every 10 minutes or so. If possible, traffic alert devices should be utilized and understood to be fallible guides to possible traffic in the area. If it's a demonstration, there should be a clearing turn before each maneuver, and teaching should be withheld until the demonstration is complete.

During the debrief, your CFI will make recommendations and answer any questions you have. You will then complete your flight-training record based on the completion standards. Any tasks requiring additional practice to meet the section completion standards will be carried over to the flight review section of subsequent lessons.

When "preflight actions" are noted, it encompasses all required elements under 14 CFR § 91.103, including obtaining and reviewing weather reports and forecasts, fuel requirements, alternate airports, traffic delays, NOTAMs, runway lengths, aircraft performance data, and takeoff and landing distances under expected conditions. This thorough preparation ensures the pilot is fully informed and equipped to make sound aeronautical decisions, enhancing flight safety and regulatory compliance.

## STAGE CHECKS

Stage checks are designed to get a peer review on the process and help the student and the CFI keep the big picture in perspective. This is an opportunity for CFIs to tighten their game, for students to get an additional perspective, and for the students to become familiar with heightened nerves associated with evaluations.

## SOLO FLIGHTS

All flights are assumed to be Dual instructional flights unless noted “Solo”. During solo flights you are the only occupant of the aircraft. As much as anything else, your solo flights are an opportunity to practice the ritual of flying. Be sure to use all the tools you’ve been taught. Start by thinking through PAVE, adhering to your standard operating procedures, and working to execute a perfect flight. Nobody ever does, but work towards that!

Your CFI will go over:

- The assigned destination and route
- What you should accomplish during the flight
- The required endorsements for the flight

Your instructor will also review any limitations you are to observe regarding the weather and airspace during the flight. You must have a student pilot certificate and a medical certificate in your physical possession when making solo flights.

This Training is divided into:

- Stages
- Phases
- Lessons
    - Skill Building Days
    - Demonstration Days
    - Scenario Flights

There is a difference between “skill building” days and “demonstration” days, noted in the syllabus. Lessons may be repeated to build skills until the stated learning objectives are met and the completion standards are consistently demonstrated. At that point, the learner will be taught to demonstrate the required ACS maneuvers.

## SKILL BUILDING

Most flight lessons are skill-building days. During these lessons, the CFI and the learner practice various maneuvers across the flight envelope to truly learn what the airplane can do. Some of these maneuvers are on the ACS and will ultimately be tested, while others are there specifically to learn how to fly the airplane and will never be demonstrated to an examiner. For example, learning how to stall an airplane is very different from learning how to demonstrate a stall maneuver to an examiner.

## DEMONSTRATION DAYS

Demonstration days are lessons in which we practice the demonstration of the maneuver itself. A big difference exists between having the skills and knowing how to demonstrate them to an examiner. Emphasis should be placed on a clearing turn before every maneuver, followed by the maneuver itself and then completed with a flow check and a checklist. Regardless of what happens during the maneuver, the CFI should avoid fixing those problems at this point but rather take note for future lessons. The point of this lesson is to practice the maneuver demonstration procedure that will ultimately be used on the checkride.

## FLIGHT SCENARIOS

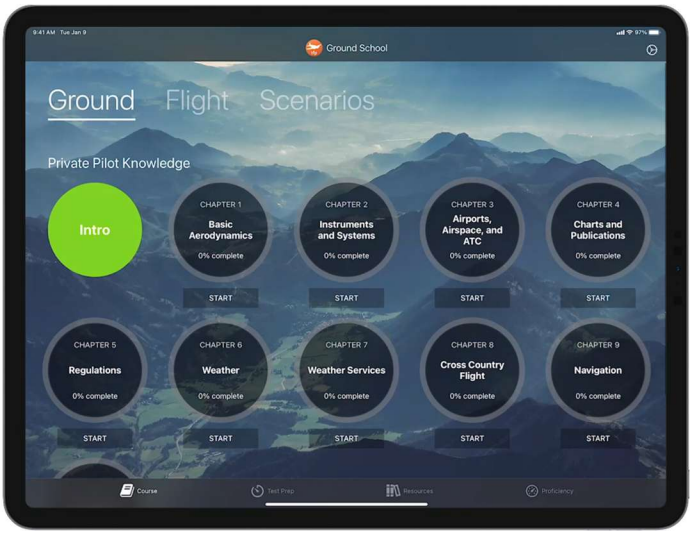
Scenarios are used to ensure that we are attaining a correlative level of knowledge. This is a chance to put it all together into a real-world scenario, measure the effectiveness of the training to date, and modify the approach going forward to suit the learner. Repeat any lesson until the completion standards are consistently met.

# Integration of Ground School App

The Finer Points Ground School App is an interactive and comprehensive flight training supplement designed to help you achieve your private pilot goals more efficiently and cost-effectively. This app empowers you to learn, practice, and receive feedback on key maneuvers and knowledge areas required for your Private Pilot Certificate, all at your own pace. The app fosters your growth with innovative educational techniques and helps you achieve peak performance. Each lesson in The Finer Points Ground School focuses on a specific maneuver, skill, or area of aeronautical knowledge and includes:

- Engaging Video Lessons: A pre-flight briefing provided through clear and engaging video instruction that simplifies complex topics.
- Interactive Knowledge Tests: Quizzes and questions to reinforce learning based on the FAA Airmen Certification Standards (ACS).
- Post-Lesson Review: Objective debriefs that highlight areas of strength and pinpoint areas for improvement, ensuring thorough comprehension of each subject.
- Progress Tracking: Monitor your learning journey and see trends in your improvement with built-in tracking tools.

***Get the Ground School App:*** **https://www.learnthefinerpoints.com/ground-school**




***The Ground School app goes beyond just answering study questions—it connects you directly to FAA sources with "Learn More" boxes for every topic. Students who dive into these resources gain a deeper understanding, far beyond just meeting the minimum requirements. To truly master the material, we highly recommend exploring the reference links throughout the app.***
***The more you engage, the more you'll learn!***

The Finer Points Ground School App is integrated into our Private Pilot Training Course Outline, providing students with modern tools to supplement in-air and classroom training. The table below highlights how lessons within the app align with the Private Pilot curriculum to maximize your training experience.

| Lesson | Ground School App |
|---|---|
| Intro | Flight: Getting Started |
| Ground 1 | Ground: Basic Aerodynamics |
| | Ground: Weather Services |
| | Flight: Getting Started |
| | Flight: Basic Communications |
| | Flight: SOP |
| | Flight: Preflight Inspection |
| Flight 1 | Ground: Instruments and Systems |
| | Ground: Charts and Publications |
| | Flight: Ground Operations |
| | Flight: The Takeoff |
| | Flight: Four Fundamentals |
| Flight 2 | Ground: Instruments and Systems |
| | Ground: Charts and Publications |
| | Flight: Airspeed Changes |
| Flight 3 | Flight: Minimum Controllable Airspeed |
| Flight 4 | Flight: Coordination Exercises |
| Flight 5 | Flight: Stall Exercises |
| | Flight: Falling Leaf Stall Exercises |
| Flight 6 | Flight: Slow Flight |
| Flight 7 | Ground: Airports, Airspace, and ATC |
| | Ground: Regulations |
| Flight 7 | Flight: Steep Turns |
| Flight 8 | Simulated Traffic Patterns |
| Flight 9 | As Required |
| Flight 10 | Ground: Aeromedical and ADM |
| | Flight: The Lazy Eight |
| Flight 11 | Flight: Turning Stalls |
| Flight 12 | Flight: Preventing Spins |
| Flight 13 | As Required |
| Flight 14 | Ground: Weather |
| | Flight: Turns Around a Point |
| Flight 15 | Flight: S-Turns |
| Flight 16 | Rectangular Course |
| Flight 17 | Flight: Mastering Landings I |
| Flight 18 | Flight: Mastering Landings I |
| Flight 19 | Flight: Mastering Landings I |
| Flight 20 | Flight: Runway Exercises |
| Flight 21 | Flight: The Touchdown |
| Flight 22 | As Required |
| Flight 23 | Flight: Engine Failure in Flight |
| | Flight: Communications Failure |
| | Flight: Electrical Failure |
| Flight 24 | Flight: Emergency Descent |
| | Flight: Intercept Procedures |
| Flight 25 | Flight: Steep Turns |
| | Flight: Slow Flight |
| | Flight: Power-on Stalls |
| | Flight: Power-off Stalls |
| | Flight: Engine Failure In Flight |
| Flight 26 | As required |
| Flight 27 | Flight: Supervised Solo |
| Solo 1 | Scenario: Solo Practice |
| Solo 2 | Scenario: Solo Practice Two |
| Flight 28 | Ground: Cross-Country Flight |
| | Ground: Navigation |
| | Flight: Short-Field Operations |
| Flight 29 | Flight: Soft-Field Operations |
| Solo 3 | Scenario: Solo Practice |
| Solo 4 | Scenario: Solo Practice |
| Ground 2 | Ground: Cross-Country Flight |
| Flight 31 | Scenario: Cross-Country |
| | Flight: Cross-Country Operations |
| Solo 5 | Scenario: Solo Practice |
| Flight 32 | Scenario: Cross-Country |
| | Flight: Cross-Country Operations |
| Solo 6 | Scenario: Solo Practice |
| Flight 33 | Flight: Compass Turns |
| | Flight: Reference to Instruments |
| Flight 34 | As Required |
| Solo 7 | Scenario: Solo Practice |
| Flight 35 | Flight: Night Operations<br>Flight: Flight Planning with an EFB |
| Flight 36 | As Required |
| Flight 37 | As Required |
| Solo 8 | As Required |
| Flight 38 | Emergency Operations II |
| Solo 9 | As Required |
| Solo 10 | The Long Solo Cross-Country |
| Flight 40 | Mock Oral Simulator |
| Solo 11 | As Required |
| Ground 3 | As Required |
| Flight 41 | Checkride Prep |
| Flight 42 | As Required |

# Stage 1: Pre-Solo

One objective of the Pre-Solo Stage is to acquire the skills and knowledge to safely fly the airplane solo from the home base to the practice area, practice ACS maneuvers, and return home. This includes the ability to deal with any emergencies that potentially arise. Another objective of the Pre-Solo Stage is to establish, as primacy, a fundamental understanding of sight pictures and basic aircraft control, the ritualization of flying, and the adoption of Standard Operating Procedures.

## Phase 1: Basic Training

**Recommended Study:**
The Ground School app includes "Learn More" boxes for each study question and links directly into the FAA sources. Students who consistently tap these boxes and then explore the FAA resources will learn vastly more than those simply meeting the minimum requirements. We strongly recommend reading the associated reference links provided throughout the Ground School app.

# Intro Flight

**Lesson Objectives:**
The objective of this lesson is to effectively demonstrate a broad sample of a typical flight lesson.

**Purpose**:
The purpose of this lesson is to give the learner an idea of what to expect on a typical flight lesson, establish early primacy where able, and stoke the passion of a new aviator.

**Completion Standard:**
This lesson is complete when the learner understands the basic structure of a flight lesson and the equipment required to be successful.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Getting Started: All Lessons

**Dry Time:** N/A

**Ground Review:**

- Pilot Supplies
- Logging Time
- Airmanship: Cockpit Organization
- ADM: PAVE

**Introduce:**

- Emergency Procedures: Best Glide
- Stability Demo

**Instructor Notes/For the CFI**:
Try and be judicious with what you teach and what you demonstrate. You have an opportunity to establish a little bit of initial primacy with the required SOPs, but mostly as demonstrations. Explain to the student that the lesson's purpose is to give them an overview, and you will have to approach many things from a high level. Ideally, they have a notebook and can write down any questions they aren't able to answer immediately on the flight. You should do the same. As much as you try, the pre-flight inspection is a hard one to gloss over. You will end up explaining some things, and it will take a fair bit of time. For this reason, explain the briefings, the ATIS, the radio calls, and the Run-Up, and then demo those for the student (for more information, see the TFP CFI Handbook).

# Ground Lesson 1

**Lesson Objectives:**

Review Standard Operating Procedures, learn how basic radio communication works with some practice calls appropriate to the training airport, and learn how to preflight the airplane.

**Purpose:**

The purpose of this lesson is to prepare the learner for the first lesson, establish fluency with the Standard Operating Procedures, and fully learn the pre-flight.

**Completion Standard:**

This lesson is complete when the learner can perform all the SOPs, repeat the simulated radio calls after the instructor, and can preflight an airplane section by section finding any "booby traps" planted.

**Required Study:**

In the **Ground Chapters** of the Ground School app:

- Basic Aerodynamics: All Lessons
- Weather Services: Overview
- Airports, Airspace, and ATC: Two Types of Airports

In the **Flight Chapters** of the Ground School app:

- Radio Communications 1: Basic Communications
- Standard Operating Procedures: All lessons
- Preflight Inspection: All lessons

**Dry Time:** Practice all SOPs.

**Ground Review:**

- Phonetic Alphabet
- Line of Sight
- One at a Time
- Mic Positioning
- Squelch
- Streamlined Radio Transmissions
- Setting Communication Levels
- Taxi, Takeoff, and Flight Following

**Nontowered Communications: if applicable**

- ASOS/AWOS
- Principles of self-announcing
- Bookending Radio Transmissions

**Towered Communications: if applicable**

- ATIS
- Taxi, Takeoff, and Flight Following
- Holding Short

**Standard Operating Procedures (SOPs):**

- SOPs: Bracketing Safety
- SOPs: Preflight Actions
- SOPs: Preflight Checks
- SOPs: Pre-Taxi Briefing
- SOPs: Taxi Turns
- SOPs: Pre-Takeoff Briefing
- SOPs: The Lindbergh Reference
- SOPs: Takeoff Callouts
- SOPs: Flow Checks and Checklists
- SOPs: Clearing Turns
- SOPs: GUMPS
- SOPs: ADM

**Instructor Notes/For the CFI:**
With this curriculum, students are learning to ritualize the act of flying, to hold it sacred and treat it with respect. Like professional operations, this curriculum leverages standardization to improve safety and precision. The Standard Operating Procedures taught in this lesson are the foundation of this effort. Don't give ground here; make sure that your student can perform all SOPs on the ground before you get into the airplane. For more information, see the CFI Handbook.

# Phase 2: Basic Aircraft Control

**Recommended Study:**
The Ground School app includes "Learn More" boxes for each study question and links directly into the FAA sources. Students who consistently tap these boxes and then explore the FAA resources will learn vastly more than those simply meeting the minimum requirements. We strongly recommend reading the associated reference links provided throughout the Ground School app.

## Flight Lesson 1 – Skill Building

**Lesson Objectives:**
The objective of this lesson is to learn basic aircraft control.

**Purpose**:
The purpose of this lesson is to begin to develop primacy around proper flight planning, PAVE, and personal limits; to learn the Four Fundamentals and the procedure for performing flow checks and checklists with each climb, level-off, and descent; to begin to put into practice the procedures we've learned for flight planning and preflight preparation, from the parking spot to the takeoff; to fly with the flight instruments covered to reinforce the integrated method of flight instruction.

**Completion Standard:**
This lesson is complete when the learner can:

- Approach the flight through the lens of the PAVE acronym
- Conduct a thorough preflight, organize the cockpit
- Execute the SOPs
- Identify the Lindbergh Reference
- Understand the value of the left-wing view
- See 'sight picture' in turns
- Understand the pitch/power relationship
- Begin to connect the flow checks and checklists for every climb, level-off, and descent

**Required Study:**
In the **Ground Chapters** of the Ground School app:

- Instruments and Systems
- Airport, Airspace, and ATC: Airspace, Taxiing, Airport Signs

In the **Flight Chapters** of the Ground School app:

- Ground Operations: All lessons
- The Takeoff: All lessons
- Four Fundamentals: All lessons

**Dry Time:**
Practice all SOPs.

**Ground Review:**

- ADM: PAVE
- Weather: Sources of Weather
- Weather: Briefings
- ADM: Personal Limits
- Preflight Prep: Preflight Actions
- Airmanship: Cockpit Organization
- Starting the Engine
- Taxiing the Airplane
- The Before-Takeoff Check

**Introduce:**

- Positioning the Aircraft
- The Takeoff
- The Initial Climb
- The Four Fundamentals

**Instructor Notes/For the CFI**:
During the first 25 hours of training, we are working hard to develop a strong primacy rooted in procedures and a certain formality to the flying process. Each practice flight we execute, starting with this first lesson, is an opportunity to reinforce PAVE, pre-flight planning, and the Standard Operating Procedures we've introduced so far. These flights should be conducted with the PFD darkened and using the backup instruments as described in the TFP CFI Handbook.

# Flight Lesson 2 – Skill Building

**Lesson Objectives:**
The objective of this lesson is to continue working on the Four Fundamentals, sight pictures, procedures, and to introduce Airspeed Changes.

**Purpose:**
To continue to build comfort in the airplane, perfect the procedures, and review the known power settings.

**Completion Standard:**
This lesson is complete when the student can:

- Demonstrate carrying forward the work from the previous lesson
- Perform the SOPs with minimal reminders
- Use the Lindbergh Reference to maintain pitch, bank, and coordination
- Change power settings to achieve the new target speed while maintaining altitude and coordination

**Required Study:**
In the **Ground Chapters** of the Ground School app:

- Airports, Airspace, and ATC: Collision Avoidance, Wake Turbulence
- Charts and Publications: All lessons

In the **Flight Chapters** of the Ground School app:

- Slow Flight and Stalls: Airspeed Changes

**Dry Time:**
Practice all SOPs.

**Ground Review:**

- ADM: PAVE
- Weather: Briefings
- ADM: Personal Limits
- Pitch & Power Relationship
- Aerodynamics: Left-Turning Tendency
- Aerodynamics: Lift
- Aerodynamics: AoA
- Known Power Settings

**Flight Review:**

- Maneuvers: Four Fundamentals
- Flight Control: Trim
- Sight Picture: Lindbergh Reference

(continued on next page)

**Introduce:**

- Known Power Settings
- Maneuvers: Airspeed Changes

**Instructor Notes/For the CFI:**
In these early hours, it's extremely important to keep the ritual of flying rigid. This is a large part of what we're teaching here; PAVE, proper weather briefings, a review of personal minimums, and adherence to SOPs are to be internalized as how the act of flying is done. During the flight, ensure you've got the PFD darkened or the flight instruments covered as described in the TFP CFI Handbook. Use a dry-erase marker or grease pencil to reinforce the sight pictures, note known power settings, and reinforce checklist usage.

# Flight Lesson 3 – Skill Building

**Lesson Objectives:**
Gain confidence with Airspeed Changes and introduce Minimum Controllable Airspeed.

**Purpose:**
Continue to develop primacy around ritualizing the act of flying. We're adding a little bit at a time while reviewing what has been learned repetitively. The student will begin to develop confidence in sight pictures, the principles of the pitch/power relationship, and yaw control using the Lindbergh Reference.

**Completion Standard:**
This lesson is complete when the student can reduce power and increase pitch so the aircraft slows to the appropriate speed without descending.

The learner:

- Demonstrate carrying forward the work from the previous lesson
- Perform the SOPs with minimal reminders
- Find sight pictures and power settings that hold requested airspeeds
- Adds power sufficient to sustain airspeed and altitude
- Can climb or descend while holding the new speed and maintaining coordination
- Can execute turns to headings while holding speed and altitude
- Maintain coordination through various power settings
- Trim and hold MCA while using the Lindbergh Reference
- Can perform these speed changes with or without flaps

**Required Study:** In the **Flight Chapters** of the Ground School app:

- Slow Flight and Stalls: Minimum Controllable Airspeed

**Dry Time:** Practice all SOPs.

**Ground Review:**

- ADM: PAVE
- Weather: Briefings
- ADM: Personal Limits
- Aerodynamics: AoA
- Procedures: Stall Recovery

**Flight Review:**

- Maneuvers: Four Fundamentals
- Maneuvers: Airspeed Changes

**Introduce:**

- Minimum Controllable Airpseed
- Maneuvers: Stall Demonstration

**Instructor Notes/For the CFI**:
To establish good primacy for your student, you must build on everything we've learned so far. It's intentionally repetitive to let the "concrete of primacy" set. With these flights, you're demonstrating that PAVE is how we approach flights—period. You're correcting students as they inevitably stray from what they're learning, holding the line, and building on one lesson after the next.

## Flight Lesson 4 – Skill Building

**Lesson Objectives:**

To continue to review what we've learned so far, connect the pitch/power relationship, review MCA, and learn Coordination Exercises. To develop confidence in sight pictures, procedures, the processes of flying, Minimum Controllable Airspeed, connect the pitch/power relationship, and learn Coordination Exercises.

**Completion Standard:**

This lesson is complete when the student can comfortably pull power to idle from cruise, slow to MCA, and add power while staying coordinated (using the Lindbergh Reference) to hold altitude and speed. The student can also maintain coordination with fast roll rates.

**Required Study:**

In the **Flight Chapters** of the Ground School app:

- Slow Flight and Stalls: Coordination Exercises

**Dry Time:**

Practice all SOPs.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Adverse Aileron Yaw
- Rudder Usage

**Flight Review:**

- Slow Flight: Airspeed Changes
- Finer Point: Minimum Controllable Airspeed (MCA)

**Introduce:**

- Finer Point: Coordination Exercises (e.g., yaw, control during slow flight)
- Finer Point: Cruise to MCA

**Instructor Notes/For the CFI:**

Three lessons in, and you should start to see what we've worked on begin to come together. You should notice more confidence in the procedures we're using, in the known power settings, and less time "hunting" for sight pictures during airspeed changes. We use this lesson to set the hook a bit. We're not moving on—we're going deeper. These finer points are measures of the core skills we've been teaching up to now. Continue to reinforce the ritualization of flying, keep the instruments covered (or dark), and take the time now to go deeper into these core skills. This effort will pay dividends forever—take the time to get it right.

# Flight Lesson 5 – Skill Building

**Lesson Objectives:**
To learn the fundamentals of stall recovery. To continue developing sight pictures across the envelope, feel coordination, and establish, as primacy, that the forward elevator breaks the stall and the rudders pick up the wings.

**Completion Standard:**
The learner can efficiently slow to MCA, find the Lindbergh Reference, and stay coordinated. Uses enough power to hold altitude and can pull the airplane into and recover from stalls without adding power.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Slow Flight and Stalls: Stall Exercises, Falling Leaf Stalls

**Dry Time:**
Practice all SOPs

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Procedures: Stall Recovery

**Flight Review:**

- Finer Point: Minimum Controllable Airspeed (MCA)
- Finer Point: Coordination Exercises (e.g., yaw control during slow flight)

**Introduce:**

- Finer Point: Falling Leaf Stalls
- Stalls: Stall Exercises

**Instructor Notes/For the CFI:**
In this lesson, we are reinforcing what we've learned so far and establishing the primacy of stall recovery. It's important to cover the flight instruments, mark the Lindbergh Reference, and learn to control yaw while pulling the airplane in and out of stalls. Recovery should be made using pitch alone to reinforce the idea that forward elevator breaks the stall. The low-power setting of MCA will provide some left-turning tendencies, but not strong left-turning tendencies.

# Flight Lesson 6 – Demonstration Day

**Lesson Objectives:**
The objective of this lesson is to learn the ACS maneuver "Slow Flight".

**Purpose:**
To take the skills that have been learned and apply them to the demonstration of the first ACS maneuver, Slow Flight.

**Completion Standard:**
The learner can execute the complete demonstration procedures and fly the maneuver to ACS tolerances with and without flaps, uncoached. The student also:

- Utilizes PAVE
- Gets the weather
- Executes a Passenger Briefing
- Executes a Pre-Taxi Briefing
- Executes Taxi Turns
- Uses CIGARS
- Positions the aircraft properly
- Notes runway heading
- Uses Takeoff Callouts
- Works to hold centerline
- Rotates at Vr
- Applies right rudder on takeoff as appropriate
- Transitions to the Lindbergh Reference
- Attains and holds Vy to 1000' AGL
- Uses flow checks and checklists
- Four Fundamentals

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Slow Flight and Stalls: Slow Flight

PPL ACS: A.O. VII. Task A

**Dry Time:** Practice all SOPs.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Standards: ACS
- Maneuver Demonstration Day Procedure

**Flight Review:**

- Maneuver Demonstration Day Procedure
- Slow Flight: Clean and Dirty Configurations
- Slow Flight: Turns to Headings

**Progress Check**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- SOPS: Preflight Checks
- Airmanship: Proper Foot position
- Airmanship: Cockpit Organization
- Airmanship: Light Grip on the Control Yoke
- SOPS: Pre-Taxi Briefing
- SOPS: Taxi Turns
- SOPS: CIGARS
- Clears the Final prior to departing
- Positioning the Aircraft
- Confirm Runway Heading prior to Power Addition
- SOPS: Takeoff Callouts
- Holds Centerline
- Rotates at Vr
- Takeoff: Applies slight right rudder on liftoff
- Sight Picture: Lindberg Reference
- Holds Extended Centerline
- Hand on Throttle
- Takeoff: Attains and Holds Vy
- SOPS: Flow Checks and Checklists
- Maneuvers: Four Fundamentals
- SOPS: Clearing Turns
- Slow Flight: Airspeed Changes
- Slow Flight: Clean and Dirty Configurations
- Slow Flight: Turns to Headings

**Instructor Notes/For the CFI:**
In a way, there is not much to this lesson if you've been teaching this syllabus with the CFI Handbook in the Ground School app. It's a phase check to verify the depth of the training so far and to learn to demonstrate an ACS maneuver as per The Finer Points method. If not, it's a point not too far in the syllabus to correct this mistake and establish good primacy for the learner. This lesson is a demonstration day, the first of many to come. Remember not to teach this lesson beyond the procedure for demonstrating a maneuver. Even if the Slow Flight goes poorly, take notes to work on it later; the main point of this lesson is the demonstration of the ACS maneuver itself. The level of depth on the task completion list serves as a calibration point if this is stuff you've been missing.

# Phase 3: Basic Aircraft Maneuvers

**Recommended Study:**
The Ground School app includes "Learn More" boxes for each study question and links directly into the FAA sources. Students who consistently tap these boxes and then explore the FAA resources will learn vastly more than those simply meeting the minimum requirements. We strongly recommend reading the associated reference links provided throughout the Ground School app.

## Flight Lesson 7 – Skill Building

**Lesson Objectives:**
To learn the principles of Steep Turns.

**Completion Standard:**
The learner can see sight pictures in turns, manage overbanking tendency while holding 45º of bank, and manage airspeed with power.

**Required Study:**
In the **Ground Chapters** of the Ground School app:

- Regulations: All lessons

In the **Flight Chapters** of the Ground School app:

- Aerial Maneuvers: Steep Turns

**Dry Time:**
Practice all SOPs.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Aerodynamics: Load Factor
- Aerodynamics: Over Banking Tendency
- Sight Picture: During Turns
- Standards: ACS

**Flight Review:**

- Slow Flight: Airspeed Changes
- Sight Picture: During Turns

**Introduce:**

- Maneuver: Steep Turns

**Instructor Notes/For the CFI:**

In Phase 3, the student is comfortable with Basic Aircraft Control and is taking on more responsibilities. The student should be using PAVE, getting weather briefings, planning the routes to the practice area, and practicing SOPs. In the dual flights in Phase 3, the student and CFI begin to fly more complex aerial maneuvers, but all of it is built on the foundation of what has been learned so far. Remember to start giving the learner more responsibility slowly. Let the leash out, observe, and measure your success or failure. It's a great time to start booby-trapping the airplane again before the preflight. Allow the learner to make more choices; if they are bad choices, discuss why.

- Make sure your student builds on your established discipline and does not allow their newfound confidence to erode it.
- Make sure your students are developing confidence in the Lindbergh Reference. If they are not, cover the flight instruments and point it out during the initial climb, MCA, stall exercises, and Power-On stalls.
- Continue measuring your students' success in flight flow checks and checklists by keeping track of their percentage (50%–75%) that is complete.
- Use time walking to the airplane to review concepts.

Spend some time confirming that the student sees sight pictures in turns. Demonstrate what pitching up and pitching down looks like in both directions. Most pilots make the mistake of focusing on the AI or other flight instruments. This lesson should be conducted with the PFD dark, using only backup instruments, as described in the CFI Handbook.

# Flight Lesson 8 – Skill Building

**Lesson Objectives:**
The objective of this lesson is to learn the principles of flying traffic patterns and the rejected landing.

**Purpose:**
To begin to learn the power settings, flap usage, and sight pictures for landing. Also, to learn to recognize an oncoming stall and initiate a go-around.

**Completion Standard:**
The learner can set pattern power, simulate an ABEAM position, fly appropriate airspeeds and flaps settings until the final approach, then induce the onset of a stall and recover with the go-around procedure.

**Required Study:** In the **Flight Chapters** of the Ground School app:

- Aerial Maneuvers: Simulated Traffic Patterns
- Slow Flight and Stalls: Power-Off Stalls

**Dry Time:** Practice all SOPs and the Maneuver Demonstration Day Procedures.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Aerodynamics: Left-Turning Tendency
- Procedures: Traffic pattern operations with power management
- Procedures: Go-Around
- Procedures: Power-Off Stalls

**Flight Review:**

- Maneuvers: Steep Turns

**Introduce:**

- Procedures: Simulated traffic patterns at altitude
- Maneuver: Power-Off

**Instructor Notes/For the CFI:**
This lesson sets the stage for beginning to learn to land, but also serves as a great progress check for skills that will be required to land successfully. Consider how much there is to observe in the simulated traffic pattern. For example, are they using the correct pattern power setting? When they pull power to idle at the abeam position, are they holding the pitch to start decreasing the speed? Are they setting the correct sight picture after the first flaps are applied and, on the descent (down line)? Are they flying the correct headings? Are they doing a GUMPS check? Are they simulating clearing final? Are they able to hold airspeed using pitch with power to idle? Do they initiate a go-around upon hearing the stall horn?

## Flight Lesson 9 – Demonstration Day

**Lesson Objectives:**

To practice the demonstration of maneuvers and determine that the learning objectives have been met up to this point.

**Purpose:**

Demonstration Day procedure, but this lesson also serves as a progress check. Slow Flight, Steep Turns, and Power-Off Stalls should be demonstrated to ACS tolerances, and the prior learning should be carried forward.

**Completion Standard:**

This lesson is complete when the learner meets the following standards:

- Carries forward prior learning
- Is learning to ritualize flying
- Recognizes Power-Off Sight Picture in Simulated Traffic Patterns
- Flies Target Speeds / Power Settings During Simulated Traffic Patterns

**Slow Flight Procedure:**

- Controls yaw using Lindbergh Reference
- Is able to hold heading
- Uses shallow bank angles in turns
- Controls altitude using power

**Power-Off Stalls Demonstration Day Procedure:**

- Clears the Area
- Announces horn
- Controls yaw on recovery
- Retracts flaps appropriately
- Controls yaw in recovery
- Rehearse recovery as a go-around procedure
- Performs flow check and checklist
- Recognizes go-around Sight Picture
- Meets ACS tolerances

**The Steep Turn Demonstration Day Procedure:**

- Clears the Area
- Performs a complete 360º turn in one direction immediately followed by a turn in the opposite direction
- Controls bank angle, altitude, and airspeed
- Performs flow checks and checklists
- Sees sight picture in turns
- Adds power to control speed
- Controls overbanking tendency
- Meets ACS tolerances

**Required Study:**

Review the Skill tasks for each of the ACS maneuvers

- Slow Flight
- Power-Off Stalls
- Steep Turns

**Dry Time:**

Practice all SOPs and the Maneuver Demonstration Day Procedures.

**Ground Review:**

- Maneuver Demonstration Day Procedure

**Flight Review:**

- Procedures: Simulated traffic patterns at altitude
- Maneuver: Slow Flight
- Maneuver: Steep Turns

**Introduce:**

- Maneuver: Power-Off Stalls

**Instructor Notes/For the CFI**:
This lesson is a demonstration day and instruction beyond the demonstration process itself should be avoided. The student should be able to discuss the flight plan through the lens of PAVE, get the weather, use all the SOPs, select the altitude and practice area, use clearing turns, demonstrate the maneuvers, recover, and perform a flow check to complete. You are primarily measuring the success or failure of this process. Resist the urge to teach any errors in the maneuvers. Make notes and discuss during the debrief. This lesson should also serve as a progress check as described in the CFI Handbook.

# Phase 4: Advanced Aircraft Maneuvers

## Flight Lesson 10 – Skill Building

**Lesson Objectives:**
To learn the maneuver Lazy Eights.

**Purpose:**
Learn about overbanking tendencies, such as slowing turns, staying oriented, and ensuring that the airplane won't stall while unloading the wing.

**Completion Standard:**
This lesson is complete when the learner can initiate a small bank, leverage the overbanking tendency, increase to maximum pitch, unload the wing, and achieve 30–45º of bank on the downline while staying oriented.

**Required Study:**

In the **Ground Chapters** of the Ground School app:

- Aeromedical and ADM: All lessons

In the **Flight Chapters** of the Ground School app:

- Aerial Maneuvers: The Lazy Eight

**Dry Time:**
Practice all SOPs and the Maneuver Demonstration Day Procedures

**Ground Review:**

- Performance Maneuvers: Lazy Eights
- Reference Selection
- Aerodynamics: Overbanking Tendency

**Flight Review:**

- Maneuver: Steep Turns

**Introduce:**

- Performance Maneuvers: Lazy Eights

**Instructor Notes/For the CFI:**
In Phase 4, we continue to push the learning as the student's skills get stronger. We learn to "get out of the cockpit" and stay positionally aware through maneuvers like Steep Turns and the Lazy Eight. We also learn the stall characteristics of the airplane and leverage the overbanking tendency for turning stalls.

Each flight should continue to use all of the structure learned up to now. PAVE, weather briefings, and all SOPs should be practiced on every flight, and certain duties should be slowly transferred to the learner. Learners should be getting their weather briefings and comparing notes to the CFI's independent briefing.

As the first 25 hours progress, use your judgment on integrated flight instruction. If your student is focusing too much on the instruments, bring back the paper over the flight instruments. Otherwise, you can move away from it.

Make sure your students are developing good use of trim. If they are not, use the pen-in-the-finger technique to lighten their grip on the yoke as described in the CFI Handbook.

Make sure you're measuring the success of your students in flight flow checks and checklists by keeping track of their percentage—50%–75% is Complete, 75% or better is Excellent. Use time walking to the airplane to review concepts.

# Flight Lesson 11 – Skill Building

**Lesson Objectives:**
To learn to stall in a turn.

**Purpose:**
To learn how to leverage overbanking tendencies at slow speeds to achieve a stall recovery in a turn.

**Completion Standard:**
This lesson is complete when the learner can initiate a small bank upon hearing the stall horn and remain coordinated as the aircraft is smoothly pulled into a full stall (which should occur at about 20-30º of bank).

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Mastering Stalls: Turning Stalls, Accelerated Stalls

**Dry Time:**
Practice all SOPs and the Maneuver Demonstration Day Procedures.

**Ground Review:**

- Aerodynamics: Overbanking Tendency

**Flight Review:**

- Finer Point: Minimum Controllable Airspeed (MCA)
- Stalls: Stall Exercises

**Introduce:**

- Stalls: Turning stalls (left and right banks)

**Instructor Notes/For the CFI:**
There are a lot of important skills coming together in this lesson. Your students will learn to confidently stall in a turn and will leverage the comfort they've gained through Lindbergh Reference, MCA, The Lazy Eight, and Stall Exercises.

# Flight Lesson 12 – Skill Building

**Lesson Objectives:**
To learn the two contexts we use for simulating Power-On Stalls during demonstrations.

**Purpose:**
Become more familiar with the rudder's role in spin prevention, learn the lowest edge of the performance envelope, and become confident executing power-on stalls.

**Completion Standard:**
This lesson is complete when the learner has seen an incipient spin entry and can successfully use the rudder to prevent it from happening during power-on stalls.

**Required Study:**
In the **Flight** Chapters of the Ground School app:

- Mastering Stalls: Preventing Spins, Power-On Stalls

**Dry Time:**
Practice all SOPs and the Maneuver Demonstration Day Procedures.

**Ground Review:**

- Aerodynamics: Spin Anatomy and Recovery
- Stalls: Incipient Spin Recovery
- Stalls: Power-on stalls from Vy climbs and/or over-rotations

**Flight Review:**

- Stalls: Stall Exercises
- Finer Point: Falling Leaf Stalls

**Introduce:**

- Stalls: Incipient Spin Recovery
- Stalls: Power-on stalls from Vy climbs and/or over-rotations

**Instructor Notes/For the CFI:**
This lesson is very important and, as always, should be repeated until the student meets the completion standards. Your student has already become comfortable with MCA, stall exercises, and turning stalls. Now they are going to complete the stall/spin awareness training by learning to stall under full power.

This lesson should follow a structured progression with:

1. MCA to warm up
2. Stall Exercises to reinforce that the forward elevator breaks the stall
3. Falling Leaf Stalls to reinforce the role of the rudder in keeping the wings level

Once these are reviewed, let the student see what happens if they use zero rudder (incipient spin entry). From there, work with the Lindbergh Reference to prevent the roll that occurs with no rudder, and learn to stall in both contextual demonstration configurations.

## Flight Lesson 13 – Demonstration Day

**Lesson Objectives:**
To introduce the Power On Stall demonstration procedure.

**Purpose:**
To practice demonstrating the skills acquired to date and serve as a final progress check before moving on to landings.

**Completion Standard:**
This lesson is complete when the learner demonstrates the following:

**Required Study:**
PPL ACS A/O VII. Task C: Power On Stall

**Dry Time:**
Practice all SOPs and the Maneuver Demonstration Day Procedures.

**Ground Review:**

- Maneuver Demonstration Day Procedure

**Flight Review:**

- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls

**Introduce:**

- Maneuver: Power-On Stalls

**Instructor Notes/For the CFI:**

Congratulations! When your student meets the requirements of this lesson, they have completed the high-airwork portion of their flight training. Use this lesson as a progress check and ensure your student meets the completion standards and is essentially checkride-ready on these maneuvers. Repeat the lesson as needed until they do.

We will revisit these maneuvers later, but from here the syllabus moves toward landing the airplane and covering the emergencies one might have to handle while solo. The foundations of good airmanship and basic aircraft control have been laid.

At this stage, you can start to fly with all instruments available, but be prepared to cover them again as needed to remind your students. However, don't rely too heavily on the MFD. Pilotage is a critical part of the upcoming Ground Reference maneuvers, and it’s important to establish navigational primacy outside the pink line. Once these are reviewed, let the student see what happens if they use zero rudder (incipient spin entry). From there, work with the Lindbergh Reference to prevent the roll that occurs with no rudder and learn to stall in both contextual demonstration configurations.

# Phase 5: Ground Reference Maneuvers

**Recommended Study:**
The Ground School app includes "Learn More" boxes for each study question and links directly into the FAA sources. Students who consistently tap these boxes and then explore the FAA resources will learn vastly more than those simply meeting the minimum requirements. We strongly recommend reading the associated reference links provided throughout the Ground School app.

## Flight Lesson 14 – Skill Building

**Lesson Objectives:**
To learn to fly the Ground Reference Maneuver, Turns Around a Point.

**Purpose:**
To teach the art of pilotage, low-altitude contingency planning, and the maneuver Turns Around a Point.

**Completion Standard:**
This lesson is completed when the learner can:

- Select a suitable point
- Correctly identify the wind
- Choose an appropriate radius
- Demonstrate patience on the upwind
- Identify an emergency landing site
- Fly Turns Around a Point to ACS standards

**Required Study:**
In the **Ground Chapters** of the Ground School app:

- Weather: All lessons

In the **Flight Chapters** of the Ground School app:

- Ground Reference: Turns Around a Point

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations for all ACS maneuvers.

**Ground Review:**

- Ground Reference: Principles of wind and ground speed
- Ground Reference: Patience on the upwind
- ADM: Low-Altitude Contingency Planning

**Introduce:**

- Ground Reference: Turns Around a Point
- Navigation: Pilotage

**Instructor Notes/For the CFI:**

Ground reference is a fun part of training. It provides the first fundamental change to the nature of the lessons. Ground reference lessons are conducted at relatively low altitudes and require a slightly different risk assessment. Trips to and from the practice area are a great opportunity to practice the art of pilotage.

We recommend flying these lessons with minimal navigational equipment, at low altitudes, and using paper charts; ignore the GPS as much as possible. This is a chance to connect to some of the fundamentals of aeronautical navigation. Open the window, fly by pilotage and the magnetic compass, and connect to the timeless art of aeronautical navigation.

# Flight Lesson 15 – Skill Building

**Lesson Objectives:**
To learn to fly S-Turns Across a Road.

**Purpose:**
To continue practicing pilotage and low-altitude risk management while perfecting low-altitude maneuvering in relation to references on the ground.

**Completion Standard:**
This lesson is completed when the learner can:

- Select a suitable reference
- Demonstrate patience on the upwind
- Identify an emergency landing site
- Fly S-Turns Across a Road to ACS standards
- Correctly identify the wind

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Ground Reference: S-Turns Across a Road

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations for all ACS maneuvers.

**Ground Review:**

- ADM: Low Altitude Contingency Planning
- Ground Reference: Maneuver entry procedures
- Ground Reference: Patience on the upwind
- Ground Reference: Principles of wind and ground speed
- Ground Reference: S-Turns Across a Road

**Flight Review:**

- Ground Reference: Turns Around a Point

**Introduce:**

- Ground Reference: S-Turns Across a Road

**Instructor Notes/For the CFI:**

This lesson is a fun opportunity to continue practicing low-altitude maneuvering and navigation. Limit the use of the GPS, fly at low altitudes, and connect chart symbology with actual features on the ground.

Let your student work on selecting the reference, as this is a skill they will need to develop to become checkride ready.

For more information on how to teach S-Turns Across a Road, refer to the CFI Handbook.

# Flight Lesson 16 – Skill Building

**Lesson Objectives:**
To learn to fly the Rectangular Course.

**Purpose:**
To develop pilotage and low-altitude contingency planning skills and learn to fly rectangles in relation to references on the ground.

**Completion Standard:**
This lesson is completed when the learner can:

- Demonstrate good ADM and low-altitude contingency planning
- Carry forward prior learning
- Learn to ritualize flying
- Select a suitable place and radius for Turns Around a Point
- Demonstrate patience on the upwind
- Meet ACS tolerances for Turns Around a Point
- Select a suitable place and radius for S-Turns Across a Road
- Demonstrate patience on the upwind
- Meet ACS tolerances for S-Turns Across a Road
- Meet ACS tolerances for Rectangular Course

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Ground Reference: Rectangular Course

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations for all ACS maneuvers.

**Ground Review:**

- Ground Reference: Rectangular Course
- Ground Reference: Maneuver entry procedures
- Ground Reference: Patience on the upwind
- Ground Reference: Low-altitude contingency planning
- Ground Reference: Principles of wind and ground speed

**Flight Review:**

- Ground Reference: Turns Around a Point
- Ground Reference: S-Turns Across a Road

**Introduce:**

- Ground Reference: Rectangular Course

**Instructor Notes/For the CFI:**
One of the main purposes of Ground Reference Maneuvers is to teach students to fly a rectangular traffic pattern. With that in mind, this lesson wraps up the learning from the past few lessons and transitions into landing the airplane.

At this point, your student should:

- Have learned pilotage, paper charts, and low-altitude contingency planning
- Meet the completion standards before moving forward

This lesson solidifies ground reference awareness and pattern planning in preparation for approach and landing training.

# Phase 6: Mastering Landings

**Recommended Study:**
The Ground School app includes "Learn More" boxes for each study question and links directly into the FAA sources. Students who consistently tap these boxes and then explore the FAA resources will learn vastly more than those simply meeting the minimum requirements. We strongly recommend reading the associated reference links provided throughout the Ground School app.

## Flight Lesson 17 – Skill Building

**Lesson Objectives:**
To learn the overview of the landing process and how to fly an approach, see an aiming point, identify the trigger reference point, and execute a go-around.

**Purpose:**
To verify proper pattern power settings, distance from the runway, sight pictures, and airspeed control, learn an overview of the landing process, and learn to execute a go-around close to the ground.

**Completion Standard:**
This lesson is complete when the learner can fly a rectangular traffic pattern at the appropriate distance and power settings while progressively adding flaps and achieving target airspeeds. The student can identify and fly toward an aiming point with and without flaps at the target airspeed, identify the trigger reference point, and go-around. The student can also demonstrate the ability to move the aiming point and meet the following completion standards:

- Fly the appropriate distance from the runway
- Consistently set proper pattern power settings
- Consistently set the proper power-off sight picture at the ABEAM position
- Make the proper pattern callouts
- Identify the 5 phases of landing
- See an aiming point
- Execute a go-around to ACS standards

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Mastering Landings 1: All lessons
- Practice Written Tests in the Ground School app Test Prep Area

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations for all ACS maneuvers.

**Ground Review:**

- Takeoffs and Landings: Overview

- Procedures: Traffic pattern operations with power management
- SOPs: Takeoff Callouts
- Takeoffs and landings: Stabilized approaches to aiming points
- Procedures: Go-Around

**Flight Review:**

- Procedures Simulated traffic patterns at altitude

**Introduce:**

- Takeoffs and Landings: Overview
- Procedures: Traffic pattern operations with power management
- Takeoffs and Landings: Stabilized approaches to aiming points
- Procedures: Go-Around

**Instructor Notes/For the CFI:**
This lesson is complete when the student can fly a rectangular traffic pattern at the appropriate distance and power settings while progressively adding flaps and achieving target airspeeds. The student can identify and fly toward an aiming point with and without flaps at the target airspeed, identify the trigger reference point, and go-around. The student can also demonstrate the ability to move the aiming point and meet all of the completion standards.

This is where it all comes together. Every good landing rides on the shoulders of a good approach. Make sure that your students are flying the appropriate distance from the runway, using the proper pattern power setting, setting the appropriate power-off sight picture, flying a rectangular pattern, managing airspeed, and seeing an aiming point. Everything downstream depends on this.

## Flight Lesson 18 – Skill Building

**Lesson Objectives:**
To master rounding out at the appropriate time, with the appropriate amount of elevator with the correct amount of force.

**Purpose:**
After learning to fly a stabilized approach to an aiming point, you learn to identify the trigger reference point and move the airplane into the flare.

**Completion Standard:**
This lesson is completed when the learner can:

- Identify and hold an aiming point
- Identify the trigger reference point
- Round out and go-around

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Mastering Landings 1: Review all lessons

Practice Written Tests in the Ground School app Test Prep Area

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the abeam position through go-around.

**Ground Review:**

- Takeoffs and Landings: Stabilized approaches to aiming points
- Procedures: Trigger reference points for landing flare
- Procedures: Runway end aiming point
- Takeoffs and Landings: Recovery from balloon during landing
- Procedures: Go-Around

**Flight Review:**

- Takeoffs and Landings: Stabilized approaches to aiming points
- Procedures: Go-Around

**Introduce:**

- Procedures: Trigger reference points for landing flare
- Procedures: Runway end aiming point
- Takeoffs and Landings: Recovery from balloon during landing

**Instructor Notes/For the CFI:**

During the mastering landing phase, you will repeat many flights in the traffic pattern of your home airport and fly to other local airports to work on landings. These flights should be planned using PAVE, performance calculations, weather briefings, and all SOPs. They are, essentially, mini "cross-countries". These landing lessons build, one upon the next. Make sure your student is still flying the proper distance from the runway, using the proper power settings, and using an aiming point before you begin to find the trigger reference point and start the round-out process.

Useful exercises for identifying the aiming point and trigger reference point are described in detail in the TFP CFI Handbook.

Use this lesson to help your students see what it looks like to have both extreme and mild balloon events, and have them become familiar with a late, low-altitude go-around.

# Flight Lesson 19 – Skill Building

**Lesson Objectives:**
To master the art of the Flare, Touchdown, and Rollout.

**Purpose:**
To learn the problems inherent in re-engaging with the Earth: You'll learn to find the references that allow you to land with the airplane's longitudinal axis aligned with and over the runway centerline; Learn to transition to the Lindbergh Reference; use the appropriate amount of elevator applied at the appropriate time, with the appropriate force, to increase the angle of attack and lose speed without gaining altitude, while keeping the longitudinal axis of the airplane aligned with and over the runway centerline while protecting the nose wheel.

**Completion Standard:**
The learner can flare the aircraft such that the main wheels touchdown with the longitudinal axis of the aircraft aligned with and over the runway centerline while protecting the nosewheel. The student effectively deals with the three possibilities related to ballooning. Upon touchdown, the student maintains directional control with appropriate rudder input, keeping the aircraft aligned with the centerline while smoothly lowering the nosewheel. During rollout, the student continues to maintain directional control and effectively manages deceleration using aerodynamic braking by increasing backpressure on the control yoke, applying brakes as necessary, and smoothly adjusting the flight controls for the effects of wind for taxi as necessary. The aircraft is taxied to a safe speed before exiting the runway at an appropriate taxiway.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Mastering Landings 1: All lessons *again*

Practice Written Tests in the Ground School app Test Prep Area

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the abeam position through go-around.

**Ground Review:**

- Sight Picture: Lindberg Reference
- Takeoffs and Landings: Recovery from balloon during landing
- Takeoffs and Landings: Porpoising
- Takeoffs and Landings: Flaring too much or too fast

**Flight Review:**

- Procedures: Traffic pattern operations with power management
- Takeoffs and landings: Stabilized approaches to aiming points
- Takeoffs and Landings: Round out

**Introduce:**

- Procedures: Flare

- Procedure: Touchdown
- Procedure: Rollout

**Instructor Notes/For the CFI:**
In these first few landing lessons, try to limit the number of variables you change. If possible, work at the same airport and on the same runway. There will be plenty of time to move to another airport after the basics have been introduced.

The keys to learning to flare are:

- The trigger reference point
- The runway end aiming point
- The Lindbergh Reference

Make sure your students can identify and set all aiming points and use high-speed taxiing in the soft-field takeoff configuration to teach the Lindbergh Reference in the flare. More information in the TFP CFI Handbook.

## Flight Lesson 20 – Skill Building

**Lesson Objectives:**
The learner will develop proficiency and confidence in maneuvering the aircraft at low speeds and low altitudes through structured runway exercises.

**Purpose:**
These exercises will focus on power-off approaches, low-altitude steep-bank turns, drift control using side slips, and energy management through precise power and control adjustments. The learner will also refine takeoff and landing techniques, including forward slips to landings, modifying the aiming point, side slips, and 180° power-off approaches, while mastering approach geometry and slipping versus skidding turns.

**Completion Standard:**
This lesson is completed when the learner can:

- Demonstrate comfort with power-off approaches
- Demonstrate comfort with low-altitude/steep-bank turns
- Control drift using side slips
- Add power and control speed/altitude after moving the aiming point

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Mastering Landings 2: Runway Exercises

Practice Written Tests in the Ground School app Test Prep Area

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the abeam position through go-around.

**Ground Review:**

- Takeoffs and Landings: Forward slips to landing
- Takeoffs and Landings: Side slips
- Maneuvers: Slipping turns vs. Skidding turns
- Finer Point: Drift Exercises
- Takeoffs and Landings: 180° Power-Off approach
- Finer Point: Approach Geometry
- Maneuvers: Steep bank/low altitude turns

**Flight Review:**

- Procedures: Traffic pattern operations with power management
- Takeoffs and Landings: Stabilized approaches to aiming points

**Introduce:**

- Takeoffs and Landings: Forward slips to landing

- Finer Point: Drift Exercises
- Takeoffs and Landings: Side Slips
- Maneuvers: Slipping turns vs. Skidding turns
- Finer Point: Moving the aiming point
- Finer Point: Approach Geometry
- Takeoffs and Landings: 180° Power-Off approach
- Takeoffs and Landings: Simulated engine failure after takeoff

**Instructor Notes/For the CFI:**
In these first few landing lessons try to limit the number of variables you change. If possible, work at the same airport and on the same runway. There will be plenty of time to move to another airport after the basics have been introduced.

The keys to learning to flare are:

- The trigger reference point
- The runway end aiming point
- The Lindbergh Reference

Make sure your students can identify and set all aiming points and use high-speed taxiing in the soft field takeoff configuration to teach the Lindbergh reference in the flare. More information in the TFP CFI Handbook.

## Flight Lesson 21 – Skill Building

**Lesson Objectives:**
Master crosswind takeoffs and landings.

**Purpose:**
You'll learn to find the references that allow you to land with the airplane's longitudinal axis aligned with and over the runway centerline while landing in a crosswind.

**Completion Standard:**
This lesson is complete when the learner can line up with the runway edge and side slip to the centerline during the flare and land with the longitudinal axis aligned with the runway centerline while protecting the nosewheel.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Mastering Landings 1: The Touchdown

Practice Written Tests in the Ground School app Test Prep Area

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the abeam position through go-around.

**Ground Review:**

- Takeoffs and Landings: Side Slips
- Finer Point: Drift Exercises

**Flight Review:**

- Finer Point: Drift Exercises
- Procedures: Traffic pattern operations with power management

**Introduce:**

- Takeoffs and Landings: Crosswind takeoffs and landings

**Instructor Notes/For the CFI:**
As you intersperse airports into these landing lessons, make sure that your student is continuing to adhere to the ritualization of flying we've established up to this point. Treat each flight as a short cross-country; make sure your student uses PAVE and is aware of all elements related to successfully executing the mission.

# Flight Lesson 22 – Scenario

**Lesson Objectives:**

Execute a flight to the practice area and then another local airport for pattern work.

**Purpose:**

To introduce a new flight environment and correlate the learning, so far. If there is an opportunity to fly to airspace different from the home base, take it. Get flight following.

**Completion Standard:**

This lesson is complete when the learner can:

- Carry forward prior learning
- Demonstrate a ritualization of flying
- Choose the practice area and altitude
- Perform high-airwork maneuvers to ACS
- Approach:
    - Round out
    - Touchdown
    - Flare
    - Rollout
- Go-Around
    - Correct pitch
    - Controls yaw
    - Makes call for go-around
- 180 Degree Power-Off Approach
- Forward Slip to landing
    - Approaches with enough altitude to demonstrate slip
    - Uses full rudder and continues to track forward
- Crosswind Landings

**Required Study:**

Review the Skill tasks for each of the ACS maneuvers

**Dry Time:**

Continue to practice SOPs and rehearse maneuver demonstrations for all ACS maneuvers.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- Maneuver Demonstration Day Procedure
- Navigation: New local airport

**Flight Review:**

- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-On Stalls
- Maneuver: Power-Off Stalls
- Takeoffs and Landings: Normal takeoffs and landings

**Introduce:**

- **Navigation: New local airport**

**Instructor Notes/For the CFI:**
Treat this flight as a mini cross-country. The scenario you're rehearsing is a typical solo flight.

Stay true to the lessons taught so far and maintain the ritualization of flying.

At its essence, this flight is a simple review of what's been taught so far. It is an opportunity to put what we've been working on into context, into a scenario.

Try and choose another local airport that is suitable for solo someday—this flight will end up being a solo flight for the student at some point.

- If you train at a towered airport, pick a nontowered airport.
- If you train at a nontowered airport, pick a towered airport.

# Phase 7: Emergency Procedures

## Flight Lesson 23 – Skill Building

**Lesson Objectives:**
To learn how to handle total engine failure and learn the ACS task, "Simulated Engine Failure", to learn about Alternator/Electrical Failure Procedures, and to learn Lost Communications procedures.

**Purpose:**
To learn to apply the principles of 180º power-off approaches to the possibility of a total engine failure. With these techniques engrained, the student will develop confidence in maneuvering into a confined area without power.

**Completion Standard:**
The learner maintains awareness of landing options, holds pitch at power loss while turning to the best option, expedites flow check, uses a written checklist if altitude permits, declares the emergency, and maneuvers into a landing spot until it's apparent the landing would be safe.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Emergency Operations: Engine Failure in Flight, Communications Failure, Electrical Failure

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the abeam position through go-around.

**Ground Review:**

- Emergency Procedures: Engine Failure in Flight
- Emergency Procedures: ABCDE
- Emergency Procedures: Best Glide
- Finer Point: Approach Geometry
- Emergency Procedures: Lost Communication
- Emergency Procedures: Alternator/electrical Failure

**Flight Review:**

- Navigation: New local airport

**Introduce:**

- Emergency Procedures: Engine Failure in Flight
- Emergency Procedures: Lost Communication
- Emergency Procedures: Simulated engine failures after takeoff
- Emergency Procedures: In-flight emergencies during cross-country flights (partial power failures, fires)
- Emergency Procedures: Alternator/Electrical Failure

**Instructor Notes/For the CFI:**

In this Phase, the student will learn to deal with possible emergencies that could potentially occur during solo flight. In light airplanes, few things can go wrong and ultimately the risk can be boiled down to the "Big 3":

- Fire
- Failure
- Collision

In this phase, students will learn to deal with cabin, engine, and airframe fires, communication failure, engine failure, and electrical failure. Collision is a risk we mitigate through traffic avoidance systems, good scanning techniques, and heads-up airmanship.

Remember to contextualize these possibilities. Once you've taught the emergency descent, you can get into the procedure by suggesting that you smell smoke, for example. Brief your students before this Phase that this might occur, and that if it's real you will indicate so, otherwise they should expect this type of scenario context. With the engine failures make sure that some are partial power and that you sometimes allow recovery at the addition of the fuel pump or switching of fuel tanks. Reinforce the idea that these actions sometimes work to solve the problem.

# Flight Lesson 24 – Skill Building

**Lesson Objectives:**

To learn how to handle cabin fire and learn the ACS task, “Emergency Descent”.

**Purpose:**

To learn the procedures used to effectively deal with the possibility of a cabin fire, engine fire, or wing fire.

**Completion Standard:**

The learner:

- Maintains positional awareness during an emergency descent
- Holds sight picture in an emergency descent
- Divides attention to fire mitigation in emergency descent

**Required Study:**

In the **Flight Chapters** of the Ground School app:

- Emergency Operations: Emergency Descent, Intercept Procedures

**Dry Time:**

Continue to practice SOPs and rehearse Emergency Procedures.

**Ground Review:**

- Emergency Procedures: Simulated engine failures after takeoff
- Emergency Procedures: Engine Failure In-Flight
- Emergency Procedures: Alternator/Electrical Failure
- Emergency Procedures: Lost Communication
- Emergency Procedures: Emergency descent maneuvers (e.g., to mitigate fire)

**Flight Review:**

- Emergency Procedures: Total engine failures
- Emergency Procedures: In-flight emergencies during cross-country flights (partial power failures, fires)
- Emergency Procedures: Engine Failure In-Flight
- Emergency Procedures: Simulated engine failures after takeoff
- Emergency Procedures: Alternator/Electrical Failure

**Introduce:**

- Emergency Procedures: Emergency descent maneuvers (e.g., to mitigate fire)

**Instructor Notes/For the CFI:**

Don't lose sight of the purpose of the various emergency descent scenarios. Include the context of these possible emergencies during the pre-flight briefing. Refer to the POH and brief the procedures for wing fire, engine fire, and cabin fire. You can practice the first two in relatively short order, it's the cabin fire where the real work should be put in. Being truly prepared for a cabin fire might be one of the most challenging aspects of flight training. There is a lot to consider, and we go into it at length in the TFP CFI Handbook. Here is the basic idea:

- Detect the smoke
- Deactivate the system
- Simulate donning a smoke hood
- Initiate the Emergency Descent
- Identify a landing site
- Simulate a forced landing

This is no joke. We take this seriously, and if your students are not utilizing dry time they will have a hard time meeting the completion standards of this lesson. Once they do master it, it's a significant confidence builder and a marker on their road to checkride readiness.

# Flight Lesson 25 – Demonstration Day

**Lesson Objective:**
The objective of this lesson is to execute a flight to the practice area and back as a mock phase check.

**Purpose:**
This is another opportunity to practice maneuver demonstration which will ultimately contribute to success on the checkride.

**Completion Standard:**
This lesson is completed when the student can:

- Carry forward prior learning
- Continue to ritualize flying
- Demonstrate an awareness of landing options
- Hold altitude at power loss while turning to the best option
- Use written checklists
- Remember emergency transponder codes

**Required Study:**
Review in the **Flight Chapters** of the Ground School app:

- Slow Flight and Stalls: Power Off Stalls, Slow Flight
- Mastering Stalls: Power-On Stalls
- Aerial Maneuvers: Steep Turns
- Emergency Operations: Engine Failure In Flight

**Dry Time:**
Continue to practice SOPs and rehearse Emergency Procedures and Maneuver Demonstration Day.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Maneuver Demonstration Day Procedure
- Ground Reference: Maneuver entry procedures
- Preflight Prep: Preflight Actions
- ADM: Low-Altitude Contingency Planning

**Flight Review:**

- Maneuver: Steep Turns
- Maneuver: Slow Flight
- Maneuver: Power-Off Stalls
- Maneuver Power-On Stall
- Emergency Procedures: Simulated engine failures after takeoff

- Emergency Procedures: Engine Failure in Flight
- Procedures: Traffic pattern operations with power management
- Procedures: Go-Around
- Takeoffs and Landings: Normal takeoffs and landings
- Takeoffs and Landings: Crosswind takeoffs and landings
- Ground Reference: S-Turns Across a Road

**Instructor Notes/For the CFI:**
This lesson is important. It's a rehearsal of the peer-review phase check needed to solo, it's a chance to confirm the completion standards of the work to date, and a chance to prep for a large portion of the eventual checkride. If your students can't perform to standards with you, they will not perform to standards with a check pilot. Any *cleanup* work you do now is worth it. As a demonstration day, you should focus on the demonstration procedures themselves and only make note of the work that needs to be done. If you need to, repeat some of the skill-building lessons to bring the students up to standards.

# Flight Lesson 26 – Pre-Solo Stage Check

**Lesson Objective:**
The objective of this lesson is to complete a pre-solo phase check.

**Purpose:**
The purpose of this lesson is to get a peer review of the work done so far and determine student readiness for solo.

**Completion Standard:**
This lesson is complete when the student completes all tasks in the ground and flight review.

**Required Study:**
Review the Skill tasks for each of the ACS maneuvers

**Dry Time:**
Continue to practice SOPs and rehearse Emergency Procedures and Maneuver Demonstration Day.

**Ground Review:**

- ADM: Personal Limits
- ADM: PAVE
- Preflight Prep: Preflight Actions

**Flight Review:**

- Procedures: Preflight inspection
- Airmanship: Proper Foot Position
- Airmanship: Cockpit Organization
- Airmanship: Light Grip on the Control Yoke
- Procedures: Standard Operating Procedures (SOPs)
- Starting the Engine
- SOPS: Pre-Taxi Briefing
- SOPS: Taxi Turns
- Taxiing the Airplane
- The Before: Takeoff Check
- SOPS: Pre-Takeoff Briefing
- SOPS: CIGARS
- Clears Final prior to entering
- Takeoff: All available runway
- Confirm Runway Heading prior to Power Addition
- The Takeoff
- SOPS: Takeoff Callouts
- Holds Centerline
- Transitions smoothly to Lindbergh Reference
- Rotates at Vr
- Takeoff: Applies slight right rudder on liftoff
- SOPS: The Lindbergh Reference

- Holds Extended Centerline
- Flight Control: Trim
- Rudder Usage
- Maneuvers: Four Fundamentals
- SOPS: Flow Checks and Checklists
- SOPS: Clearing Turns
- Maneuver: Steep Turns
- Maneuver: Slow Flight
- Maneuver: Power-On Stalls
- Maneuver: Power-Off Stalls
- Emergency Procedures: Engine Failure in Flight
- Procedures: Traffic pattern operations with power management
- Takeoffs and Landings: Normal takeoffs and landings
- SOPS: GUMPS

**Instructor Notes/For the CFI:**
This is a peer review of the work you've done to date. You should use it as an opportunity to cross-check your performance. Critical review by our peers is one way to get better as a flight instructor. If you have been using the TFP CFI handbook and meeting the completion standards for all prior lessons, your student should have no problem here. If they consistently come up short, work to fix the problems now before moving on in the syllabus.

# First Solo

## Flight Lesson 27 – Supervised Solo

**Lesson Objective:**
The objective of this lesson is to conduct a supervised solo of three trips around the pattern.

**Purpose:**
To give the students confidence in their knowledge and lay the groundwork for future solo flights.

**Completion Standard:**
This lesson is complete when the student has flown 3 laps in the traffic pattern of the home airport solo.

**Required Study:**

In the **Flight Chapters** of the Ground School app:

- Supervised Solo

**Dry Time:**
Continue to practice SOPs and rehearse the traffic pattern procedure from the abeam position through touchdown.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Regulations: Solo Endorsements

**Flight Review:**

- Procedures: Traffic pattern operations with power management

**Instructor Notes/For the CFI:**
This is a big day. Make sure you've got the endorsements correct. If you are not certain, refer to the CFI Handbook. Make sure that the weather minimums are met and that your student is feeling ready. You should both feel confident, if perhaps a little nervous. When the time comes, taxi in and shut down. Let your student know they should go start-up, taxi out, and fly 3 laps in the pattern then return. If they have never done a hot start, make sure you review the procedure or wait long enough that it won't matter before they go back out to fly.

**Congratulations!**

## Solo Flight 1

**Lesson Objective:**
Execute a solo flight from the home base to the practice area and back.

**Purpose:**
To build confidence in the student and extend the “leash” a little bit. The student should practice Airspeed Changes, Slow Flight, Steep Turns, and Power-Off Stalls. Then, return to the home base for some pattern work.

**Completion Standard:**
This lesson is complete when the learner safely executes a flight from the home base to the practice area and back.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Solo Practice: All Flight Lessons

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Regulations: Solo Endorsements

**Flight Review:**

- Slow Flight: Airspeed Changes
- Maneuver: Slow Flight
- Slow Flight: Clean and Dirty Configurations
- Slow Flight: Turns to Headings
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls

**Instructor Notes/For the CFI:**
Be sure to hold your student to the standards you've taught them. This is extremely important in establishing trust and cementing good primacy. The *last* thing you want to convey is that "they have soloed now and can relax the procedures a bit".

In these early solo flights, meet them at the airport, review the weather, hold them to PAVE, and see them off.

## Solo Flight 2

**Lesson Objective:**
To the practice area and back.

**Purpose:**
To continue to develop confidence and accrue solo hours. The student should practice the same maneuvers as the last solo flight, Slow Flight, Steep Turns, and Power-Off Stalls and now Power-On stalls should be added.

**Completion Standard:**
This lesson is complete when the student has successfully flown to the practice area, practiced the listed maneuvers, and flown home.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Solo Practice Two

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Regulations: Solo Endorsements

**Flight Review:**

- Slow Flight: Airspeed Changes
- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stall

**Instructor Notes/For the CFI:**
Be sure to hold your student to the standards you've taught them. This is extremely important in establishing trust and cementing good primacy. The *last* thing you want to convey is that "they have soloed now and can relax the procedures a bit".

In these early solo flights, meet them at the airport, review the weather, hold them to PAVE, and see them off.

# Stage 2: Advanced Training

**One objective of the advanced training phase is to master high-performance takeoffs and landings, become proficient in flight by instruments to handle inadvertent flights into IMC, develop cross-country planning skills grounded in traditional aeronautical principles, enhance night flying abilities, and accumulate solo flight time. Another goal is to transition to modern avionics and participate in scenario-based training that more accurately reflects the flying likely to be undertaken after certification.**

## Phase 8: Performance Takeoffs and Landings

**Recommended Study:**
The Ground School app includes "Learn More" boxes for each study question and links directly into the FAA sources. Students who consistently tap these boxes and then explore the FAA resources will learn vastly more than those simply meeting the minimum requirements. We strongly recommend reading the associated reference links provided throughout the Ground School app.

### Flight Lesson 28 – Skill Building

**Lesson Objective:**
To learn the short-field takeoffs and landings.

**Purpose:**
To learn to fly the aircraft at a slower approach speed and land on a specified point -0/+200 feet, including the ability to land over an obstacle from a higher rate of descent.

**Completion Standard:**
This lesson is completed when the learner can:

- Fly a short-field approach to an aiming point
- Land, retract flaps, and brake
- Fly a power-off approach at the short-field approach speed over a simulated obstacle

**Required Study**:

In the **Ground Chapters** of the Ground School app:

- Cross-Country Flight: All lessons
- Navigation: All lessons

In the **Flight Chapters** of the Ground School app:

- Short-Field Operations

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- Takeoffs and Landings: Short-field takeoffs and landings (slower approach speed, obstacle clearance)

**Flight Review:**

- Takeoffs and Landings: Normal takeoffs and landings
- Takeoffs and Landings: 180° Power-Off approach

**Introduce:**

- Takeoffs and Landings: Short-field takeoffs and landings (slower approach speed, obstacle clearance)

**Instructor Notes/For the CFI:**
The ACS doesn't currently require short-field approaches over obstacles (as some prior certification requirements have) so remember to focus primarily on the short-field approach as it will be demonstrated. However, the skills gained from practicing a power-off short-field approach are important. For more information see the CFI Handbook.

# Flight Lesson 29 – Skill Building

**Lesson Objective:**
To learn the soft-field takeoffs and landings.

**Purpose:**
To learn the techniques required for operations on soft fields and how to demonstrate those on hard surfaces.

**Completion Standard:**
This lesson is completed when the learner can:

- Land with proper runway alignment while protecting the nosewheel
- Demonstrate limited use of brakes
- Apply power for takeoff as the airplane enters the runway
- Maintain sufficient backpressure during the takeoff roll
- Remain in ground effect after lift-off

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Soft-Field Operations: All lessons

**Dry Time:** Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- Takeoffs and Landings: Soft-field takeoffs and landings (protecting the nosewheel, staying in ground effect)

**Flight Review:**

- Takeoffs and Landings: Normal takeoffs and landings
- Takeoffs and Landings: 180° Power-Off approach

**Introduce:**

- Takeoffs and Landings: Soft-field takeoffs and landings (protecting the nosewheel, staying in ground effect)

**Instructor Notes/For the CFI:**
If possible, this lesson should be flown on a grass runway. That is not available to everybody, however, so it's important to teach the student how to simulate soft-field operations. Even when a grass runway is available, you will want to transition to pavement to practice the demonstration. It makes your job easier if the student has seen real soft-field operations. Certain elements of the procedure (such as limited use of brakes) are obvious when flying off of grass, for example. Also, remember that at sea level (at most training weights) the aircraft accelerates quickly in ground effect. Make sure your students let the check pilot see that they are pitching forward to "stay in ground effect" after lift-off before climbing away at the appropriate speed.

## Solo Flight 3

**Lesson Objective:**
To the practice area and back.

**Purpose:**
To continue to develop confidence and accrue solo hours. The student should practice the same maneuvers as the last solo flight: Slow Flight, Steep Turns, and Power-Off Stalls. Power-On stalls should be added.

**Completion Standard:**
The lesson is complete when the student has flown to the practice area, practiced the required maneuvers, and returned to home base.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Solo Practice Two

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Regulations: Solo Endorsements
- Maneuver Demonstration Day Procedures

**Flight Review:**

- Maneuvers: Airspeed Changes
- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stalls

**Instructor Notes/For the CFI:**
As your student develops confidence, make sure they are sticking to the procedures and ritualization of flying. With their growing confidence they will feel as though they don't *need* the procedures or flying ritual, but they do. This is the opportunity to cement it in their foundation. Some might simply forget. Remind them of the rigor and hold them to it. You're almost there and soon they will never forget. It will be a part of their primacy.

## Flight Lesson 30 – Skill Building

**Lesson Objective:**
To learn to fly in the traffic pattern at night.

**Purpose:**
To begin to learn the principles of flying at night.

**Completion Standard:**
This lesson is complete when the learner has logged six night-landings to a full stop and experienced landing with the landing light on and with the landing light off.

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Night Operations: Introduction to Night Flying, Night Takeoffs and Landings

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Night-Night Vision
- Night: Operations (traffic patterns, landings without landing lights)

**Introduce:**

- Night: Operations (traffic patterns, landings without landing lights)

**Instructor Notes/For the CFI:**
Be sure to discuss the phase of the moon, the ambient lighting, and the fact that in many other countries night flying is its own rating. We want the students to feel confident yet have a healthy respect for night flying and the specific challenges it brings.

## Solo Flight 4

**Lesson Objective:**
To the practice area and back.

**Purpose:**
To continue to develop confidence and accrue solo hours. The student should practice the same maneuvers as the last solo flight: Slow Flight, Steep Turns, Power-On and Power-Off Stalls.

**Completion Standard:**
This lesson is complete when the student has flown to the practice area, practiced the required maneuvers, and flown home.

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Preflight Prep: Preflight Actions
- Regulations: Solo Endorsements
- Maneuver Demonstration Day Procedure

**Flight Review:**

- Maneuvers: Airspeed Changes
- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stalls
- Takeoffs and Landings: Normal takeoffs and landings

# Phase 9: Cross-Country Operations

## Ground Flight Lesson 2

**Lesson Objective:**
The objective of this lesson is to learn Cross-Country Flight Planning.

**Purpose:**
To learn the fundamental art of planning a VFR flight using a route log, plotter, and E6B. This process allows for a deeper understanding of EFBs when the time comes.

**Completion Standard:**

- Cross-country flight planning process
- True Course vs. Magnetic Course vs. Magnetic Heading
- Types of plotters
- E6B calculations
- Terminals, Sectionals, and EFBs
- Chart Supplement
- Flipping the chart
- Choosing checkpoints
- Airspace
- Special Use Airspace
- VFR Flight Plans
- Flight Following

**Required Study:**
In the **Ground Chapters** of the Ground School app:

- Cross-Country Flight: All lessons

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- Cross-Country: Cross-country flight using dead reckoning and pilotage
- Cross-Country: Flight planning using paper charts, E6B, and plotters
- Cross-Country: Navigation waypoint identification and fuel calculations

**Instructor Notes/For the CFI:**
An interesting truth is that almost every student today will push back a bit on whether or not they should have to plan flights using paper charts, plotters, and E6Bs, yet all students will ultimately see that they feel much more informed about a given flight after planning in this way. Make sure that you emphasize the steps in the planning process, because what we're working to do in this course is to establish primacy without the EFB and then bring the same level of attention to detail when we move to the EFB.

# Flight Lesson 31 Flight – Skill Building

**Lesson Objective:**
The objective of the lesson is to fly a cross-country flight using dead reckoning and pilotage with pilotage exercises on the return flight.

**Purpose:**
In the modern flight environment we rely on technology for planning and execution. We must carry forward the attention to detail required with less powerful tools into these modern conveniences.

**Completion Standard:**
This lesson is complete when the learner can identify waypoints from the air and make ground speed calculations and fuel burn projections.

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Cross-Country: All lessons
- Cross-Country Operations: All lessons

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning using paper charts, E6B, and plotters

**Introduce:**

- Cross-Country: Cross-country flight using dead reckoning and pilotage
- Cross-Country: Navigation waypoint identification and fuel calculations

**Instructor Notes/For the CFI:**
In this lesson we execute the flight we planned in the previous lesson. Don't rely on the GPS; put the work in here to establish good primacy. Get the student to look out the window, find the waypoints on the ground, and make all the necessary calculations and updates. They will never look at the EFB the same way again, and that's the point. You can fly the flight as planned to the destination and then fly home at a low altitude using pilotage. For more information see the TFP CFI Handbook.

## Ground Lesson 2

**Lesson Objective:**
The objective of this lesson is to learn Cross-Country Flight Planning

**Purpose:**
To learn the fundamental art of planning a VFR flight using a route log, plotter, and E6B. This process allows for a deeper understanding of EFBs when the time comes.

**Completion Standard:**
This lesson is complete when the learner has covered:

- Cross-country flight planning process.
- True Course vs. Magnetic Course vs. Magnetic Heading
- Types of plotters
- E6B calculations
- Terminals, Sectionals, and EFBs
- Chart Supplement
- Flipping the chart
- Choosing checkpoints
- Airspace
- Special Use Airspace
- VFR Flight Plans
- Flight Following

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Airports, Airspace, and ATC: Airspace
- Cross-Country Flight: Cross-Country Flight
- Navigation: Pilotage and Dead Reckoning

**Dry Time:** Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- Cross-Country: Cross-country flight using dead reckoning and pilotage
- Cross-Country: Flight planning using paper charts, E6B, and plotters
- ADM: Personal Limits
- Cross-Country: Navigation waypoint identification and fuel calculations

**Instructor Notes/For the CFI:**
An interesting truth is that almost every student today will push back a bit on whether or not they **should have to** plan flights using paper charts, plotters, and E6Bs, yet **all** students will ultimately see that they feel much more informed about a given flight after planning in this way. Make sure that you emphasize the steps in the planning process because what we're working to do in this course is establish primacy without the EFB and then bring the same level of attention to detail when we move to the EFB.

## Flight Lesson 31 – Skill Building

**Lesson Objective:**
The objective of the lesson is to fly a cross-country flight using dead reckoning and pilotage with pilotage exercises on the return flight.

**Purpose:**
In the modern flight environment we rely on technology for planning and execution. We must carry forward the attention to detail required with less powerful tools into these modern conveniences.

**Completion Standard:**
This lesson is complete when the learner can identify waypoints from the air and make ground speed calculations and fuel burn projections.

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Cross-Country: All lessons
- Cross-Country Operations: All lessons

**Dry Time:**
Continue to practice SOPs, rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning using paper charts, E6B, and plotters

**Flight Review:**

- Cross-Country: Cross-country flight using dead reckoning and pilotage
- Cross-Country: Navigation waypoint identification and fuel calculations

**Instructor Notes/For the CFI:**
In this lesson we execute the flight we planned in the previous lesson. Don't rely on the GPS, put the work in here to establish good primacy. Get the student to look out the window, find the waypoints on the ground, and make all the necessary calculations and updates. They will never look at the EFB the same way again and that's the point. You can fly the flight as planned to the destination and then fly home at a low altitude using pilotage. For more information see the TFP CFI Handbook.

# Solo Flight 5

**Lesson Objective:**
The objective of this lesson is to practice pattern work at the home airport.

**Purpose:**
To continue to develop confidence and accrue solo hours. The student should practice pattern work at the home airport.

**Completion Standard:**
This lesson is complete when the learner has executed a flight in the traffic pattern at the home airport.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Solo Practice Two

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the abeam position through go-around.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Regulations: Solo Endorsements

**Flight Review:**

- Takeoffs and Landings: Normal takeoffs and landings
- Takeoffs and Landings: Soft-field takeoffs and landings (protecting the nosewheel staying in ground effect)
- Procedures: Go-Around

**Instructor Notes/For the CFI:**
As you move on with your student to cross-country flying, night flying, simulated instrument, and so on, it is up to them, with your guidance, to continue to maintain the skills they've learned so far.

# Flight Lesson 32 – Skill Building

**Lesson Objective:**
The objective of this lesson is to fly another cross-country flight using pilotage and dead reckoning.

**Purpose:**
The purpose of this lesson is to develop good habits with cross-country operations and establish a foundation that can be translated to the EFB when the time comes. This second cross-country flight will be to a new airport and will be repeated at a later date by the student solo.

**Completion Standard:**
This lesson is complete when the learner successfully executes a cross-country flight to a new airport.

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Cross-Country Chapter Review
- Cross-Country Operations Chapter Review

**Dry Time:**
Continue to practice SOPs, rehearse maneuver demonstrations and emergency procedures.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning using paper charts, E6B, and plotters

**Flight Review:**

- Cross-Country: Cross-country flight using dead reckoning and pilotage
- Cross-Country: Navigation waypoint identification and fuel calculations

**Instructor Notes/For the CFI:**
This lesson is a repeat of the last, only it's to a new location and the planning is done by the student on their own time. Start the lesson with a review of the plan. Be critical. Ask questions about performance and fuel calculations. This questioning will serve as a context for questions about EFB flight plans in the future. Choose an airport that will be suitable for student solo cross-country in the future. Fly the plan to the destination and use pilotage to fly home. For more information about the cross-country phase of flight training, check out the TFP CFI Handbook.

## Solo Flight 6

**Lesson Objective:**
The objective of this lesson is to fly to another local airport for practice in the traffic pattern and back.

**Purpose:**
To continue to develop confidence and accrue solo hours. The student should fly to an airport within 25 NM that has been consistently used with his/her CFI, and at which the student has demonstrated proficiency.

**Completion Standard:**
This lesson is complete when the learner has executed a flight to another local airport, flown in the traffic pattern, and returned home.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Solo Practice at Another Airport

**Dry Time:**
Continue to practice SOPs and rehearse emergency procedures.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Cross-Country: Flight planning using paper charts, E6B, and plotters
- Preflight Prep: Preflight Actions

**Flight Review:**

- Cross-Country-Navigation waypoint identification and fuel calculations
- Takeoffs and Landings: Normal takeoffs and landings

**Instructor Notes/For the CFI:**
With this flight we *let the leash out* a little bit more. The flight is a repeat of a dual flight you have flown before and the student is very familiar with and signed off for the new airport. Remember that with these flights the students are meant to preserve and not dilute the training we've accomplished so far. Hold the line for them. You're the coach; they are the star athlete, and the big game is coming up.

# Flight Lesson 33 – Skill Building

**Lesson Objective:**
The objective of this lesson is to fly Compass Turns and learn Flight by Reference to Instruments.

**Purpose:**
The purpose of this lesson is to be sure that the learner can cope with the possibility of inadvertent flight into IMC. Pilots **must** learn to keep the airplane under control, execute a 180º degree turn, exit the area, and if necessary, fly magnetic headings by reference to the compass.

**Completion Standard:**
This lesson is completed when the learner can:

- Use recommended scan patterns to fly by reference to the instruments
- Execute a 180º, timed turn
- Fly Headings on the magnetic compass
- Turns to headings using the magnetic compass

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Flight By Reference to Instruments: All Flight Lessons

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the abeam position through go-around.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Preflight Prep: Preflight Actions
- Navigation: Compass turns

**Introduce:**

- Navigation: Compass turns
- Basic Instrument Maneuvers: 180° timed turn

**Instructor Notes/For the CFI:**
Remember to stay focused on the purpose of the lesson. Continued VFR into IMC is the leading killer among weather accidents. This lesson is meant to guarantee that your student never succumbs to that hazard. This flight goes deep. Unusual attitudes will come later. Focus on good scan habits, timed 180º degree turns, and compass turns to headings with lag and lead correction.

## Flight Lesson 34 – Skill Building

**Lesson Objective:**
Radio Navigation and Flight by Reference to Instruments.

**Purpose:**
The purpose of this lesson is to continue to prepare the student for the possibility of inadvertently flying into IMC. This lesson introduces basic radio navigation.

**Completion Standard:**
This lesson is completed when the learner can:

- Visualize the aircraft position on the VOR
- Use a GPS direct function
- Fly direct to a VOR

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Basic VOR Navigation
- Basic GPS Operation

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Preflight Prep: Preflight Actions
- Basic Instrument Maneuvers: Radio Navigation
- Basic Instrument Maneuvers: Flight by reference to instruments

**Flight Review:**

- Basic Instrument Maneuvers: 180° timed turn

**Introduce:**

- Basic Instrument Maneuvers: Radio Navigation
- Basic Instrument Maneuvers: Flight by reference to instruments

**Instructor Notes/For the CFI:**
In this lesson, we continue to build the required 3 hours of flight by reference to instruments while teaching the students the fundamentals of radio navigation. Make sure that your students get some exposure to how VORs work and the TUNE, TWIST, ID procedure before moving on to GPS functionality.

# Solo Flight 7

**Lesson Objective:**
The objective of the lesson is to execute a solo flight to the practice area, another local airport, and back.

**Purpose:**
The purpose of this lesson is to continue to develop confidence and accrue solo hours. The student should fly to the practice area and then to the same airport as the last flight within 50 NM.

**Completion Standard:**
This lesson is complete when the learner has executed a flight to the practice area, another local airport, and back.

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the Abeam position through go-around.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning using paper charts, E6B, and plotters
- Maneuver Demonstration Day Procedure
- Regulations: Solo Endorsements

**Flight Review:**

- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stall
- Takeoffs and Landings: Normal takeoffs and landings
- Cross-Country: Navigation waypoint identification and fuel calculations

# Flight Lesson 35 – Scenario

**Lesson Objective:**
The objective of this lesson is to complete a night VFR cross-country flight.

**Purpose:**
The purpose of this lesson is to get familiar with night cross-country procedures, the operation of pilot-controlled lighting, and learn to identify airport beacons.

**Completion Standard:**
This lesson is complete when the learner has planned and executed a night VFR cross-country flight.

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Night Operations: All Lessons
- Cross-Country: Flight Planning with an EFB

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- ADM: Personal Limits
- Preflight Prep: Preflight Actions
- Cross-Country: Cross-country flight using dead reckoning and pilotage
- Cross-Country: Navigation waypoint identification and fuel calculations
- Night: Night Vision
- Night: Operations (traffic patterns, landings without landing lights)

**Flight Review:**

- Night: Operations (traffic patterns, landings without landing light)
- Cross-Country: Navigation waypoint identification and fuel calculations

**Instructor Notes/For the CFI:**
During your briefing be sure to discuss the sky conditions and phase of the moon. Not all nights are created equal. The difference between a full moon with snow on the ground and flying under a high overcast is like night and day. Try to convey to the student that this is an **introduction** to night flying. For more information, see the TFP CFI Handbook.

# Flight Lesson 36 – Scenario

**Lesson Objective:**
The objective of this lesson is to plan and execute a cross-country flight to a new airport.

**Purpose:**
To connect the principles we've learned planning flights on paper with the EFB in a real-world cross-country scenario.

**Completion Standard:**
This lesson is complete when the learner has planned and executed a cross-country flight using an EFB.

**Required Study**:
Plan a cross-country flight using an EFB.

**Dry Time:**
Continue to practice SOPs and rehearse Diversions and Emergency procedures.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning with an EFB

**Flight Review:**

- Cross-Country: Navigation waypoint identification and fuel calculations
- Cross-Country: Navigation using an EFB

**Instructor Notes/For the CFI:**
With this lesson, we're pulling together all the elements of training into real-world scenarios, representative of the kind of flying your students are likely going to do with their certificate. Be sure to connect the processes of flight planning to the EFB. This is why we put all the work in on paper. Make sure they:

- Draw the course line
- Study the route
- Get the true/magnetic courses
- Explain EFB performance data

The process of flight planning remains the same, even though we now have the added convenience of the EFB.

# Solo Flight 8 Cross-Country Flight

**Lesson Objective:**
To fly the first solo cross-country.

**Purpose:**
The student should repeat one of the routes that he/she has previously flown with their CFI.

**Completion Standard:**
This lesson is complete when the student successfully flies to another airport beyond 50 NM and returns.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Solo Practice

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the Abeam position through go-around.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Regulations: Solo Endorsements
- Cross-Country: Flight planning with an EFB

**Flight Review:**

- Cross-Country: Navigation waypoint identification and fuel calculations
- Cross-Country: Navigation using an EFB

# Flight Lesson 37 – Skill Building

**Lesson Objective:**
The objective of this lesson is to learn the process of diverting from your destination airport.

**Purpose:**
To learn some fundamentals of flight planning while in flight, including “old school”, “analog” diversions and how they inform diversions using GPS.

**Completion Standard:**
This lesson is complete when the learner can demonstrate the ability to efficiently and effectively plan a diversion to an alternate airport and calculate flight time and fuel burns for the new route.

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Cross-Country Operations: Diversions

**Dry Time:**
Continue to practice SOPs and rehearse Diversions and Emergency procedures.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Simulated diversions to alternate airports (manual and GPS methods)

**Flight Review:**

- Cross-Country: Navigation waypoint identification and fuel calculations

**Introduce:**

- Cross-Country: Simulated diversions to alternate airports (manual and GPS methods)

**Instructor Notes/For the CFI:**
The secret to diversion without the use of GPS is the division of attention. Even if it seems unlikely that your student will ever have to divert without the use of a GPS, it's still a wonderful skill-building exercises. Make sure you take the time to teach this to your students before moving onto GPS diversions. GPS diversions are relatively easy and will be informed by the work you put in early on “analog" diversion procedures.

## Flight Lesson 38 – Scenario

**Lesson Objective:** The objective of this lesson is to plan and fly a cross-country flight with simulated emergencies.

**Purpose:** The purpose is to contextualize the emergency procedures by putting them into cross-country scenarios.

**Completion Standard:** This lesson is complete when the learner has experienced:

- A simulated partial power failure
- A simulated total engine failure
- A simulated alternator failure

**Required Study**: In the **Flight Chapters** of the Ground School app:

- Emergency Operations: All lessons

**Dry Time:** Continue to practice SOPs and rehearse traffic pattern procedures from the Abeam position through go-around.

**Ground Review::**

- Emergency Procedures: Alternator/Electrical Failure
- Emergency Procedures: ABCDE
- Emergency Procedures: Emergency descent maneuvers (e.g., to mitigate fire)
- Emergency procedures: Engine Failure in Flight
- Emergency Procedures: In-Flight emergencies during cross-country flights (partial power failures, fires)
- Emergency Procedures: Lost Communication
- Emergency Procedures: Simulated engine failures after takeoff

**Introduce:**

- Emergency Procedures: In-Flight emergencies during cross-country flights (partial power failures, fires)
- Emergency Procedures: ABCDE
- Emergency procedures: Engine Failure in Flight
- Emergency procedures: Alternator/ Electrical Failure
- Emergency procedures: Lost Communication

**Instructor Notes/For the CFI:**
Work to give this lesson a real-world feel. Simulate these emergencies in the most realistic way you can. For example, most power failures are partial. A good way to introduce this might be by pulling power to idle; "You just lost your engine". However, bring the power back when the student checks the fuel pump. This reinforces that the flow check can potentially fix the problem. However, the fix doesn't last and sometime later you can reduce power to 1400 RPM and say, "There's the engine problem again, this time it's a partial failure", and it doesn't get fixed. For more information on how this works see the CFI Handbook.

## Solo Flight 9 Cross-Country Flight

**Lesson Objective:**
The objective of this lesson is to fly a solo cross-country flight.

**Purpose:**
The purpose of this lesson is to continue to build confidence, continue to accrue solo hours, and prepare for the long solo cross-country flight.

**Completion Standard:**
This lesson is complete when the learner has planned and executed a solo cross-country flight along a route previously flown on a dual cross-country flight.

**Required Study:**
Plan a cross-country flight using an EFB.

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the Abeam position through go-around.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning with an EFB
- Regulations: Solo Endorsements

**Flight Review:**

- Cross-Country: Navigation using an EFB
- Cross-Country: Navigation waypoint identification and fuel calculations

**Instructor Notes/For the CFI:**
Your student is in the final stretch here toward their checkride and, more importantly, toward their certificate. Hold them fast to the ritual we've learned throughout this training and encourage them to utilize their SOPs. Review the weather, the plan, and the endorsements required.

# Flight Lesson 39 – Scenario

**Lesson Objective:**
The objective of this lesson is to plan and fly a cross-country flight with simulated emergencies.

**Purpose:**
The purpose of this lesson is to contextualize the possible emergency scenarios we've trained to deal with.

**Completion Standard:**
This lesson is completed when the learner can:

- Simulated wing fire
- Simulated cabin fire
- Simulated engine fire

**Required Study**:
In the **Flight Chapters** of the Ground School app:

- Emergency Operations: Emergency Descent

**Dry Time:**
Continue to practice SOPs and rehearse Emergency procedures.

**Ground Review:**

- Emergency Procedures: Simulated engine failures after takeoff
- Emergency Procedures: ABCDE
- Emergency Procedures: Emergency descent maneuvers (e.g., to mitigate fire)
- Emergency Procedures: In-Flight emergencies during cross-country flights (partial power failures, fires)

**Flight Review:**

- Cross-Country: Navigation using an EFB
- Emergency Procedures: In-Flight emergencies during cross-country flights (partial power failures, fires)
- Emergency Procedures: Emergency descent maneuvers (e.g., to mitigate fire)
- Emergency Procedures: Simulated engine failures after takeoff
- Emergency Procedures: ABCDE

**Instructor Notes/For the CFI:**
Just like the last lesson we want to try and give this lesson as much context as possible. It's not quite as easy with fire, because it's difficult to have a partial fire, but do the best you can. There are some detailed suggestions in the CFI Handbook.

## Solo Flight 10 Long Cross-Country Flight

**Lesson Objective:**
The objective of this lesson is to fly the second solo cross-country.

**Purpose:**
The purpose of this lesson is to complete the requirements of 61.93 and establish confidence for the kind of flying that will be completed after certification.

**Completion Standard:**
This lesson is complete when the learner has met the requirements 14 CFR 61.93.

**Required Study:**
In the **Flight Chapters** of the Ground School app:

- Cross-Country Operations: As required.

**Dry Time:**
Continue to practice SOPs and rehearse Emergency Procedures.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning with an EFB
- Regulations: Solo Endorsements

**Flight Review:**

- Cross-Country: Navigation waypoint identification and fuel calculations
- Cross-Country: Navigation using an EFB

**Instructor Notes/For the CFI:**
At this point in the training, the skills are there to complete this mission. Or they certainly should be. This long flight is flown as a triangle, with two of the routes having been flown dual and the connecting route in the middle new to the student. With all the skills in place, the main point of the new leg is to establish confidence.

# Stage 3: Checkride Preparation

**There is a difference between acquiring the knowledge and skills to achieve your pilot certificate and demonstrating to an examiner that you have those skills. Through the use of Demonstration Day days and strong completion standards, this syllabus prepares you for the checkride, but in this final stage of the training we leave nothing to chance. You will focus on demonstrating skills and knowledge, practicing with the mock oral simulator, and verifying that all federal requirements have been met.**

**One objective of the checkride prep stage is to verify that all legal requirements have been met and that the learner is qualified and prepared for a Private Pilot Airplane Single Engine Land checkride. Another objective is to verify, through peer review, that the learner has met the objectives of this syllabus and can perform consistently to the levels designed by this curriculum.**

## Phase 10: Practical Preparation

**Recommended Study:**
The Ground School app includes "Learn More" boxes for each study question and links directly into the FAA sources. Students who consistently tap these boxes and then explore the FAA resources will learn vastly more than those simply meeting the minimum requirements. We strongly recommend reading the associated reference links provided throughout the Ground School app.

### Flight Lesson 40 – Demonstration Day

**Lesson Objective:**
The objective of this lesson is to complete a mock checkride.

**Purpose:**
The purpose of this flight is to verify that the learner can complete a checkride, establish the stamina required to be successful, and learn to deal with anxiety associated with evaluations.

**Completion Standard:**
This lesson is complete when the learner has completed all the required tasks.

**Required Study:**
The Mock Oral simulator in the Ground School app. Complete a mock oral and **study your mistakes**.

**Dry Time:**
Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning with an EFB
- Maneuver Demonstration Day Procedure

- Ground Reference: Low-altitude contingency planning
- Ground Reference: Maneuver entry procedures

**Flight Review:**

- Cross-Country: Navigation waypoint identification and fuel calculations
- Cross-Country: Simulated diversions to alternate airports (manual and GPS methods)
- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stall
- Emergency Procedures: Engine Failure in Flight
- Ground Reference Maneuver: S-Turns
- Ground Reference Maneuver: Turns Around a Point
- Takeoffs and Landings: Normal takeoffs and landings
- Takeoffs and Landings: Forward slips to landing
- Takeoffs and Landings: Short-field takeoffs and landings (slower approach speed obstacle clearance)
- Takeoffs and Landings: Soft-field takeoffs and landings (protecting the nosewheel, staying in ground effect)

**Instructor Notes/For the CFI:**
Set a high standard for this lesson—it is a mock checkride, and the student must meet Airman Certification Standards (ACS) performance levels. If the student does not meet these standards, the next lesson should focus on Skill Building to correct deficiencies before attempting another mock checkride. Before sending the student for a peer-reviewed mock checkride, they should be able to successfully meet ACS standards with you, demonstrating confidence, precision, and consistency. The peer-reviewed mock checkride should be more rigorous than the actual checkride, ensuring the student is prepared and fully capable of passing their FAA checkride.

You want your student coming back from the checkride saying, “That was easy.” This is your chance to verify the certainty of this result.

## Solo Flight 11

**Lesson Objective:**
The objective of this lesson is to complete the high air work, ground reference maneuvers, and takeoffs and landings.

**Purpose:**
The purpose of this lesson is to complete the solo hours and establish confidence in the demonstration of several of the ACS maneuvers while solo.

**Completion Standard:**
This lesson is complete when the learner can execute the required tasks to ACS standards.

**Required Study:**
The Mock Oral Simulator in the Ground School app. Complete a mock oral and **study your mistakes**.

**Dry Time:**
Continue to practice SOPs and rehearse traffic pattern procedures from the Abeam position through go-around.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Maneuver Demonstration Day Procedure

**Flight Review:**

- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stall
- Ground Reference Maneuver: S-Turns
- Ground Reference Maneuver: Turns Around a Point
- Takeoffs and Landings: Short-field takeoffs and landings (slower approach speed obstacle clearance)
- Takeoffs and Landings: Soft-field takeoffs and landings (protecting the nosewheel, staying in ground effect)
- Takeoffs and Landings: Normal takeoffs and landings

**Instructor Notes/For the CFI:**
Remind your student of the importance of conforming to the procedures and demonstrating what they've been taught.

## Ground Lesson 3

**Lesson Objective:**
The objective of this lesson is to review the mock oral results and the written test results.

**Purpose:**
The purpose of this lesson is to evaluate the learner's competency for the Private Pilot practical and ensure that no knowledge holes are going into the Oral portion.

**Completion Standard:**
This lesson is complete when the learner has reviewed all of the deficiencies on the written test and cumulative mock oral test results.

**Required Study:**
The Mock Oral Simulator in the Ground School app. Complete a mock oral and **study your mistakes**.

**Ground Review:**

- Checkride Prep: Mock Oral Mistakes
- Regulations: Written Test Review

**Instructor Notes/For the CFI:**
Remember that the mock oral is tied to every single ACS code, in many cases more than once. You can use the feature in text mode to conduct the mock oral live with your student. Make sure there are no holes here and your student will be bulletproof on the oral.

# Flight Lesson 41 – Demonstration Day

**Lesson Objective:**

The objective of this lesson is to complete a mock checkride.

**Purpose:**

The purpose of this flight is to show the learner a checkride, establish the stamina required to be successful, learn to deal with anxiety associated with evaluations, and find any holes that might exist in the learning goals.

**Completion Standard:**

This lesson is complete when the learner has completed all the required tasks.

**Required Study**

The Mock Oral simulator in the Ground School app. Complete a mock oral and **study your mistakes**.

**Dry Time:** Continue to practice SOPs and rehearse maneuver demonstrations.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Cross-Country: Flight planning with an EFB
- Maneuver Demonstration Day Procedure
- Ground Reference: Low-altitude contingency planning
- Ground Reference: Maneuver entry procedures

**Flight Review:**

- Cross-Country: Navigation waypoint identification and fuel calculations
- Cross-Country: Simulated diversions to alternate airports (manual and GPS methods)
- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stall
- Emergency Procedures: Engine Failure in Flight
- Ground Reference Maneuver: S-Turns
- Ground Reference Maneuver: Turns Around a Point
- Takeoffs and Landings: Normal takeoffs and landings
- Takeoffs and Landings: Forward slips to landing
- Takeoffs and Landings: Short-field takeoffs and landings (slower approach speed obstacle clearance)
- Takeoffs and Landings: Soft-field takeoffs and landings (protecting the nosewheel, staying in ground effect)

**Instructor Notes/For the CFI:**

Set the bar high here. This mock checkride and the final phase check should be more vigorous than the checkride itself. You want your student coming back from the checkride saying, "That was easy". This is your chance to verify the certainty of this result.

## Flight Lesson 42 – Final Stage Check

**Lesson Objective:** To demonstrate a knowledge and skill level that meets or exceeds the minimum performance standards for a Private Pilot Certificate with an airplane category and single-engine land class rating, as outlined in the current FAA Private Pilot ACS.

**Purpose:** The purpose of this flight is to get a peer review of the work that has been done, to verify that the legal requirements have been met, to verify that all of the course learning objectives have been met, and to foster confidence in the student that they are well-prepared and capable of passing a checkride.

**Completion Standard:** This lesson is complete when the student has demonstrated proficiency on all available tasks.

**Required Study**:
The Mock Oral Simulator in the Ground School app. Complete a mock oral and **study your mistakes**.

**Ground Review:**

- ADM: PAVE
- Preflight Prep: Preflight Actions
- ADM: Personal Limits
- Regulations: Aircraft Logbooks
- Cross-Country: Flight planning with an EFB

**Flight Review:**

- Cross-Country: Navigation with an EFB
- Cross-Country: Navigation waypoint identification and fuel calculations
- Cross-Country: Simulated diversions to alternate airports (manual and GPS methods)
- Maneuver: Slow Flight
- Maneuver: Steep Turns
- Maneuver: Power-Off Stalls
- Maneuver: Power-On Stall
- Emergency Procedures: Engine Failure in Flight
- Ground Reference Maneuver: S-Turns
- Ground Reference Maneuver: Turns Around a Point
- Ground Reference Maneuver: Rectangular Course
- Takeoffs and Landings: Normal takeoffs and landings
- Takeoffs and Landings: Crosswind takeoffs and landings
- Takeoffs and Landings: Forward slips to landing
- Takeoffs and Landings: Short-field takeoffs and landings (slower approach speed obstacle clearance)
- Takeoffs and Landings: Soft-field takeoffs and landings (protecting the nosewheel, staying in ground effect)

**Instructor Notes/For the CFI:** This moment should, arguably, be the hardest in the student's training. Don't give this short shrift. Have the phase check pilot conduct a thorough oral and then a thorough practical. Make it longer than the checkride will likely be. There is a reason that baseball players swing with two bats before they go up to the plate; it makes the real thing easier.

# Congratulations, pilot!

You've successfully navigated every lesson, every maneuver, and every ground school module of **The Finer Points** syllabus. From those first tentative moments behind the yoke to the confident execution of advanced flight scenarios, you've earned your wings the old-fashioned way: through discipline, focus, and a deep respect for the art of aviation.

This isn't just the end of a course—this is the beginning of a lifetime in the sky.

As you roll down the runway of your aviation career, remember: The best pilots never stop learning. Stick and rudder skills, risk management, aeronautical decision-making—they're not just boxes checked; they're habits to hone for a lifetime. Keep your mind sharp, your logbook honest, and your love of flying alive.

To borrow the words of Richard Bach: “We can lift ourselves out of ignorance, we can find ourselves as creatures of excellence and intelligence and skill. We can be free! We can learn to fly!”

You’ve done just that.

The pattern is yours, aviator—take it with confidence and purpose.

—The Finer Points Flight Training Team