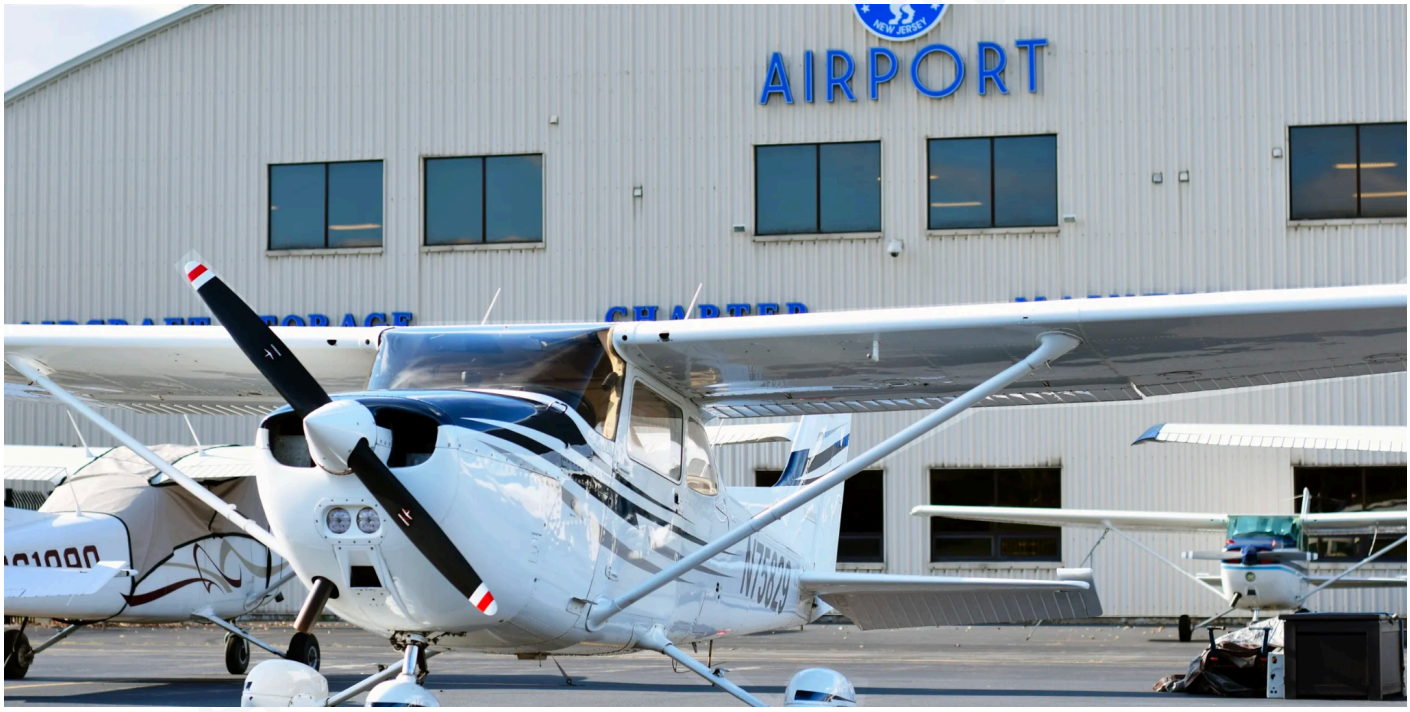
COSTANZO AIR FLIGHT SCHOOL



Private Pilot Training Overview

At Costanzo Air, our objective is not to simply train our students to successfully complete the Private Pilot checkride. Our vision centers on molding our students into pilots exemplifying superior Aeronautical Decision Making, built on a framework of Standard Operating Procedures that ensure the safety of every flight.

This document provides an overview of the Private Pilot training at Costanzo Air. It is intended as a guide for our students to understand the content and roadmap of the training provided at Costanzo Air. For each stage of flight training, this document will describe the objective, training activities, and completion standards required to conclude the stage and progress to the next one.

Flying is an activity that demands respect, dedication, and rigorous standards of knowledge, decision-making, and skills. You will find that learning to fly is both an incredible privilege, and a profound responsibility. As you embark on your flight training journey, this document will also show you the breadth and depth of the training required to become a pilot.

As a final note, it is important to keep in mind that although your training may be regularly scheduled, all training days will vary due to factors such as aircraft availability, weather, or scheduling issues. This will be dealt with at the discretion of your instructor, and, depending upon your prior knowledge or learning practices, your instructor may rearrange the objectives laid out by this curriculum in effort to maximize your learning. Above all else, safety must be accounted for in every aspect of your training.

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Our training philosophy

Here are the tenets of Private Pilot training at Costanzo Air.

The right attitude: we work with individuals who embody dedication, respect, and humility. A pilot's journey is paved with continuous learning, and an open, respectful attitude ensures one absorbs the best of what aviation has to offer. While we appreciate enthusiasm, it's essential to avoid traits that might hinder learning or compromise safety, such as irresponsibility or resistance to established protocols.

A tailored training approach: we recognize that each student is unique, and we adapt our training methods to suit individual learning styles and paces, ensuring every student gets the maximum benefit from their time with us. We find that 60 to 80 hours of flight training is the average to complete a Private Pilot course in the busy New York area. While training in congested airspace will take more time, it will also build your confidence and piloting skills to a higher level of proficiency. Regular flight training (1-2 times a week), and consistent self-studying are key ways to accelerate your progress.

Dedication to high-levels of knowledge: we believe that safe pilots are knowledgeable pilots. We require our students to complement their flight and ground training with an online ground school program alongside other self-studying activities. Each stage will require you to complete a certain set of self-studying activities. Self-study will represent around 2 to 3 hours for each hour of flight training.

Leveraging technology: we leverage our state-of-the-art, FAA-approved, Redbird FMX Advanced Aviation Training Device at all stages of the Private flight training. Expect to log around 5 hours of simulator training throughout the course, with a special emphasis on preparing for flight maneuvers and the traffic pattern, knowledge of navigation equipment, and emergency procedures.

Continuous feedback and improvement: we maintain an open 2-way feedback system, encouraging students to communicate their experiences, challenges, and suggestions. This not only aids their personal growth but also ensures we continuously refine our training methodologies

Holistic development: beyond the technicalities of flying, we underscore the importance of developing sound judgment and aeronautical decision making. Flying demands both mental and physical fitness, and we guide students on maintaining optimal fitness for flight, understanding the effects of fatigue, and the importance of nutrition and exercise.

The power of the community: piloting might seem like a solitary endeavor, but the shared experiences, camaraderie, and collective wisdom of the community will enrich your journey. We emphasize community learning, brief and debrief our flights in an open setting, and organize regular events, seminars, and meet-ups. We organize longer-range cross-country trips to provide real-world knowledge to our students. Participation is encouraged as it will aid in learning as well as networking.

Before starting flight training

- **English language:** you must be able to read, speak, write and understand the English language.
- **Age requirements:** as per the Federal Aviation Regulations, a student pilot must be at least 16 years of age to conduct their first solo flight, and 17 years of age to apply for the Private Pilot license.
- **Medical certificate:** you must meet the physical standards for a third class medical certificate prior to beginning training.
    - If you intend to pursue aviation as a career: we recommend completing a first class medical certificate examination prior to beginning flight training. It is the strictest medical standard for pilots in the US, and is required to fly for the airlines. It will ensure that no medical factor will prevent you from achieving your goals.
    - Aviation Medical Examiners (AMEs) in the area: the FAA's database of AMEs is available here. We recommend Dr Sheren, located in Somerset, NJ (first come first served during doctor's hours published on his website), or Dr Basri in Morristown, NJ (book online on his website).
    - Before the visit: ahead of going to the exam, you will need to have created an account and submitted an application for a medical on FAA MedXPress before the visit. The website will give you a receipt number to give to the AME during the visit.
- **Citizenship:**
    - If you are a US citizen: upon your first lesson, a valid driver's license and birth certificate or US passport must be presented, to confirm your US citizenship.
    - If you are not a US citizen: you will need to complete the TSA's Flight Training Security Program (FTSP). See the instructions in this document: TSA authorization .
- **Student pilot certificate:** once your training begins, we will be working with you to process your student pilot certificate with the FAA. If you want to get started with submitting your application, you can create an account on the IACRA website, following the instructions in this video: Ep. 80: IACRA | How to Apply for a Student Pilot Certificate .
- **Policies and procedures:** you will need to return the Costanzo Air Policies and Procedures.docx signed for our records.

COMPLETION STANDARDS		
Flight activities	**Ground activities**	**Admin requirements**
Discovery flight (optional)	Discovery flight (optional)	Citizenship verification Student pilot registration Policies and procedures CC authorization Emergency contact

Stage 1 - Four fundamentals of flight

This stage is dedicated to introducing you to the airplane and the flight environment. You will learn about the aircraft, its flight controls, and will build its ability to control the airplane by using outside visual references. You will also be introduced to the Costanzo Air Standard Operating Procedures, ensuring you adopt solid safety and operational standards from the get-go.

At the completion of this stage, you will be able to safely control the airplane at altitude, fly the airplane straight and level, and execute turns, climbs, and descents to predetermined headings and/or altitudes. You will have developed an understanding of how the rudder and trim are used to maintain stable and coordinated flight.

CONTENTS			
Flight maneuvers	**Flight procedures**	**Ground training**	**Self-study**
Taxiing Takeoff Level flight and turns Use of trim and rudder Climbs and descents Slow flight Ground reference maneuvers	Aircraft preflight Use of aircraft checklist Engine start, shutdown Runup Basic navigation to the practice area, knowledge of local landmarks.	Aircraft preflight Principles of flight Aerodynamics of flight Flight controls	Chair-flying - slow flight, ground reference maneuvers Sporty's section 1 "Your First Few Hours" complete

GROUND TRAINING LESSONS			
Preflight	**Principles of flight**	**Aerodynamics of flight**	**Flight controls**
Importance of preflight Methodology Do-verify Fluids (oil, fuel) Discrepancies	Structure of the atmosphere, air pressure Theories of production of lift (Newton, Bernoulli) Airfoil design and pressure distribution	4 forces of flight L/D ratio Ground effect Aircraft stability Left turning tendencies Load factor	Primary flight controls (ailerons, elevator, rudder) Secondary flight controls (flaps, trim)

COMPLETION STANDARDS		
Flight activities	**Ground activities**	**Admin requirements**
Students are able to maintain altitude ±200', heading ±20°.	Stage 1 knowledge test	Medical certificate

Stage 2 - Performance maneuvers

In Stage 2, we're diving deeper, enhancing your mastery over aircraft control and preparing you for unexpected situations. Building upon the foundational skills from Stage 1, this stage introduces you to the performance maneuvers essential for a Private pilot. These exercises are pivotal in refining your control skills and honing your ability to manage multiple tasks concurrently. Moreover, they play a crucial role in preparing you for operations within the airport traffic pattern and, ultimately, for successful landings.

We're also placing a strong emphasis on dispatch and briefing procedures. Being proactive and anticipating the next steps is a hallmark of a skilled pilot. As you navigate the busy airport environment, understanding the nuances of the engine and its associated systems becomes increasingly vital. Complementing these technical insights, we'll delve into crucial lessons on aeronautical decision-making and risk assessment.

By the end of Stage 2, you'll confidently control the aircraft across diverse airspeeds and configurations. You'll be adept at executing the key Private pilot performance maneuvers, managing basic radio communications, and consistently delivering effective flight briefings.

CONTENTS			
Flight maneuvers	**Flight procedures**	**Ground training**	**Self-study**
Stage 1 maneuvers Steep turns Power off and power on stalls Simulated engine failure in flight Emergency descent	Dispatch procedures Passenger briefing Departure briefing	In-aircraft avionics training Radio communications Airport procedures Engine systems ADM & risk management	Chair-flying - steep turns Chair-flying - stalls Sporty's section 2 "Practicing Landings" and 3 "Your First Solo" Radio comms practice (ATIS, LiveATC, AR Sim)

GROUND TRAINING LESSONS			
Radio communications	**Airport procedures**	**Engine systems**	**ADM, risk management**
Procedure and phraseology ATC clearances, instructions Frequencies ATC light signals Lost communications	Traffic pattern (legs, entries, flying the pattern, uncontrolled ops) Airport signs and markings Airport lighting Airport equipment	4 strokes of the engine Fuel system Induction systems (carburetor, injection) Oil system Propeller	ADM, hazard, risk SRM, situational awareness Hazardous attitudes Perceive (PAVE, IMSAFE) Process (CARE) Perform (TEAM)

COMPLETION STANDARDS		
Practical standards	**Knowledge standards**	**Admin requirements**
Maintain altitude ±100', heading ±10°, steep turns ±150'. Navigate to the practice area. Stage 2 Check (Pre Landings)	Stage 2 knowledge test	Medical certificate complete Student pilot certificate complete

Stage 3 - Landings and the first solo flight.

In Stage 3, we're sharpening your skills and building towards a monumental milestone: your first solo flight. This stage is all about consistency and decision-making. You'll become adept at managing operations within the airport environment. We'll also expand your understanding of the aircraft, diving deeper into its systems and the essential ground knowledge that ensures every flight is safe and informed. You will learn to learn the airplane consistently, and make safe go-around decisions when a landing can't be assured.

By the end of this stage, after demonstrating proficiency and sound judgment, you'll experience the thrill and accomplishment of piloting an aircraft all on your own – a true testament to your dedication and skill.

CONTENTS			
Flight maneuvers	**Flight procedures**	**Ground training**	**Self-study**
All stage 1 & 2 maneuvers Pattern legs and entries Normal, x-wind landings Go-around Forward slip to a landing Local airports (4N1, MGJ, 1N7, FWN, 06N) Performance takeoffs	Traffic pattern awareness Radio communications Stabilized approach Collision avoidance Windshear avoidance	Stalls and spins Perf and limitations Aeromedical Aircraft airworthiness Visual Flight Rules Airframe systems Flight instruments Safety of flight	Read POH of training airplane Sporty's Section 4 "Your Dual Cross-Countries", Section 5, "Your Solo Cross-Countries"

GROUND TRAINING LESSONS			
Stalls and spins	**Perf and limitations**	**Aeromedical**	**Aircraft airworthiness**
Principles of a stall Airspeed awareness Stall recovery Spin awareness Spin recovery	POH limitations (Ch 2) Use of performance charts Aircraft weight Center of gravity	Hypoxia, hyperventilation CO poisoning Scuba diving Visual, vestibular illusions Fatigue and stress Alcohol and drugs	Aircraft categories 3 levels of airworthiness Minimum equipment Inspections, Maintenance Preflight Aircraft lights
Visual Flight Rules	**Airframe systems**	**Flight instruments**	**Safety of flight**
PIC, Emergencies Altitude, airspeed limitations Right-of-way Pre-flight action, fuel Accident reporting	Electrical system Environmental system Landing gear system	Magnetic compass, errors Pitot-static system Gyroscopic instruments Electronic flight deck Autopilot	Runway incursion Visual scanning and collision avoidance Wake turbulence CFIT Workload management

COMPLETION STANDARDS		
Practical standards	**Knowledge standards**	**Admin requirements**
Stage 3 Check (Pre Solo) First solo flight complete	Stage 2 / Pre-solo knowledge test	Solo endorsements

Stage 4 - Cross-country flying

In Stage 4, we transition from the familiar surroundings of the local area to the expansive world of cross-country flight.You'll learn to use both traditional and modern navigation tools, from VOR to GPS. Night operations will introduce you to the unique challenges and beauty of flying after the sun sets. This stage includes intense ground training, with a focus on cross-country operations. This includes a variety of topics such as weather, navigation systems, and classes of airspace.

By the end of Stage 4, you'll be well-equipped to handle longer flights, diverse conditions, and be more independent as a pilot, paving the way for your first solo cross-country adventure, and will complete the Part 61 solo and dual cross-country requirements.

CONTENTS			
Flight maneuvers	**Flight procedures**	**Ground training**	**Self-study**
All stage 1, 2 & 4 maneuvers Performance landings Simulated instrument VOR and GPS procedures Night flying	Preflight briefing Pilotage and dead-reckoning Flight following Arrival briefing Diversion	XC flight planning Weather Navigation systems Airspace Night operations Pilot certification	Chart reading on sectional charts FAA VFR Chart User Guide Sporty's Section 6 "Your Private Pilot Test" 2 Practice tests complete

GROUND TRAINING LESSONS			
XC flight planning	**Principles of weather**	**Weather information**	**Weather hazards**
Aeronautical charts (sectional, TAC, C/S) Course to heading, magnetic variation, wind. Airspeed (IAS/CAS/TAS) Pilotage, dead reckoning Lost procedures VFR flight plans	Atmospheric composition Properties of the atmosphere Temperature, air masses Wind, horizontal motion Stability, vertical motion Clouds and precipitation Fronts	Observations (METAR, PIREP, radar, satellite) Advisories (AIRMET, SIGMET, Conv Sigmet) Forecasts (TAF, GFA, wind/temp, prog charts, conv outlook). Inflight weather	Precipitation Obstructions to visibility Thunderstorms Windshear Turbulence Local winds Icing
Navigation systems	**Airspace**	**Night operations**	**Pilot certification**
Principles of VOR & GPS Tracking & intercepting VOR and GPS courses Radar and transponder ADS-B, TIS-B, FIS-B	Controlled airspace Uncontrolled airspace Weather minimums Equipment & certification Special use airspace	Night vision Disorientation, optical illusions Night procedures Night emergencies	Private certificate, privileges & limitations Medical, Basic Med Currency, logbooks Additional endorsements

COMPLETION STANDARDS		
Flight activities	**Ground activities**	**Admin requirements**
Stage 4 Check FAR cross-country flights complete.	Stage 4 knowledge test. Online ground complete.	FAA written test completed before first solo XC.

Stage 5 - Practical test preparation

Welcome to the culmination of your foundational training: Stage 5. Think of this as the home stretch, where all the skills, knowledge, and techniques you've acquired converge into a finely-tuned, cohesive performance. While you won't encounter new maneuvers or concepts, this stage is vital. It's about refining, practicing, and ensuring you're wholly prepared for the practical test.

During this stage, we'll revisit essential maneuvers, diving deep into any areas that require added attention. Mock checkrides will simulate the real examination experience, offering invaluable feedback on where you stand. We'll also intensify our ground sessions, emphasizing topics commonly addressed during the oral portion of the test.

Remember, Stage 5 is not just about meeting standards—it's about exceeding them, cultivating confidence, and ensuring that when you sit for your practical test, you do so with the utmost readiness and assurance in your abilities. Let's polish, perfect, and propel you towards that coveted Private Pilot Certificate!

CONTENTS			
Flight maneuvers	**Flight procedures**	**Ground training**	**Self-study**
All maneuvers from Stage 1 to 4.	Checkride procedures	ACS familiarization Oral exam preparation.	Read M. Hayes Oral Exam Guide.

COMPLETION STANDARDS		
Flight activities	**Ground activities**	**Admin requirements**
Mock Checkride 1 Mock Checkride 2	Mock Oral Checkride	FAA Part 61 requirements completed. Checkride endorsements completed.

Additional resources

- **Radio Communications:**
  - ATIS recordings: you can find a collection of ATIS recordings in this folder: 🗀 ATIS Recordings . Practice listening to them and writing down the elements of the weather briefing.
  - Caldwell Ground & Tower frequencies online: the live feed of the Ground and Tower frequencies of the Caldwell airport is available online on LiveATC. Spend time to listen to it, as it will greatly help you learn the "language" of Air Traffic Control. You can also listen to radios at many other airports all around the world.
  - Radio communication training app: some students have enjoyed using the ARSim app (App Store)
  - PilotEdge CAT ratings: PilotEdge is a subscription for very realistic ATC in your favorite flight sim. You can review the Communications & Airspace Training (CAT ratings) scenarios for VFR pilots here. Starting from simple VFR communications, these scenarios will help you build up your communication skills. PilotEdge is staffed with real ATC controllers. It can be plugged into most sims (FSX, X-Plane, MSFS). You don't need any fancy sim controls, or a high-performance computer (as long as you keep the settings low!). It's all about the communications, and not about the flying, the landscape looking great or the controls being realistic.
- **Aircraft systems:**
  - Embry Riddle Aircraft Systems Videos (YouTube): a playlist of videos with solid explanations of the main systems used in General Aviation aircraft.
  - SmarterEveryDay - How does an engine work (YouTube): a transparent engine for your viewing pleasure, and great learning in the process.
  - SmarterEveryDay - How does a carburetor work (YouTube): see how a carburetor works in real-time and in slow motion!
  - How a Cessna 172 works (YouTube): a video navigating through a 3D exploded view of the 172.
- **Avionics:**
  - Garmin GTN-750: Garmin publishes on the App Store a very accurate simulator of the Garmin GTN750 (installed in 75829 and 5169E). See Garmin iPad GTN Trainer (App Store)
  - Garmin G1000 Nxi / Cirrus Perspective+: you have a couple of options to help you learn the details of the G1000.
    - Garmin G1000 trainer (Garmin Aviation): very accurate but can be hard to use. We have the software at the school, ask us for a demo!
    - Simionic G1000 iPad app (PFD, MFD): cheaper and easier to use, but not specific to the Cirrus implementation of the Garmin G1000.
- **Weather:**
  - Basics of weather by Andi Kravljaca (YouTube): a great introduction to the fundamentals of aviation weather.
- **Aeromedical:**
  - SmarterEveryDay - Hypoxia demonstration (YouTube): an educational (and humbling) video about the effects of hypoxia.
- **Cross-country planning:**
  - Fly8MA - Navlog preparation (YouTube): a solid overview of XC navlog preparation.
- **Regulations:**
  - JustPlaneSilly - Remembering Airspace (YouTube): a great memory aid for VFR cloud clearances.