

Bermuda Dunes Flight Training

Adaptive IRA Pilot Syllabus



"If you aren't having fun, you're doing it wrong."

Our Training Philosophy

At Bermuda Dunes Flight Training, we know the instrument rating is where the training wheels come off. It is not about feeling the airplane; it is about absolute trust in the data, ruthless repetition, and mastering the "types of mess" when it comes to procedures. This syllabus relies on flexibility. If a student is task-saturated, we don't just push through the checkboxes. We step back, break it down, and build the foundation.

Instructors: *Instrument training is mentally exhausting. Read your student's unspoken signals. If they are falling behind the airplane, simplify the lesson. Focus on building safe, confident, and competent decision-makers who can manage a high-workload environment.*

Phase 1: The Un-Breakable Scan (Basic Attitude)

The goal of this phase is stripping away reliance on outside visual cues and building absolute trust in the instruments.

- **The Scan Fundamentals:** Establishing the hub-and-spoke method. Whether scanning the analog attitude indicator in the 172 or the digital GI 275 in the SR20, the eyes must keep moving.
- **Pitch, Power, and Trim:** Nailing exact airspeeds and descent rates without looking out the window.
- **Unusual Attitudes:** Recognizing the onset of an upset and executing the correct recovery sequence without hesitation.
- **Partial Panel Operations:**
 - *Vacuum Failure (Steam):* Covering the attitude and heading indicators; relying on the turn coordinator, altimeter, and airspeed.
 - *Electrical Degradation (Glass):* Managing the standby battery life on the GI 275s or G5s, and understanding load shedding and the Essential Bus.

Phase 2: Navigation and Procedures

The goal of this phase is mastering positional awareness and learning how to interpret and execute procedural instructions.

- **Intercepting & Tracking:** Locking onto VOR radials and GPS courses. Understanding wind drift and dialing in the exact crab angle needed to keep the needle centered.
- **DME Arcs:** Flying the turn-10, twist-10 method. Keeping the aircraft within the precise distance parameters.
- **Holding Patterns:** Practice, practice, practice. Visualizing the hold, determining the entry (Direct, Teardrop, Parallel), and mastering the wind correction angles on the inbound and outbound legs.
- **Situational Awareness:** Knowing exactly where the aircraft is in space without relying solely on the magenta line.

Phase 3: The Approach to Minimums

The goal of this phase is pure repetition until flying the glidepath and hitting the step-down fixes becomes automatic.

- **Precision Approaches (ILS):** Chasing the localizer and glideslope down to 200 feet AGL. Modulating power to maintain the exact descent rate required.
- **Non-Precision Approaches (VOR, LOC, RNAV):** Managing the step-down altitudes. With non-WAAS Garmin 430s, emphasizing LNAV minimums and mastering the dive-and-drive versus continuous descent final approach (CDFA) techniques.
- **Circling Approaches:** The highest-risk maneuver in IFR. Transitioning from instruments to visual references close to the ground, managing the pattern, and keeping the aircraft in tight to the runway.
- **Missed Approaches:** Executing the "cram, climb, clean, click, call" sequence smoothly when the runway environment is not in sight.

Phase 4: Real-World IFR and Cross-Country

The goal of this phase is managing the high-workload environment of the IFR system from engine start to shutdown.

- **Clearances & Comms:** Using the CRAFT acronym. Copying clearances quickly and accurately, reading them back without stammering, and anticipating ATC instructions.
- **Weather & ADM:** Evaluating icing conditions, freezing levels, and thunderstorm activity. Knowing when to launch and when to stay in the hangar.
- **Filing & Alternates:** Understanding the 1-2-3 rule and selecting legal, safe alternate airports based on fuel availability and weather minimums.

Appendix B: Instructor Notes & Navigating Student Plateaus

The Golden Rule: Read the Student, Reduce the Noise

Instrument training induces task saturation faster than any other phase of flight. As an instructor, you have to read your student's unspoken signals. When they freeze up, it's usually because they are overwhelmed by data. Step in, reduce the workload, and reconnect them to the basics.

1. The “Death Grip” Plateau

The student is white-knuckling the yoke, over-controlling, and fighting the airplane's natural stability.

- **The Fix:** Make them fly with two fingers. Have them trim the aircraft perfectly for level flight, then let go of the yoke entirely. Show them the airplane wants to fly straight and level.
- **The Bermuda Dunes Way:** Remind them that IFR flying is a mental exercise, not a physical one. Pitch, power, and trim do 90% of the work.

2. Information Overload & Instrument Fixation

The student is fixating on the CDI or localizer, making massive bank inputs to correct minor deviations, resulting in a sine-wave flight path.

- **The Fix:** Cover the CDI for a few minutes and make them fly the heading indicator. Teach them to establish a heading, wait to see what the needle does, and make corrections in small 2-to-5 degree increments.
- **The Bermuda Dunes Way:** "Fly the heading, monitor the needle." The needle tells you where you are; the heading indicator tells you where you are going. PICK ANY HEADING THE NEEDLE IS LOCATED TOWARDS AND YOU WILL FLY TOWARDS THAT COURSE 100% OF THE TIME. TO? FROM? No, this is an exercise in situational awareness.

3. The "Radio Paralysis" Plateau (IFR Edition)

The student can fly the plane but completely drops the scan when ATC starts issuing rapid-fire vectors or route amendments.

- **The Fix:** Aviate, Navigate, Communicate. In that exact order. Teach them that it is completely acceptable to tell ATC "Standby" or ask for a "Delay Vector" if they are in the middle of configuring for an approach.
- **The Bermuda Dunes Way:** Emphasize that we are the Pilot-in-Command, not ATC. Build their confidence to own their airspace and prioritize flying the airplane over copying a clearance.

4. The "Task Saturation" Plateau

The student is falling behind the airplane, forgetting to load approaches, missing step-downs, or completely losing situational awareness.

- **The Fix:** Hit the pause button. Request a vector off the approach course or ask for a hold to give the student time to catch their breath, brief the plate, and set up the avionics.
- **The Bermuda Dunes Way:** We don't rush failure. If the approach isn't set up perfectly by the Final Approach Fix, teach them to automatically execute the missed approach and try again.

5. The "Burnout" Plateau

The student is quiet, frustrated, and performing worse today than they did two weeks ago.

- **The Fix:** Put the syllabus away completely.
- **The Bermuda Dunes Way:** Remember our motto: *"If you aren't having fun, you're doing it wrong."* If a student is burning out, take them on a flight purely for the joy of it. Fly somewhere new, grab a \$100 hamburger, or just do some scenic maneuvers with zero grading or pressure. Remind them why they wanted to learn how to fly in the first place.