Private Pilot Flight Review — Complete Ground Session

> **Important:** This is a study and session guide. Always verify current regulations with the FAA, consult the latest AIM, FARs, and official guidance. This document is not legal advice and regulations may evolve. Last updated: January 2026.

Flight Review Requirements (14 CFR 61.56)

Every 24 calendar months, you must complete:

- **Minimum 1 hour ground training** on Part 61 and Part 91 rules, plus any regulations relevant to your certificate and aircraft
- **Minimum 1 hour flight training** covering maneuvers and procedures appropriate to your certificate, aircraft category/class, and operations you intend to conduct
- **Endorsement:** Instructor signs your logbook certifying satisfactory completion

This ground session satisfies the regulatory minimum and is tailored to Private Pilot operations.

1. Regulatory Essentials

Private Pilot Privileges and Limitations (14 CFR 61.113)

- **Privileges:** May act as PIC of an aircraft for which you are rated, carry passengers, and share operating expenses (pro-rata share of fuel, oil, airport fees, rental fees) with passengers
- **Compensation or Hire:** May not pay less than pro-rata share, and may not act as PIC for compensation or hire
- **Exceptions:** May act as PIC for certain charitable, nonprofit, or community events (14 CFR 61.113(b)-(d)), aircraft salesperson demonstrations, towing gliders/banners (with endorsement), and certain other limited operations
- **Currency:** Must meet recency of experience requirements to carry passengers (14 CFR 61.57)
- **Medical:** Must hold at least a third-class medical certificate, or meet BasicMed requirements (14 CFR 61.23, 61.113(i))

Required Documents and Currency

Is it legal to fly today?

- **Pilot Certificate:** Valid private pilot certificate (or higher)
- **Medical Certificate or BasicMed:** Valid third-class (or higher) medical certificate, OR meet BasicMed requirements (CMEC within 48 months, online course within 24 months, valid driver's license)
- **Photo ID:** Government-issued photo ID
- **Logbook Endorsements:** Current for complex/high-performance/tailwheel (as applicable), high-altitude (if operating above 25,000 ft MSL or FL250)
- **Flight Review:** Completed within preceding 24 calendar months (14 CFR 61.56)

- **Takeoffs and Landings (61.57):** To carry passengers, 3 takeoffs and 3 landings in same category, class, and type (if type rating required) within preceding 90 days. *For night passenger ops (1 hour after sunset to 1 hour before sunrise): 3 takeoffs and 3 landings to a full stop within preceding 90 days.*
- **Instrument Currency (if flying IFR):** Within preceding 6 calendar months, 6 instrument approaches, holding, intercepting/tracking (14 CFR 61.57(c))

High-Performance and Complex Aircraft Endorsements

- **High-Performance (61.31(f)):** Required to act as PIC of aircraft with engine of more than 200 HP. Requires ground and flight training and logbook endorsement.
- **Complex Aircraft (61.31(e)):** Required to act as PIC of complex aircraft (retractable landing gear, flaps, controllable-pitch propeller). Requires ground and flight training and logbook endorsement.
- **Tailwheel (61.31(i)):** Required to act as PIC of tailwheel aircraft. Requires ground and flight training and logbook endorsement.
- **High-Altitude (61.31(g)):** Required to act as PIC in pressurized aircraft above 25,000 ft MSL. Requires ground and flight training and logbook endorsement.

2. Airspace and Communications

VFR Weather Minimums (14 CFR 91.155)

Airspace	Visibility	Cloud Clearance
Class A	N/A (IFR only)	N/A (IFR only)
Class B	3 SM	Clear of clouds
Class C	3 SM	500 ft below, 1,000 ft above, 2,000 ft horizontal
Class D	3 SM	500 ft below, 1,000 ft above, 2,000 ft horizontal
Class E (below 10,000 MSL)	3 SM	500 ft below, 1,000 ft above, 2,000 ft horizontal
Class E (at or above 10,000 MSL)	5 SM	1,000 ft below, 1,000 ft above, 1 SM horizontal
Class G (≤1,200 AGL, day)	1 SM	Clear of clouds
Class G (≤1,200 AGL, night)	3 SM	500 ft below, 1,000 ft above, 2,000 ft horizontal
Class G (>1,200 AGL, <10,000 MSL)	1 SM (day) 3 SM (night)	500 ft below, 1,000 ft above, 2,000 ft horizontal

Class D Operations: Pattern and Sequencing

Before entering Class D airspace:

- **Two-way radio communication:** Establish contact with tower and receive acknowledgment (your call sign)

- **Initial call (10 miles out):** "[Tower], [Your Call Sign], [Location], [Altitude], inbound for landing with [ATIS/AWOS letter]"
- **Listen for instructions:** Tower will assign runway, pattern entry (straight-in, base, downwind, etc.), and sequence ("Number 2, follow the Cessna on left downwind")
- **Read back all runway assignments and hold-short instructions**
- **Pattern reports:** Report downwind, base, and final as requested or as appropriate
- **After landing:** Do not cross any runway hold-short line without explicit clearance. Contact ground when clear of runway.

Radio Communication Basics

- **Who:** Facility name (e.g., "Podunk Tower")
- **Who:** Your full call sign (first call), then abbreviated
- **Where:** Your position (distance, direction, landmark)
- **What:** Your altitude, intentions, ATIS code
- **Listen first, transmit clearly, read back all runway and hold-short instructions**

Airspace Quick Reference

- **Class A:** 18,000 ft MSL to FL600 — IFR only, ATC clearance required
- **Class B:** Typically surface to 10,000 ft MSL around major airports — Requires ATC clearance, Mode C transponder, and two-way radio
- **Class C:** Typically surface to 4,000 ft AGL around busy airports — Requires two-way radio communication and Mode C transponder
- **Class D:** Typically surface to 2,500 ft AGL around towered airports — Requires two-way radio communication
- **Class E:** Controlled airspace not A, B, C, or D — Weather minimums apply, no specific clearance required for VFR
- **Class G:** Uncontrolled airspace — No ATC clearance required, lower weather minimums in some cases

3. Weather and Go/No-Go Decisions

NWKRAFT — Pre-Flight Planning Checklist

- **N — NOTAMs:** Check for runway closures, navaid outages, airspace changes, TFRs
- **W — Weather:** METARs, TAFs, AIRMETs, SIGMETs, winds aloft, graphical forecasts
- **K — Known ATC delays:** Check for flow control, ground stops, or expected delays
- **R — Runway lengths:** Verify adequate runway length at departure, destination, and alternates
- **A — Alternatives:** Identify alternate airports in case of weather or other issues
- **F — Fuel requirements:** Ensure sufficient fuel for the flight plus reserves (day VFR: 30 min; night VFR: 45 min)
- **T — Takeoff and landing distance data:** Calculate performance for current conditions (density altitude, weight, wind)

Weather Resources

- **1800wxbrief.com:** Leidos Flight Service (official FAA briefing)
- **aviationweather.gov:** NOAA Aviation Weather Center (METARs, TAFs, radar, satellite, AIRMETs,

SIGMETs)

- **ATIS/AWOS/ASOS:** Real-time airport weather
- **Graphical Forecasts:** Ceiling, visibility, winds, turbulence, icing

Personal Minimums and Risk Management

> **Legal ≠ Safe.** Establish personal minimums higher than regulatory minimums, especially as a rusty or low-time pilot.
>
> **Example Personal Minimums:**
>
> - Visibility: 5 SM (vs. regulatory 3 SM)
> - Ceiling: 3,000 ft AGL (vs. regulatory cloud clearances)
> - Winds: Crosswind component ≤ 10 knots (check your POH)
> - No flight if convective SIGMETs, embedded thunderstorms, or icing conditions forecast
>
> **Quick RM Tools:**
>
> - **PAVE:** Pilot, Aircraft, enVironment, External pressures — assess each before flight
> - **IMSAFE:** Illness, Medication, Stress, Alcohol, Fatigue, Eaten — personal readiness check
> - **5 P's:** Plan, Plane, Pilot, Passengers, Programming — continual in-flight risk assessment
>
> *Tie weather planning back to PAVE: enVironment includes weather, terrain, airports, and airspace complexity.*

IMSAFE — Personal Readiness Checklist

- **I — Illness:** Am I sick or feeling unwell?
- **M — Medication:** Am I taking any medications that could impair my performance?
- **S — Stress:** Am I under psychological or emotional stress?
- **A — Alcohol:** Have I consumed alcohol within 8 hours (or while still under the influence or with BAC ≥ 0.04%)?
- **F — Fatigue:** Am I tired or not well-rested?
- **E — Eaten:** Am I properly nourished and hydrated?

4. Aircraft Airworthiness

ARROW — Required Documents

- **A — Airworthiness Certificate:** Must be displayed in the aircraft
- **R — Registration:** Must be current (expires every 3 years)
- **R — Radio Station License:** Required only for international flights
- **O — Operating Limitations:** POH/AFM with approved supplements and placards
- **W — Weight and Balance:** Current W&B data and equipment list

AVIATE — Required Inspections

- **A — Annual Inspection:** Required every 12 calendar months (14 CFR 91.409)
- **V — VOR Check:** Required every 30 days if using VOR for IFR navigation (14 CFR 91.171)
- **I — 100-Hour Inspection:** Required if aircraft is used for hire or flight instruction *for hire* (14 CFR 91.409)
- **A — Airworthiness Directives (ADs):** Must be complied with as specified (14 CFR 91.403)
- **T — Transponder:** Required every 24 calendar months if installed (14 CFR 91.413)
- **E — ELT:** Battery and inspection every 12 calendar months (or per manufacturer); battery replacement at 50% life or 1 cumulative hour of use (14 CFR 91.207)

Pre-Flight Inspection

- Follow the checklist in your POH
- Check fuel quantity and quality (sump all drains, look for water and contamination)
- Check oil level and condition
- Inspect control surfaces, hinges, and cables for security and freedom of movement
- Check tires, brakes, and landing gear
- Verify all required documents and inspections are current
- Check for any obvious damage, leaks, or discrepancies

Weight and Balance — Non-Negotiables

> **Every flight, verify:**
>
> - **Gross Weight:** Total weight ≤ maximum gross weight in POH
> - **CG Location:** Center of gravity must be within forward and aft limits for the current weight
> - **Fuel Load:** Account for fuel weight (6 lbs/gal for avgas)
> - **Baggage and Passengers:** Do not exceed baggage compartment limits or seat limits
>
> **Simple Rule:** If you're not sure, do the math. An out-of-CG aircraft can be uncontrollable.
>
> **Performance:** High density altitude (high temperature, high elevation, high humidity) degrades performance. Use POH charts for takeoff/landing distance, climb rate, and cruise performance. If calculated takeoff distance exceeds available runway, do not fly.

5. Airport Operations and Emergencies

Traffic Patterns (Non-Towered Airports)

- **Standard Pattern:** Left-hand pattern unless otherwise indicated (check Chart Supplement, segmented circle, or traffic pattern indicators)
- **Pattern Altitude:** Typically 1,000 ft AGL (check Chart Supplement for specific airport)
- **Pattern Legs:** Upwind, crosswind, downwind, base, final
- **Radio Calls (CTAF):** 10 miles out, entering downwind, turning base, turning final, clear of runway
- **See and Avoid:** Maintain vigilant lookout for other traffic; not all aircraft have radios or make calls

Runway Incursion Avoidance

- **Read back all runway hold-short instructions**

- **Never cross a hold-short line without clearance**
- **If unsure of your position or clearance, stop and ask ATC**
- **Use airport diagram and taxi carefully, especially at unfamiliar airports**

Emergency Procedures

Engine Failure After Takeoff:

- **Airspeed:** Establish best glide speed immediately
- **Landing Site:** Straight ahead or within 30° of nose (do NOT attempt to turn back to runway unless you have sufficient altitude and training)
- **Secure Aircraft:** Fuel off, mixture off, mags off, master off (when landing is assured)
- **Touchdown:** Controlled landing, wings level

Engine Failure in Flight:

- **Airspeed:** Establish best glide speed
- **Landing Site:** Pick a suitable field (large, smooth, into the wind if possible)
- **Restart Checklist:** Fuel selector, mixture, carb heat, mags, primer (follow POH)
- **Mayday Call:** 121.5 MHz if time permits — location, souls on board, fuel remaining
- **Secure Aircraft:** Fuel off, mixture off, mags off, master off (when landing is assured)
- **Touchdown:** Controlled landing, wings level, slowest possible speed

Lost Procedures:

- **Climb:** Gain altitude for better visibility and radio/GPS reception
- **Communicate:** Contact ATC or Flight Service on 121.5 MHz
- **Confess:** Admit you are lost and request assistance
- **Comply:** Follow ATC instructions

6. Scenario Bank — Decision-Making Practice

Instructions: For each scenario, discuss: *What is your plan? What is your no-go line? What would have to change for you to change your decision?*

Scenario 1: Marginal Weather

You planned a cross-country flight. TAF at destination shows: "BKN015 TEMPO BKN008." Current METAR: "BKN020." Forecast is for lowering ceilings. You are not instrument-rated.

Discuss: Do you go? What is your personal ceiling minimum? What is your alternate plan? At what point do you divert or turn back?

Scenario 2: High Density Altitude

It's a hot summer day (95°F), and you're departing from a 3,000 ft elevation airport. Density altitude is calculated at 6,500 ft. Your POH shows takeoff distance at 6,500 ft DA is 2,200 ft. Available runway is 2,500 ft.

Discuss: Is this safe? What are your options? How does passenger/baggage weight affect your

decision?

Scenario 3: Airspace Bust Risk

You're flying near Class B airspace. Your GPS shows you're 1 mile from the boundary. You have not received a clearance to enter Class B.

Discuss: What do you do? How do you avoid busting Class B? What if ATC is too busy to respond to your call?

Scenario 4: Fuel Planning

You have 4 hours of fuel. Your flight is planned for 2.5 hours. Headwinds are stronger than forecast, and you're now estimating 3 hours to destination. Nearest alternate is 30 minutes behind you.

Discuss: What is your fuel reserve requirement? Do you have legal reserves? What is your decision point to divert?

Scenario 5: Passenger Pressure

Your passenger is eager to get home and suggests you can "make it" despite lowering ceilings and your personal minimums being exceeded.

Discuss: How do you handle external pressure? What is your responsibility as PIC? How do you communicate your decision?

Scenario 6: Night Flight

You're planning a night flight. Forecast is clear, but there are no lights along your route (rural area, minimal ground lighting). You haven't flown at night in 6 months.

Discuss: What additional risks does night flight present? What are your personal minimums for night flight? What emergency procedures change at night? Are you current to carry passengers at night?

7. Sources and References

- **14 CFR Part 61:** Certification: Pilots, Flight Instructors, and Ground Instructors
- **14 CFR Part 91:** General Operating and Flight Rules
- **Aeronautical Information Manual (AIM):** Official guide to basic flight information and ATC procedures
- **FAA-H-8083-25B:** Pilot's Handbook of Aeronautical Knowledge (PHAK)
- **FAA-H-8083-3C:** Airplane Flying Handbook (AFH)
- **Chart Supplement (formerly A/FD):** Airport and facility information
- **Your Aircraft POH:** Always the final authority for your specific aircraft

Flight Review Endorsement

Sample Flight Review Endorsement (14 CFR 61.56):

"I certify that [Pilot Name], [certificate number], has satisfactorily completed a flight review of 14 CFR 61.56 on [date]."

End of Ground Session. Proceed to flight portion per 14 CFR 61.56.
Safe flying and welcome back to the skies!