

# Complex Training Course

## *Cutlass Cessna 172RG*

### Lesson 1:

Schedule 2.0 ground, 3.0 flight

#### Ground

- What defines an airplane as “complex”
- Requirements for the [complex endorsement](#) & [Aircraft Checkout](#) with AeroDynamic
- [Renter’s Agreement](#) (no T&Gs, currency, general operations)
- Completing the [Aircraft Checkout Sheet](#) with [Complex Addendum](#)
- Basic components of the landing gear system
  - Electric motor, hydraulic actuation
  - Gear indications: lights, horn, and visual confirmation
  - Preflighting the gear: testing of lights, preflight inspection, hydraulic fluid
  - Good habits for avoiding a gear-up landing: GUMPS check and short final callout of “gear down & green, we are clear to land”
- Cowl flaps
- Altitude-compensating carburetor ([HA-6 model](#) with economizer)
  - ALL climbs & go-arounds in the Cutlass must be THROTTLE FULL FORWARD
- Constant-speed propeller operation
- Flow checks for takeoff, climb, cruise, descent, and before landing
  - Takeoff = Everything full forward & open
    - Cowl flaps OPEN → mixture RICH\* → prop FULL FWD (2700 RPM) → throttle FULL FWD (approximately 29” MP at S.L.)
  - Enroute Climb once above a safe altitude (typically at 1,000’ AGL)
    - Cowl flaps OPEN → mixture RICH\* → prop 2500 RPM → throttle FULL FWD
  - Reducing power for level cruise
    - Throttle 21-23” MP → prop 2300 RPM → mixture LEAN\* → cowl flaps CLOSED
  - Reducing power for a descent
    - Throttle max. 1-2” MP/min reduction → prop 2300 → mixture ENRICHEN gradually throughout descent to slowly cool EGTs → cowl flaps CLOSED
  - Before Landing (ready for go-around) on short-final
    - Mixture RICH → prop FULL FWD (once below 12” MP) → gear DOWN & GREEN
- Note: These are simple power settings. Please refer to POH for actual data.
- \* Mixture & Cowl Flaps settings are dependent upon engine temperatures.
- IFR power settings (if pilot is instrument rated)
- Monitoring engine temps at all times
- Wing flaps
- Use of checklists
- Passenger, PIC, taxi, and takeoff briefings

## Flight #1

	Intro	Practice	Perform	Proficient
Preflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine start & warmup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi briefing & taxiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run-up checklist & takeoff briefing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal and/or crosswind takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Climb checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cruise checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine management: climbs, cruise & descents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maneuvering and Cruise checks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steep turns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slow flight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power-on & -off stall recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Descent planning & engine cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate use of flaps & within limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forward slip and/or sideslip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal and/or crosswind landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Go-arounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown & postflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Debrief Notes:

Ground Time: \_\_\_\_\_ Flight Time: \_\_\_\_\_ CFI Signature: \_\_\_\_\_

## Lesson 2:

## Schedule 2.0 ground, 3.0 flight

### Ground

- Resources to study
  - [Cutlass 172RG POH](#)
  - [Cutlass 172RG Operating Checklist](#) & [Preflight/Emergency Checklist](#)
- Constant-speed propeller
  - Nuts and bolts of how it works
    - [McCauley prop guide](#) (2-blade, constant-speed, non-feathering)
    - [FlightInsight](#) video
  - Causes of over-speed and under-speed (pitch, moving the blue knob)
  - High pitch (low RPM) and low pitch (high RPM) stops ([CFI Notebook](#))
    - Why throttle also controls RPM at low power settings
    - When to bring the prop full forward prior to landing (below 12" MP)
  - When we can make larger power changes (once CHTs are cooled)
  - Why we might bring the prop lever full aft, how it works, and what this does
    - Note: We do not allow solo practice, only with a CFI onboard!
- Powerplant
  - [Lycoming O-360 manual](#)
  - ["Manifold Pressure Sucks"](#)
    - Normal MP & RPM indications with the engine shutdown, during taxi, before takeoff at SL, before takeoff at 4,000 feet DA, settings for cruise, and slow reduction during descent
  - Engine management 101: normal range, caution, redline, and controlling them
    - CHT → Air-cooled = airspeed, pitch, cowl flaps, and power awareness
      - Normal = 350-400°F, Caution = 400-435°F, Fix Me! = 450°F
    - EGT → When and how to lean, beware the altitude-compensating carburetor, running smoothly, fairly even temps, and fuel consumption
      - Normal = 1350-1400°F, Caution = 1400-1430°F, Fix Me! = 1480°F
      - Note: This can vary widely depending on altitude and engine model. Please consult engine manufacturer data for your engine
    - Oil temperature → Air-cooling, mixture control, oil cooler & [vernatherm](#)
      - Normal = 180-210°F, Caution = 210-230°F, Redline 245°F
    - Other considerations like high RPM, high OAT, and air density
    - Keeping ground run-up checks brief (no air cooling!)
    - Why  $V_X$  climbs are to be used **only** when an obstacle is present and why they are not intended to be used for any length of time
      - You are below  $V_{BG}$  if the engine fails
      - Steep climb = hot engine
    - $V_Y$  climb is recommended to a safe altitude, typically 1,000 feet AGL
    - Climb checklist and Cruise Climb for better cooling above safe altitude
    - Step climbs
    - Leaning for cruise based on CHT, EGT, and oil temperature (no LOP!)
  - Descent planning: how to avoid shock cooling

- < 20°F/min CHT reduction = @1-2”MP/min until approximately 15”MP, then ok to make bigger adjustments
- Review descent planning formulas (these work for all aircraft!)
  - Altitude to lose x 3° glideslope/1000 = distance to start down (ex: 9500 MSL to TPA of 1000 = 8500 x 3 = 25500/1000 = 25.5 nm (plus add 3-5 nm for pattern entry and/or speed reduction)
  - Descent rate = GS/2 x 10 (ex: 100 KTS/2 = 50 x 10 = 500 FPM)

W&B

Performance charts: Calculate the following at max weight with forward CG:

- Calculate the following at max weight with forward CG:
  - $V_S = \underline{\hspace{2cm}}$  KIAS       $V_{S0} = \underline{\hspace{2cm}}$  KIAS
  - $V_S$  with 45-degree bank =  $\underline{\hspace{2cm}}$  KIAS
  - $V_S$  with 60-degree bank =  $\underline{\hspace{2cm}}$  KIAS
- What should our MP be at full power when taking off with a DA of 6,000?  $\underline{\hspace{2cm}}$ ”
- What is the calculated takeoff distance at KRHV at 2500 pounds with METAR reporting temp of 15°C and altimeter 30.12?  $\underline{\hspace{4cm}}$
- What is the calculated distance to clear a 50’ obstacle at KMMH (FE 7,135) at 2650 pounds with METAR reporting temperature 39°C and altimeter 29.82?  $\underline{\hspace{4cm}}$
- What would our MP” be at full power when taking off from KMMH?  $\underline{\hspace{2cm}}$ ”
- What is the calculated 50’ obstacle landing distance at KRHV at 2500 pounds with METAR reporting temp of 30°C and altimeter 30.12?  $\underline{\hspace{4cm}}$
- How much fuel and time will it take you to climb from 3,00 feet to 7,500 feet?  $\underline{\hspace{4cm}}$
- What is the endurance at 65% power at 5,500 feet with full fuel tanks at night?
- At which runway length will you use short-field takeoff or landing procedures?

Soft-field takeoff and landing procedures (checklist & POH guidance)

Short-field (obstacle vs. short runway) procedures (checklist & POH guidance)

**HOMEWORK ASSIGNMENT:** Complete a round-trip flight plan to  $\underline{\hspace{2cm}}$  for pattern work. Include the following:

- Weather briefing
- Weight and balance calculations
- Performance calculations
  - Time, fuel & distance to climb
  - Enroute power settings
  - Total fuel burn calculations
- Descent planning
- Airport operations, noise abatement, taxi diagram, airspace, parachute jump areas [PJAs], and NOTAMs
- Diversion options
- Glide considerations for engine-out emergency

Note: If you hold an instrument rating and would like to fly IFR in our aircraft, please plan to fly at least one IAP at your destination and/or upon return to KRHV.

## Flight #2

	Intro	Practice	Perform	Proficient
Preflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine start & warmup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi briefing & taxiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run-up checklist & takeoff briefing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crosswind takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Climb checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cruise checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine management: climbs, cruise & descents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cross-country procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maneuvering and Cruise checks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steep turns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slow flight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power-off stall recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power-on stall recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Descent planning & engine cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate use of flaps & within limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crosswind landings (sideslip)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Soft-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forward slip when appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partial-flap landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Go-arounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown & postflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument flight maneuvers & navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument approach procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Debrief Notes:

Ground Time: \_\_\_\_\_ Flight Time: \_\_\_\_\_ CFI Signature: \_\_\_\_\_

## Lesson 3:

## Schedule 1.0 ground, 3.0 flight

### Ground

- Airworthiness
  - Required documents (AROW, AFM, GPS)
  - AVIATE + ADs
  - Required equipment (91.205 + AFM)
  - Inoperative equipment
  
- Review landing gear operation and checklist associated with malfunction
  
- Abnormalities
  - How to identify abnormalities (monitor your systems!)
  - CFI will give a few scenarios to assess understanding of systems, resource management, and decision making
  
- Emergencies
  - When abnormalities become emergencies (how do we know the difference?)
  - When, why, and how to abort a takeoff
  - Gear-up or gear-down choices (water, pavement, grass, snow, etc.)
  - CFI will give a few scenarios to assess your understanding of systems, resource management, and decision making

**HOMEWORK ASSIGNMENT:** Complete a one-way flight plan from KSBA to L35 departing at 1000 local (IFR pilots: plan this leg as an IFR flight), then plan a second leg from L35 to 3O8 departing at 1800 local. Your passengers weigh 220, 160, and 80 pounds. They bring 100 pounds of baggage. This must be done to complete the final ground assessment for Lesson 4.

For an aircraft checkout, please complete the Aircraft Checkout Sheet with Complex Addendum and all other renter paperwork, which can be found on our [Documents](#) webpage.

If you would also like a Flight Review endorsement, please complete our [Flight Review Quiz](#).

### Flight #3

	Intro	Practice	Perform	Proficient
Preflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine start & warmup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi briefing & taxiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run-up checklist & takeoff briefing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crosswind takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Climb checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cruise checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine management: climbs, cruise & descents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrical failure scenario to include:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Landing gear malfunction/failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Flaps failure, no-flap approach & landing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency procedures to include:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Partial power loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Engine failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Engine fire with emergency descent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Descent planning & engine cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate use of flaps & within limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Crosswind landings (sideslip)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forward slip when appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine-out approach & landing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Go-arounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown & postflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument flight maneuvers & navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument approach procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Debrief Notes:

Ground Time: \_\_\_\_\_ Flight Time: \_\_\_\_\_ CFI Signature: \_\_\_\_\_

## Lesson 4:

## Schedule 2.0 ground, 3.0 flight

Completion Standard: **This is not a training session.** You will be acting PIC for this final lesson. The instructor will be assessing how you manage the airplane without any assistance or coaching. They will conduct both the ground and flight portions as an assessment of the knowledge and skills necessary for you to properly operate a complex aircraft. This lesson may need to be repeated until you demonstrate proficiency.

After successfully completing this lesson you will receive the complex endorsement, flight review endorsement (if requested), and/or aircraft checkout in our Cutlass 172RG.

### Ground

- Pilot
  - Legal currency vs. proficiency vs. AeroDynamic Aviation requirements
  - Flight review
  - Requirements to fly with passengers
  - IMSAFE issues
- Aircraft
  - Airworthiness
  - Aircraft documents
  - Aircraft limitations
  - Systems
- EnVironment
  - Cross-country vs. local flight planning
  - Day vs. night considerations
  - VFR vs. IFR considerations (if pilot is IFR rated)
  - What is your glide range at the cruising altitude(s) you chose?
  - Emergency/survival equipment
- External Pressures

## Flight #4

	Intro	Practice	Perform	Proficient
Preflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine start & warmup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi briefing & taxiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run-up checklist & takeoff briefing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crosswind takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Climb checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cruise checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine management: climbs, cruise & descents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landing gear malfunction/failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency procedures (select at least one:)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Partial power loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Engine failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Engine fire with emergency descent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Descent planning & engine cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate use of flaps & within limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crosswind landings (sideslip)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Short-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forward slip when appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine-out approach & landing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partial-flap landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No-flap landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Go-arounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown & postflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument flight maneuvers & navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument approach procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Debrief Notes:

Ground Time: \_\_\_\_\_ Flight Time: \_\_\_\_\_ CFI Signature: \_\_\_\_\_

## Additional Flight

	Intro	Practice	Perform	Proficient
Preflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine start & warmup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxi briefing & taxiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run-up checklist & takeoff briefing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Normal takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crosswind takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-field takeoffs & climbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Climb checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cruise checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine management: climbs, cruise & descents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cross-country procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maneuvering and Cruise checks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steep turns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slow flight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power-off stall recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power-on stall recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landing gear malfunction/failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Descent planning & engine cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate use of flaps & within limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Normal landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crosswind landings with a sideslip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-field landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forward slip when appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine-out approach & landing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partial-flap landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No-flap landings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Go-arounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Landing checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown & postflight inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument flight maneuvers & navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Instrument approach procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Debrief Notes:

Ground Time: \_\_\_\_\_ Flight Time: \_\_\_\_\_ CFI Signature: \_\_\_\_\_