Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 CFI: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Initial Meeting – Outline Training Plan and Set Expectations**

**Objective:**

Determine Students motivation for seeking flight training, and answer any questions the student has concerning flight training.

**Instructor Tasks**

* Private pilot requirements
* Recommended books PHAK, FAR/AIM, AFH
* Cost estimator
* Create Flight Schedule Pro Account
* Create Myflightbook.com online logbook account
* Assist with IACRA Student pilot application
* Give instructions on how to obtain medical
* Create student folder
* Issue student syllabus guide
* Examine Passport or Birth Certificate
* Give TSA Citizen Verification Endorsement and Private Pilot Knowledge Areas labels
* Photocopy Passport or Birth Certificate and place copies in student folder
* Answer any questions

**Instructor Note: Endorse logbook.**

No student may receive flight training without this endorsement. Flight school employees (and flight instructors) not in compliance may be subject to civil penalties under federal regulations.

**Determine applicability.**

The requirements for determining citizenship status for any student, whether U.S. or alien, applies only to flight training towards an initial pilot certificate. Copies of documents must be retained for 5 years.

 Proof of citizenship. Student must show evidence of U.S. citizenship to instructor with one of the following:

* Valid, unexpired U.S. passport
* Original or government-issued birth certificate of the U.S., American Samoa, or Swains Island AND a government-issued picture ID
* Original certificate of birth abroad with raised seal (Form FS-545 or DS-1350) AND a government-issued picture ID
* Original certificate of U.S. citizenship with raised seal (Form N-560 or N-561) or a Certificate of Repatriation (Form N-581) AND government-issued pictured ID
* Original U.S. Naturalization Certificate with raised seal (Form N-550 or N-570) AND a government-issued picture ID

**Ground Lesson 1 – Learning the Basics (In Conjunction with Flight Lesson 1)**

**Content:**

* Weather information (METARs and TAFs)
* NOTAMS
* IMSAFE checklist
* Cockpit management
* Positive exchange of flight controls
* Airport, runway, and taxiway signage
* A brief overview of radio communication
* VFR traffic patterns
* Aircraft documents
* Pilot documents
* Discuss your aircraft’s systems: Primary flight controls and secondary flight controls
* Preflight intro

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 4 of the PHAK Principals of Flight**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 1 – Preflight & Four Fundamentals (Dual)**

**Objective: Familiarization and Basic Control**

The student will become familiar with preflight inspection, checklists, use of flight controls and their effect on taxiing and in-flight. Introduce the four basic maneuvers (climbs, descents, turns, and straight-and-level) while keeping their focus outside the aircraft and enjoying the sensation of flight.

**Review Proficient**

* Pre-flight inspection (demo)
* Engine start (demo)
* Taxiing (demo)
* Normal takeoff (demo, instructor assist)
* Positive exchange of flight controls
* Collision avoidance
* Basic aircraft control
* Straight and level
* Trimming (demo)
* Climbs and descents (demo)
* Turns (demo)
* Turn coordination
* Simulated approach in landing configuration (note pitch attitude)
* Normal approach and landings (demo, instructor assist)
* Engine shutdown (demo)
* Securing the aircraft (demo)

**Completion Standards:** Altitude ±200 feet, Airspeed ±20 mph, Heading ±20 degrees

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 2 & 3 of AFH Ground Operations & Basic Flight Maneuvers**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed **Ground Lesson 2 – Basic Aerodynamics**

**Content:**

* Structure of the Atmosphere
* Atmospheric Pressure
* Pressure Altitude
* Density Altitude
* Effect of Pressure on Density
* Effect of Temperature on Density
* Effect of Humidity on Density
* Bernoulli’s Principle
* Newton’s 3rd Law
* Airfoil Design
* Low Pressure Above
* High Pressure Below
* Pressure Distribution
* Airfoil Behavior
* Forces Acting on the Aircraft
* Thrust
* Drag
* Parasite Drag
* Induced Drag
* Lift/Drag Ratio
* Weight
* Lift
* Wingtip Vortices
* Avoiding Wake Turbulence
* Ground Effect

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 5 of the PHAK Aerodynamics**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 2.5 – Aerodynamics (cont.)**

**Content:**

* Aircraft Design Characteristics
* Axes of an Aircraft
* Stability
* Static Stability
* Dynamic Stability
* Forces in Flight Maneuvers
* Forces in Turns
* Forces in Climbs
* Forces in Descents
* Stalls
* Basic Propeller Principles
* Torque and P-Factor
* Torque Reaction
* Corkscrew Effect
* Gyroscopic Action
* Asymmetric Loading (P-Factor)
* Load Factors
* Load Factors in Aircraft Design
* Load Factors in Steep Turns
* Load Factors and Stalling Speeds
* Load Factors and Flight Maneuvers
* Vg Diagram
* Rate of Turn
* Radius of Turn
* Weight and Balance
* Moment and Moment Arm
* Effect of Weight on Flight Performance
* Effect of Weight on Aircraft Structure
* Effect of Weight on Stability
* Effect of Load Distribution

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 3 & 6 of the PHAK Aircraft Construction & Flight Controls**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 2 – Four Fundamentals and Basic Maneuvers** **(Dual)**

**Objective: Familiarization and Basic Control**

The student will become familiar with preflight inspection, checklists, use of flight controls and their effect on taxiing and in-flight. Continue working on the four basic maneuvers (climbs, descents, turns, straight-and- level) incorporate flight instruments and introduce turns to headings. The student should look up the current weather information. Discuss carburetor and/or induction icing and the aircraft’s power plant and propeller.

**Review Proficient Review Proficient**

* Preflight
* Starting procedures
* Checklist usage
* Taxi
* Run-up
* Basic radio communication
* Normal takeoff
* Basic aircraft control
* Turns to headings
* Positive exchange of controls
* Turn coordination
* Dutch rolls (demo)
* Constant airspeed climbs
* Constant airspeed descents
* Medium banked turns
* Outline practice area
* Normal landing
* Engine shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±200 feet, Airspeed ±20 mph, Heading ±20 degrees

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 4 (p. 1-17) & 5 (all) of AFH**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 3 – Aircraft Construction and Flight Controls**

**Content:**

* Major components
* Fuselage
* Wings
* Empennage
* Landing gear
* The powerplant
* Subcomponents
* Types of aircraft construction
* Truss structure
* Monocoque
* Semimonocoque
* Flight controls
* Flight control Systems
* Primary flight controls
* Elevator
* T-tail
* Stabilator
* Rudder
* Secondary flight controls
* Flaps
* Leading edge devices
* Spoilers
* Trim tabs
* Balance tabs
* Autopilot

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 7 of the PHAK Aircraft Systems**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 3 – Introduction to Slow Flight and Power Off/Arrival Stall (Dual)**

**Objective: Familiarization and Basic Control**

The student will become familiar with slow flight, power off stalls and in-flight emergencies. The student will be able to recognize an approaching stall. The student should look up the present the weather information. Briefly cover some performance and limitations information for your training aircraft (basic speeds [Vs, Vs1, Vg etc.], G-limits) Discuss your training aircraft’s electrical system and how to recognize an electrical malfunction and emergency procedures.

**Review Proficient Review Proficient**

* Spin awareness and recovery
* Preflight
* Taxi
* Run-up
* Normal takeoff
* Basic aircraft control
* Radio communication
* Positive exchange of controls
* Turn coordination
* Slow flight (demo)
* Trimming
* Turns in slow flight
* Power-off stall (demo)
* Electrical malfunction
* Normal landing
* Engine shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±200 feet, Airspeed ±20 mph, Heading ±20 degrees

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson:  **Ch. 9 (intro & Steep turns) & Ch. 17 of AFH**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 4 – Aircraft Systems**

**Content:**

* Reciprocating engines
* Propeller
* Fixed-pitch propeller
* Adjustable-pitch propeller
* Induction systems
* Carburetor systems
* Mixture control
* Carburetor icing
* Carburetor heat
* Carburetor air temperature gauge
* Outside air temperature gauge
* Fuel injection systems
* Turbochargers
* Ignition system
* Oil systems
* Engine cooling
* Exhaust systems
* Starting system
* Fuel systems
* Gravity-feed system
* Fuel-pump system
* Fuel primer
* Fuel gauges
* Fuel selectors
* Fuel strainers, sumps, and drains
* Fuel grades
* Fuel contamination
* Refueling procedures
* Electrical system
* Hydraulic systems
* Landing gear
* Tricycle landing gear airplanes
* Tailwheel landing gear airplanes
* Fixed and retractable landing gear
* Brakes
* Anti-ice and deice systems
* Propeller deice systems

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 6 of AFH Ground Reference Maneuvers**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 4 – Power-On/Departure Stalls, Steep Turns and Emergency Procedures (Dual)**

**Objective: Familiarization and Basic Control**

The student should look up the present weather information and NOTAMS. Discuss spins, specifically, how they happen, how to prevent them, and how to recover. Discuss the airspace surrounding your airport and general practice areas. Emergency Procedures: Engine roughness or overheat, Smoke/fire/engine compartment fire. Discuss your training aircraft’s landing gear, fuel, oil, and hydraulic systems.

**Review Proficient Review Proficient**

* Spin Awareness and Recovery
* Preflight
* Taxi
* Run-up
* Normal Takeoff
* Basic Aircraft Control
* Radio Communication
* Positive Exchange of Controls
* Turn coordination
* Steep Turns (demo)
* Slow Flight
* Turns In Slow Flight
* Power-Off Stall
* Power-On Stall (demo)
* Engine Failure Procedures
* Power off descent (Vg)
* Inflight Emergencies
* Ditching
* Normal landing
* Go around (demo)
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±200 feet, Airspeed ±20 mph, Heading ±20 degrees

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 6 of AFH Ground Reference Maneuvers**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 5 – Ground Reference Maneuvers, Stalls**

**Content:**

* Rectangular Pattern
* Turns Around a Point
* S Turns
* Slow Flight
* Flight at Less than Cruise Airspeeds
* Flight at MCA
* Stalls
* Recognition of Stalls
* Fundamentals of Stall Recovery
* Use of controls in Stall Recovery
* Stall Characteristics
* Power-On or Power-Off
* Secondary Stall
* Accelerated Stalls
* Cross-Control Stall
* Slips
* Elevator Trim Stall
* Spins
* Spin Procedures
* Entry Phase
* Incipient Phase
* Developed Phase
* Recovery Phase
* Intentional Spins
* Weight and Balance Requirements

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Familiarize yourself with FAR/AIM Parts 91 and 61**

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Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 5 – Ground Reference Maneuvers, Stalls (Dual)**

**Objective: Familiarization and Basic Control**

The student should look up the present weather information and NOTAMS. The student will become familiar with ground reference maneuvers, dividing attention and developing coordination.

**Review Proficient**

* Normal Takeoff
* Radio Communication
* Turn Coordination
* Stalls (Power Off and Power On)
* Slow Flight
* Wind Correction
* S Turns (demo)
* Turns Around a Point (demo)
* Rectangular Course (demo)
* Simulated Engine Failure
* Slips (demo)
* Normal approach and landings
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±150 feet, Airspeed ±10 mph, Heading ±15 degrees

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 7 & 8 (p. 26-35) of AFH**

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Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 6 – Rules and Regulations**

**Content:**

* 91.3 – Responsibility of the PIC
* 91.7 – Civil aircraft airworthiness
* 91.13 – Careless or reckless operation
* 91.15 – Dropping objects
* 91.17 – Alcohol or drugs
* 91.103 – Preflight action
* 91.107 – Use of safety belts
* 91.111 – Operating near other aircraft
* 91.113 – Right-of-way rules
* 91.119 – Minimum safe altitudes
* 91.123 –ATC clearances
* 91.125 – ATC light signals
* 91.151 – Fuel requirements for VFR
* 91.155 – VFR weather minimums
* 91.159 – VFR cruising altitude
* 91.203 – Certifications required
* 91.205 – Equipment requirements
* 91.209 – Aircraft lights
* 91.211 – Supplemental oxygen
* 91.213 – Inoperative equipment
* 91.215 – ATC transponder use
* 91.303 – Aerobatic flight
* 91.409 – Inspections
* 91.411 – Altimeter system inspections
* 91.413 – ATC transponder inspections
* Part 61 – Certification of Pilots
* 61.57 – Recent flight experience
* 61.83 – Eligibility Requirements
* 61.87 – Solo Requirements
* 61.89 –Limitations
* 61.93 – Solo Cross-Country req.
* 61.95 –Student Pilots in Class B airspace
* 61.103 – Eligibility requirements
* 61.105 – Aeronautical Knowledge
* 61.107 – Flight Proficiency req.
* 61.109 – Aeronautical Experience req.
* 61.113 – Private Pilot Privileges

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 14 of PHAK Airport Operations**

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Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 6 – Airport Operations, Traffic Patterns and Landings (Dual)**

**Objective: Refining Control and Learning to Land**

The student should look up the present weather information and NOTAMS. Discuss Airport traffic patterns, determining headwind and crosswind components and go arounds.

**Review Proficient**

* Normal Takeoff
* Aborted Takeoff
* Radio Communications
* Traffic Pattern entry
* Full flap landing
* Go arounds
* Normal approaches and landings
* Forward Slips
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±10 mph

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 7 of AFH Airport Traffic Patterns**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 7 – Flight Operations**

**Content:**

* Types of Airports
* Towered Airport
* Nontowered Airport
* Sources for Airport Data
* Aeronautical Charts
* A/FD
* Notices to Airmen (NOTAMS)
* Airport Markings and Signs
* Runway Markings
* Taxiway Markings
* Other Markings
* Airport Signs
* Airport Lighting
* Airport Beacon
* Approach Light Systems
* Visual Glideslope Indicators
* Other Glidepath Systems
* Runway Lighting
* Runway End Identifier Lights
* Runway Edge Lights
* In-Runway Lighting
* Control of Airport Lighting
* Taxiway Lights
* Obstruction Lights
* Wind Direction Indicators
* Traffic Patterns
* Parallel Runways
* Radio Communications
* Radio Equipment
* Lost Communication Procedures
* Air Traffic Control (ATC) Services
* Primary Radar
* Transponder
* Radar Traffic Advisories
* Wake Turbulence
* Vortex Generation
* Vortex Strength
* Vortex Behavior
* Vortex Avoidance Procedures
* Collision Avoidance
* Clearing Procedures
* Runway Incursion Avoidance

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 15 of PHAK Airspace**

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Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 7 – Critical Flight Situations and Landings at Other Airports (Dual)**

**Objective: Refining Control and Learning to Land**

The student should look up the present weather information and NOTAMS. The student will become more proficient in recognition and recovery from critical flight situations and become familiar with traffic pattern operations and landings at other airports.

**Review Proficient**

* Normal and crosswind Takeoff
* Radio Communication
* Crosswind landings
* Forward slips
* No flap landings
* Go arounds
* Emergency engine out landings
* Wind Shear Avoidance
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±10 mph, Minimal assistance with takeoffs and landings, use of touchdown zone

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review Ch. 8 of AFH and Ch. 14 of PHAK**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 8 – Airspace**

**Content:**

* Controlled Airspace
* Class A Airspace
* Class B Airspace
* Class C Airspace
* Class D Airspace
* Class E Airspace
* Class G Airspace
* Special Use Airspace
* Prohibited Areas
* Restricted Areas
* Warning Areas
* MOAs
* Alert Areas
* Controlled Firing Areas
* Other Airspace Areas
* Wildlife Areas
* Military Training Routes
* Temporary Flight Restrictions
* Published VFR Routes
* Terminal Radar Service Areas
* National Security Areas
* Basic VFR Weather Minimums
* Equipment Requirements

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **AIM 4-1 and 4-2**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 8 – Landings Practice and Pre-Solo Written Take Home Exam (Dual)**

**Objective: Refining Control and Learning to Land**

The student should look up the present weather information and NOTAMS. The student will become more proficient with traffic patterns, takeoffs and landings in preparation for solo. Student will demonstrate good aeronautical decision making when determining when a go around is necessary.

**Review Proficient**

* Preflight
* Engine Start
* Taxi
* Radio Communication
* Normal and crosswind takeoff
* Simulated Engine Fire and Emergency Approach and Landing
* Normal and crosswind approaches and landings
* Go arounds (simulated balked approach, demonstrate good ADM)
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review for Pre Solo Progress Check**

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Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 9 – Radio Communication**

**Content:**

* 4-1-1 – Air Route Traffic Control Centers
* 4-1-2 – Control Towers
* 4-1-3 – Flight Service Stations
* 4-1-8 – Approach Control
* 4-1-9 – Traffic Advisory Practices
* 4-1-13 – ATIS
* 4-1-15 – Radar Traffic Information
* 4-1-16 – Safety Alert
* 4-1-17 – Radar Assistance
* 4-1-18 – Terminal Radar Services
* 4-1-19 – Tower En Route Control
* 4-1-20 – Transponder Operation
* 4-1-21 – Hazardous Area Reporting
* 4-2-1 – General
* 4-2-2 – Radio Technique
* 4-2-3 – Contact Procedures
* 4-2-4 – Aircraft Call Signs
* 4-2-6 – Ground Station Call Signs
* 4-2-7 – Phonetic Alphabet
* 4-2-8 – Figures
* 4-2-9 – Altitudes and Flight Levels
* 4-2-10 – Directions
* 4-2-11 – Speeds
* 4-2-12 – Time
* 4-2-13 – Light Gun Signals
* 4-2-14 – Communications for VFR Flights

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 11 of** **PHAK & Landing/Takeoff Performance in POH**

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Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Pre Solo Progress Check 61.87(d) (Dual)**

**Objective: Demonstrating Landing Proficiency and ADM**

The student should demonstrate the ability to prepare for the flight unassisted (just like they were solo). Furthermore, the check instructor should *evaluate* the following items:

**Review Proficient**

* Planning and preparation
* Preflight
* Powerplant operation, and aircraft systems
* Taxiing or surface operations, including runup
* Takeoffs and landings, including normal and crosswind
* Straight and level flight, and turns in both directions
* Climbs and climbing turns
* Airport traffic patterns entry and departure procedures
* Collision avoidance
* Windshear avoidance
* Wake turbulence avoidance
* Descents, with and without turns, using high and low drag configurations
* Flight at various airspeeds from cruise to slow flight
* Stall entries from various flight attitudes and power combinations
* Emergency procedures and equipment malfunctions
* Ground reference maneuver of instructors choice
* Approach to a landing area with simulated engine malfunction
* Slip to a landing
* Go-around
* Normal landing

**Completion Standards:** Student can complete all tasks safely without input from instructor

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **N/A**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Endorsement – Initial Solo**

**Instructor Note: Endorse student pilot certificate or logbook & verify medical**

Regulations limit this endorsement to 90 days. At the end of 90 days the student must pass a flight check by a certified flight instructor who so endorses the student’s logbook.

**Presolo Aeronautical Knowledge Test**

Administer the test; and at the conclusion of the test, review all incorrect answers with the student before authorizing that student to conduct a solo flight.

**§ 61.83 Eligibility requirements for student pilots.**

To be eligible for a student pilot certificate, an applicant must:

(a) Be at least 16 years of age for other than the operation of a glider or balloon.

(c) Be able to read, speak, write, and understand the English language. If the applicant is unable to meet one of these requirements due to medical reasons, then the Administrator may place such operating limitations on that applicant's pilot certificate as are necessary for the safe operation of the aircraft.

**Endorsement – First 90 days and Additional 90 Day Endorsements**

Record date in endorsements tab of Flight Schedule Pro. FSP will not allow dispatch if students 90 day solo endorsement has expired.

**Flight Lesson 9 – Supervised Solo and First Solo**

**Objective: Demonstrating Landing Proficiency and ADM**

The student should demonstrate the ability to prepare for the flight unassisted. If satisfied with student’s performance after the pre solo progress check proceed directly to flight #2 after all necessary endorsements have been given. If deficiencies are found preform flight #1 with original instructor or as many flights as needed to address deficiencies.

Flight #1 With Original Instructor (if needed to address deficiencies)

**Review Proficient**

* Preflight
* Startup
* Taxi
* Normal Takeoff
* 3 Normal Landings
* Go around
* Emergency landing
* Aeronautical decision making

Flight #2 Solo

**Review Proficient**

* Startup
* Taxi
* Normal Takeoff
* 3 Normal Landings
* Engine Shutdown
* Securing the aircraft

**Instructor Note: After Landing, Cut Shirt Tail!**

**Completion Standards:** Student can complete solo landings safely

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Towered ops in Ch. 14 of PHAK & Ch. 7 of AFH**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed **Ground Lesson 10 – Aircraft Performance**

**Content:**

* Importance of Performance Data
* Atmospheric Pressure
* Pressure Altitude
* Density Altitude
* Effects of Pressure on Density
* Effects of Temperature on Density
* Effects of Humidity on Density
* Performance
* Straight-and-Level Flight
* Climb Performance
* Range Performance
* Takeoff and Landing Performance
* Runway Surface and Gradient
* Water on the Runway
* Takeoff Performance
* Landing Performance
* Performance Speeds
* Performance Charts
* Interpolation
* Density Altitude Charts
* Takeoff Charts
* Climb and Cruise Charts
* Crosswind and Headwind Component
* Landing Charts
* Stall Speed Performance Charts

Also reference **the Pilot’s Operating Handbook (POH)** for your training aircraft as it pertains to the *specific* performance characteristics of your make and model training airplane. Show the student how to use the performance tables and charts.

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 10 of** **PHAK Weight and Balance**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 10 – Towered Airport Intro (Dual)**

**Objective: Cross-country and Night Prep**

The student should look up the present weather information and NOTAMS for airport of departure and at destination. The student will become more proficient with traffic patterns, takeoffs and landings, towered operation and ground control in preparation for towered solo. If doing the towered landing practice at KMQY this is a good time to request a tour of the control tower and have the student meet the controllers and tour the facility. No prior arrangement is necessary. Prior arrangement is necessary for touring KBNA facility.

**Review Proficient**

* Preflight
* Engine start
* Taxi
* Towered radio communication
* Normal and crosswind takeoff
* Normal and crosswind approaches and landings
* Go arounds
* Engine shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review Ch. 14 of PHAK and Ch. 7 of AFH for Towered Solo**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 11 – Weight and Balance**

**Content:**

* Effects of Weight
* Weight Changes
* Balance, Stability, and Center of Gravity
* Effects of Adverse Balance
* Stability
* Control
* Terms and Definitions
* Principles of Weight and Balance Computations
* Determining CG
* Computational Method
* Graph Method
* Table Method
* Computations with a Negative Arm
* Computations with Zero Fuel Weight
* Shifting, Adding, and Removing Weight
* Weight Shifting
* Weight Addition or Removal

Also reference **the Pilot’s Operating Handbook (POH)** for your training aircraft as it pertains to the *specific* weight and balance data of your make and model training aircraft. Run through a sample weight and balance calculation with your student.

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 12 of** **PHAK Weather**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 11 – Practice in Traffic Pattern (Towered Airport) – (Dual and Solo)**

**Objective:**

The student should look up the present weather information and NOTAMS for airport of departure and at destination. The student should be proficient with towered airport radio communication and ground control. Repeat flights may be necessary until student is comfortable with towered operations.

**Review Proficient**

* Preflight
* Engine Start
* Taxi
* Radio Communication
* Normal and crosswind takeoff
* Normal and crosswind approaches and landings
* 3 solo full stop landings
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings, student can operate safely at a towered airport without assistance on the radios from the instructor.

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review as required by CFI for next lesson**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 12 – Weather**

**Content:**

* Causes of weather
* Atmospheric Pressure
* Coriolis Force
* Altitude and Atmospheric Pressure
* Altitude and the Human Body
* Wind Patterns
* Convective Currents
* Effect of Obstructions on Wind
* Low-Level Wind Shear
* Weather Maps
* Moisture and Temperature
* Relative Humidity
* Temperature/Dew Point Relationship
* Dew and Frost
* Fog
* Clouds
* Ceiling
* Visibility
* Precipitation
* Air Masses
* Fronts
* Warm Front
* Cold Front
* Comparison of Cold and Warm Fronts
* Wind Shifts
* Stationary Front
* Occluded Front
* Thunderstorms
* Hazards
* Squall Line
* Tornadoes
* Turbulence
* Icing
* Hail
* Ceiling and Visibility
* Lightning

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 13 of** **PHAK Aviation Weather Services**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 12 – Review (Optional) – (Dual or Solo)**

**Objective: Review**

Utilize this lesson to review any deficient areas up to this point, brush up on maneuvers, and solidify the basics before moving on to basic attitude instrument flight.

**Review Proficient**

* Preflight
* Engine Start
* Taxi
* Radio Communication
* Normal and crosswind takeoff
* Ground reference maneuvers
* Stalls, power on and power off
* Steep turns
* Slow flight
* Constant airspeed climbs and descents
* Normal and crosswind approaches and landings
* Go arounds
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 4 (p. 17-24) of AFH**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 13 – Weather Reports**

**Content:**

* Observations
* Surface Aviation Weather Observations
* Upper Air Observations
* Radar Observations
* Satellite
* Satellite Weather
* Satellite Weather Products
* Service Outlets
* Automated Flight Service Station (AFSS)
* Transcribed Information Briefing
* DUATS
* En Route Flight Advisory Service (EFAS)
* HIWAS
* Transcribed Weather Broadcast (TWEB)
* Weather Briefings
* Aviation Weather Reports
* METAR
* Pilot Weather Reports (PIREPs)
* Radar Weather Reports (RAREP)
* Aviation Forecasts
* Terminal Aerodrome Forecasts (TAF)
* Area Forecasts (FA)
* Inflight Weather Advisories
* AIRMET
* SIGMET
* Convective Sigmet
* Winds and Temperature Aloft Forecast
* Weather Charts
* Surface Analysis Chart
* Weather Depiction Chart
* Radar Summary Chart
* Significant Weather Prognostic Charts
* ATC Radar Weather Displays
* Weather Avoidance Assistance
* Weather Products Age and Expiration
* NEXRAD Limitations
* AIRMET/SIGMET

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 16 of** **PHAK Navigation**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 13 – Basic Attitude Instrument Flight (Dual)**

**Objective:**

Briefly introduce the student to VORs and their use and operation. The student will gain an understanding of flight by reference to instruments, instrument scan, VOR tracking and simulate inadvertent VFR into IMC scenarios.

**Review Proficient**

* Instrument scan
* Straight and level flight under the hood
* Unusual attitudes
* Constant airspeed climbs and descents
* Constant rate climbs and descents
* Standard rate turns (demo)
* Timed turns to headings
* VOR intercepting and tracking (demo)

**Completion Standards:** Altitude ±250 feet, airspeed ±10 mph, heading ±20 degrees, proper scan

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 4 (p. 17-24) of AFH & Ch. 16 of PHAK**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 14 - Navigation**

**Content:**

* Sectional Charts
* VFR Terminal Area Charts
* World Aeronautical Charts
* Latitude and Longitude
* Time Zones
* Variation
* Deviation
* Effect of Wind
* Basic Calculations
* Converting Minutes to Equivalent Hours
* Converting Knots to Miles Per Hour
* Fuel Consumption
* E6B
* Plotter
* Pilotage
* Dead Reckoning
* Flight Planning
* Completing a NAV log
* Use of A/FD
* Steps in Charting the Course
* Filing a VFR Flight Plan
* VOR’s
* Tracking With VOR
* Course Intercept
* Rate of Intercept
* Angle of Intercept
* Using the VOR
* CDI
* Horizontal Situation Indicator
* Distance Measuring Equipment (DME)
* Global Positioning System
* VFR Waypoints
* Lost Procedures
* Flight Diversions

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 2 of** **PHAK Aeronautical Decision Making**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 14 – Basic Attitude Instrument Review, Navigation, and Maneuvers (Dual)**

**Objective:**

The student will gain an understanding of flight by reference to instruments, instrument scan, VOR tracking and continue practicing flight maneuvers.

**Review Proficient**

* Instrument scan
* Basic attitude instrument flight
* VOR tracking and intercepting
* GPS intro and setup
* Practice are review
* Slow Flight
* Power on and power off stalls
* Steep turns
* Solo flight in practice area

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review Ch. 9 of AFH**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 15 – Aeronautical Decision Making**

**Content:**

* Hazard and Risk
* Hazardous Attitudes and Antidotes
* Assessing Risk
* Likelihood of an Event
* Severity of an Event
* Mitigating Risk
* The PAVE Checklist
* P = Pilot in Command
* A = Aircraft
* V = EnVironment
* E = External Pressures
* Human Behavior
* The Decision-Making Process
* SRM and the 5P Check
* The Plan
* The Plane
* The Pilot
* The Passengers
* The Programming
* Perceive, Process, Perform (3P)
* Forming Good Safety Habits
* The DECIDE Model
* Detect (the Problem)
* Estimate (the Need To React)
* Choose (a Course of Action)
* Identify (Solutions)
* Do (the Necessary Actions)
* Evaluate (the Effect of the Action)
* Decision-Making in a Dynamic Environment
* Automatic Decision-Making
* Operational Pitfalls
* Stress Management
* Use of Resources
* Internal Resources
* External Resources
* Situational Awareness
* Obstacles to Maintaining Situational Awareness
* Workload Management
* Managing Risks
* Automation
* Equipment Use
* Autopilot Systems

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review** **NTSB Part 830**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 15 – Performance Takeoffs and Landings (Dual)**

**Objective:**

The student should look up the present weather information and NOTAMS. Briefly discuss aircraft performance and when to use short field and soft field takeoffs as well as Vx and Vy. The instructor should demonstrate short field and soft field takeoffs and landings and then have the student perform them as well.

**Review Proficient**

* Preflight
* Engine Start
* Taxi
* Radio Communication
* Short field takeoff (demo)
* Short field landing (demo)
* Slips
* Soft field takeoff (demo)
* Soft field landing (demo)
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings, landings within 200’ of specified point and on centerline.

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review deficiencies addressed by instructor**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 16 – Accident Reporting**

**Content**

* 830.2 – Definitions (defines what an accident is)
* Initial Notification of Aircraft Accidents, Incidents, and Overdue Aircraft
* 830.5 – Immediate notification
* 830.6 – Information to be given in notification
* 830.1 – Preservation of aircraft wreckage, mail, cargo and records
* Reporting of Aircraft Accidents, Incidents, and Overdue Aircraft
* 830.15 – Reports and statements to be filed

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Chapter 17 of** **PHAK**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 16 – Solo Pattern Work and Maneuvers (Solo)**

**Objective:**

The student should look up the present weather information and NOTAMS. The student will continue to gain proficiency and build solo time by conducting a solo flight in the pattern and to the practice area to conduct maneuvers (excluding stalls).

**Review Proficient**

* Preflight
* Engine Start
* Taxi
* Radio Communication
* Collision avoidance procedures
* Normal and crosswind takeoff
* Ground reference maneuvers
* Constant airspeed climbs and descents
* Normal and crosswind approaches and landings
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±200 feet, airspeed ±10 mph, heading ±10 degrees, stabilized approaches and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review Ch. 10 of AFH Night Operations**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Ground Lesson 17 – Aeromedical Factors**

**Content:**

* Obtaining a Medical Certificate
* Health and Physiological Factors
* Hypoxia
* Hypoxic Hypoxia
* Hypemic Hypoxia
* Stagnant Hypoxia
* Histotoxic Hypoxia
* Symptoms of Hypoxia
* Hyperventilation
* Middle Ear and Sinus Problems
* Spatial Disorientation and Illusions
* Vestibular Illusions
* Visual Illusions
* Postural Considerations
* Demonstration of Spatial Disorientation
* Climbing While Accelerating
* Climbing While Turning
* Diving While Turning
* Tilting to Right or Left
* Reversal of Motion
* Coping with Spatial Disorientation
* Optical Illusions
* Runway Width Illusion
* Runway and Terrain Slopes Illusion
* Featureless Terrain Illusion
* Haze
* Fog
* Ground Lighting Illusions
* Motion Sickness
* Carbon Monoxide (CO) Poisoning
* Stress
* Fatigue
* Dehydration and Heatstroke
* Alcohol
* Drugs
* DCS After Scuba Diving
* Vision in Flight
* Empty-Field Myopia
* Night Vision
* Night Vision Illusions
* Autokinesis
* False Horizon
* Night Landing Illusions

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Study for FAA Written Exam**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ **Lesson Completed**

Ground Time \_\_\_\_\_\_\_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 17 – Night Operations (Dual)**

**Objective:**

The student should look up the present weather information and NOTAMS. The student will become familiar with night operations and landings in preparation for dual night cross country.

**Review Proficient**

* (Night) Preflight
* Engine Start
* Taxi
* Radio Communication
* Normal and crosswind takeoff
* Night Illusions
* Full stop landings
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, stabilized approaches and landings, never red over red

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Review Ch. 16 of PHAK for Cross Country Planning**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 18 – Cross Country (Dual)**

**Objective:**

The student should pick an airport approximately 50nm from their home airport and look up the current and forecasted weather as well as any relevant NOTAMS. The instructor will assist with filling out a nav log.

**Review Proficient**

* Preflight
* Cross country flight planning
* Engine Start
* Taxi
* Radio Communication
* Normal or crosswind takeoff
* VFR navigation
* Flight following
* Fuel and time to checkpoint calculations
* Diversions
* Lost procedures
* Pattern entry procedures
* Normal or crosswind approaches and landings
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Ch. 10 of AFH**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 19 – Night Cross Country (Dual)**

**Objective:**

The student should pick an airport approximately 50nm from their home airport and look up the current and forecasted weather as well as any relevant NOTAMS. The student should be able to fill out the nav log with minimal assistance from the instructor for practice. GPS/ VOR will be the primary means navigation since part of this flight will be conducted under the hood. Simulate an electrical failure during the flight and stress the importance of having a flashlight, preferably with a red lens.

**Review Proficient**

* Preflight
* Cross country flight planning (demo)
* Engine Start
* Taxi
* Radio Communication
* Normal or crosswind takeoff
* Basic attitude instrument flying
* Tracking a course with GPS or VOR
* Electrical failure
* Pattern entry procedures
* Normal or crosswind approaches and landings
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Prepare for Next Cross Country**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 20 – Cross Country (Dual)**

**Objective:**

The student should look up the present weather information and NOTAMS. The student will become more proficient with traffic patterns, takeoffs and landings in preparation for solo cross country. The student should have the cross country planned and be able to answer questions concerning their planned route, destination information, and options for navigation. The student should be able to discuss various emergency and contingency scenarios.

**Review Proficient**

* Use of aeronautical charts for VFR navigation
* Pilotage
* Dead reckoning
* Aircraft performance charts
* Aeronautical weather reports
* Collision avoidance
* Emergency procedures
* Traffic pattern procedures
* Wake turbulence precautions
* Windshear avoidance
* Recognition and avoidance of hazardous terrain features
* Instrument operation
* Radio communication
* Control and maneuvering solely by reference to flight instruments
* Climbs at best angle and best rate
* Takeoff, approach, and landing procedures
* Short-field, soft-field, and crosswind takeoffs, approaches, and landings

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Prepare for Inital Solo Cross Country**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Endorsements Required Prior to Solo Cross Country**

These endorsements are specifically required prior to sending a student on solo cross countries.

* Initial Cross Country Solo Endorsement

 Required before initial solo cross-country flight specifying approved make and model for solo cross country



* Cross Country Solo Endorsement

 Required for every solo cross-country confirming the instructor has reviewed flight planning and route and make and model. You can also place limitations on the endorsement such as:

* Instructors Knowledge and Consent
* Crosswind Limitations
* Ceiling and Visibility Limitations



An authorized instructor may not permit a student pilot to conduct a solo cross-country flight unless that instructor has:

* Determined that the student's cross-country planning is correct for the flight;
* Reviewed the current and forecast weather conditions and has determined that the flight can be completed under VFR;
* Determined that the student is proficient to conduct the flight safely;
* Determined that the student has the appropriate solo cross-country endorsement for the make and model of aircraft to be flown; and
* Determined that the student's solo flight endorsement is current for the make and model aircraft to be flown.

**Flight Lesson 21 – Initial Cross Country (Solo)**

**Objective:**

The student should pick an airport approximately 50nm from their home airport and look up the current and forecasted weather as well as any relevant NOTAMS and make a go/no go decision. The student should be able to fill out the nav log without assistance from the instructor and answer questions concerning the route, fuel requirements, and lost procedures. Encourage the student to use flight following.

**Review Proficient**

* Preflight
* Cross country flight planning
* Engine Start
* Taxi
* Radio Communication
* Normal or crosswind takeoff
* VFR navigation
* Tracking a course with GPS or VOR
* Pattern entry procedures
* Normal or crosswind approaches and landings
* Engine Shutdown
* Securing the aircraft

**Instructor Note: Give solo cross country endorsement prior to each solo cross country.**

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Prepare for Next Solo Cross Country**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 22 – Cross Country (Solo)**

**Objective:**

The student should pick an airport approximately 50nm from their home airport and look up the current and forecasted weather as well as any relevant NOTAMS and make a go/no go decision. The student should be able to fill out the nav log without assistance from the instructor and answer questions concerning the route, fuel requirements, and lost procedures. Encourage the student to use flight following.

**Review Proficient**

* Preflight
* Cross country flight planning
* Engine Start
* Taxi
* Radio Communication
* Normal or crosswind takeoff
* VFR navigation
* Tracking a course with GPS or VOR
* Pattern entry procedures
* Normal or crosswind approaches and landings
* Engine Shutdown
* Securing the aircraft

**Instructor Note: Give solo cross country endorsement prior to each solo cross country.**

**Completion Standards:**  Altitude ±100 feet, Airspeed ±5 mph

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Prepare for Long Solo Cross Country Progress Check**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Pre Long Solo Cross Country Progress Check (Dual)**

**Objective:**

The student should be able to gather all information relevant to their cross-country flight and present it to the instructor and fill out a nav log unassisted. The student and instructor should set out on a cross-country as soon as instructor is satisfied with students performance give a diversion and return to home airport.

**Review Proficient**

* VFR flight planning
* Aircraft performance charts
* Aeronautical weather reports
* Collision avoidance
* Flight following
* Fuel burn and ETA calculations
* Lost procedures
* Diversions
* Emergency procedures
* Traffic pattern procedures
* Wake turbulence precautions
* Aeronautical decision making
* Instrument operation
* Radio communication
* Control and maneuvering solely by reference to flight instruments
* Climbs at best angle and best rate
* Takeoff, approach, and landing procedures
* Short-field, soft-field, and crosswind takeoffs, approaches, and landings

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **N/A if same day as LSCC. If not, prepare for LSCC.**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 23 – Long Cross Country (Solo)**

**Objective:**

The student should pick a route that is 150nm total distance and includes a leg that is at least 50nm, with three takeoffs and landings to a full-stop. Have the student look up the current and forecasted weather as well as any relevant NOTAMS and make a go/no go decision. The student should be able to fill out the nav log without assistance from the instructor and answer questions concerning the route, fuel requirements, and lost procedures. The student should use flight following on any legs over 50nm.

**Review Proficient**

* Preflight
* Cross country flight planning
* Engine Start
* Taxi
* Radio Communication
* Flight following
* Normal or crosswind takeoff
* VFR navigation
* Tracking a course with GPS or VOR
* Pattern entry procedures
* Normal or crosswind approaches and landings
* Engine Shutdown
* Securing the aircraft

**Instructor Note: Give solo cross country endorsement prior to each solo cross country.**

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Begin Review Oral Exam Guide & Maneuvers for next flight.**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 24 – Maneuvers and Practical Test Review (Dual)**

**Objective:**

The instructor should run through all the maneuvers required for the private pilot checkride and use this time to address any deficient areas in preparation for the checkride.

**Review Proficient**

* Preflight
* Engine Start
* Taxi
* Radio Communication
* Short field and soft field takeoffs
* Clearing procedures
* Collision avoidance
* Ground reference maneuvers
* Emergency procedures
* Stalls, power on and power off
* Steep turns
* Slow flight
* Constant airspeed climbs and descents
* Short field and soft field landings
* Go arounds
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings, landings within 200’ of specified point and on centerline.

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Prepare for Checkride Prep/Final Progress Check**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Flight Lesson 25 – Maneuvers Practice (Dual or Solo)**

**Objective:**

The instructor should rub through all the maneuvers required for the private pilot checkride and use this time to address any deficient areas in preparation for the checkride. If the instructor is satisfied with the students performance from the previous flight this flight can be completed solo.

**Review Proficient**

* Preflight
* Engine Start
* Taxi
* Radio Communication
* Short field and soft field takeoffs
* Clearing procedures
* Collision avoidance
* Ground reference maneuvers
* Emergency procedures
* Steep turns
* Slow flight
* Constant airspeed climbs and descents
* Short field and soft field landings
* Go arounds
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Altitude ±100 feet, Airspeed ±5 mph, unassisted takeoffs and landings

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Prepare for Checkride Prep**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Final Progress Check (Dual)**

**Objective:**

The student will fly a simulated checkride for the instructor as if the instructor was the DPE.

**Review Proficient Review Proficient**

* Simulated oral exam
* Required pilot documents
* Regulations
* Weather briefing
* Weight and balance
* Aircraft airworthiness
* Cross country flight planning
* Preflight
* Startup
* Taxi
* Checklist usage
* Runup
* Normal or crosswind takeoff
* Time and fuel to checkpoint
* Diversions
* Collision avoidance
* Cockpit management
* Clearing turns
* Steep turns
* Stalls Power on, power off
* Stall 20 degree bank
* Ground reference maneuvers
* Engine failure
* Emergency procedures
* Radio Communication
* Short field Landing
* Soft field landing
* Short field takeoff
* Soft field takeoff
* Aeronautical decision making
* Go around
* Engine Shutdown
* Securing the aircraft

**Completion Standards:** Private pilot ACS standards on all maneuvers

**NOTES:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Study Assignment for Next Lesson: **Prepare for Checkride**

□

Lesson Completed Date \_\_\_\_\_\_\_\_\_\_\_ Ground Time \_\_\_\_\_\_ **Lesson Completed**

Hobbs Out \_\_\_\_\_\_\_\_ Hobbs In \_\_\_\_\_\_\_\_ Flight Time \_\_\_\_\_\_ Tach \_\_\_\_\_\_\_\_ Landings \_\_\_\_\_

Student Signature Printed

CFI Signature, Num, and Exp. Printed

**Endorsements Required for the Checkride**

These endorsements are specifically required for the checkride.

* **Practical Test Endorsement – Certifies you’re ready for the checkride**



* **Recent Training Endorsement – Certifies you have the 3 hours of dual in the last 2 months.**



* **Knowledge Test Deficient Areas Endorsement – Certifies your instructor has gone back and reviewed missed test questions**



**ACS Standards**

* Normal takeoff and landing - Maintain Vy +/- 10 knots, touchdown within 400ft of selected point on centerline
* Performance takeoffs - Maintain Vy/Vx +10/-5 knots, touchdown within 200ft of selected point on centerline
* Steep Turns – Alt. ±100ft, airspeed ±10 knots, Bank ±5o, rollout ±10o
* Ground Reference Maneuvers - Alt. ±100ft, airspeed ±10 knots
* Slow Flight – Alt. ±100ft, heading ±10o, airspeed +10/-0 knots, specified bank ±10o
* Instrument Maneuvers – Alt. ±200ft, heading ±10o, airspeed ±10 knots

**Special Emphasis Areas**

1. **Positive aircraft control** – You are demonstrating that you are flying the airplane; the airplane shouldn’t be flying you.  Another example is that you shouldn’t be ‘behind the airplane’.
2. **Positive exchange of the flight controls procedure** – Use of the three-way voice handshake ‘You have the controls’ and visual check.
3. **Stall/spin awareness** – Demonstrating knowledge of the conditions that lead to stalls and spin, as well the proper recovery procedure.
4. **Collision avoidance** – Using clearing turns before maneuvers, pattern visual scans before entering runways, raising the wing in a high-wing airplane before turns, looking left and right before entering a taxiway and call-outs, i.e. ‘Clear Left’.
5. **Wake turbulence avoidance** – You need to demonstrate that you understand the risk of wake turbulence, the procedures to use when departing or arriving behind heavier aircraft, or when crossing behind a heavier aircraft enroute.
6. **LAHSO** – Land and hold short operations.  You need to know the requirements to accept a LAHSO clearance, the phraseology ATC will use, and your responsibilities once you have accepted a LAHSO clearance.  You also need to know that you do not have to accept a LAHSO clearance.   This is a special emphasis item as student and novice pilots are susceptible to runway incursions related to this operation as they are either unfamiliar with the operation and the runway’s allowable landing distance, or they do not understand that do not have to accept the ATC clearance. **Review section** [**4-3-11**](http://www.faa.gov/air_traffic/publications/atpubs/aim/aim0403.html#aim0403.html.13) in the AIM.
7. **Runway incursion avoidance –**This has been a hot topic for a few years now, and GA pilots are one of the largest violators of runway hold short instructions, either due to lack of situation awareness, distraction, or unfamiliarity with complex fields.  Read the [appendix](http://www.faa.gov/regulations_policies/handbooks_manuals/aviation/media/PHAK%20-%20Appendix%201.pdf) to the Pilot’s Handbook of Aeronautical Knowledge that was published to improve safety and reduce runway incursions.
8. **CFIT** – Controlled flight into terrain.  Demonstrating importance of always knowing about terrain and obstructions along flight path, and risk of inadvertent or continued flight into IMC.
9. **ADM and risk management** – This is such an important area that it has its own detailed section in the ACS
10. **Wire strike avoidance** – While this is a higher risk for helicopter and aerial application operations, every flight involves at least two close encounters with the ground. You need to discuss how you will assess the risk of wires anytime you are flying at less than 1,000 AGL.
11. **Checklist usage** – This is already called out in an earlier section in the ACS, but again its emphasized that you need to demonstrate consistent use of the checklist for all operations. Be prepared to discuss your strategy for using a checklist and how to avoid distractions when using a checklist.
12. **Temporary flight restrictions (TFRs)** – If your response is other than ‘I check for TFRs before every flight’ you’re likely to in the hot seat. Know how and where to obtain TFR information, the different types of TFRs, and how to interpret the TFR NOTAM to ensure that you can comply with its requirements.
13. **Special use airspace (SUA)** – Whether its a MOA, alert area, warning area, restricted area, prohibited area, or a TFR, you need to know how to identify it on a chart, the risks and restrictions associated with it, and best practices or procedures when flying through these types of SUAs.
14. **Aviation security** – Since 9/11, security has had an increasing emphasis. As general aviation pilots, we all share the responsibility to ensure the security of our airports and operations. Complete the [General Aviation Security](http://flash.aopa.org/asf/gasecurity/gasecurity.cfm) course from AOPA to learn best practices for security.
15. **Single-Pilot Resource Management (SRM**) – This is such an important area that it has its own detailed section in the ACS.