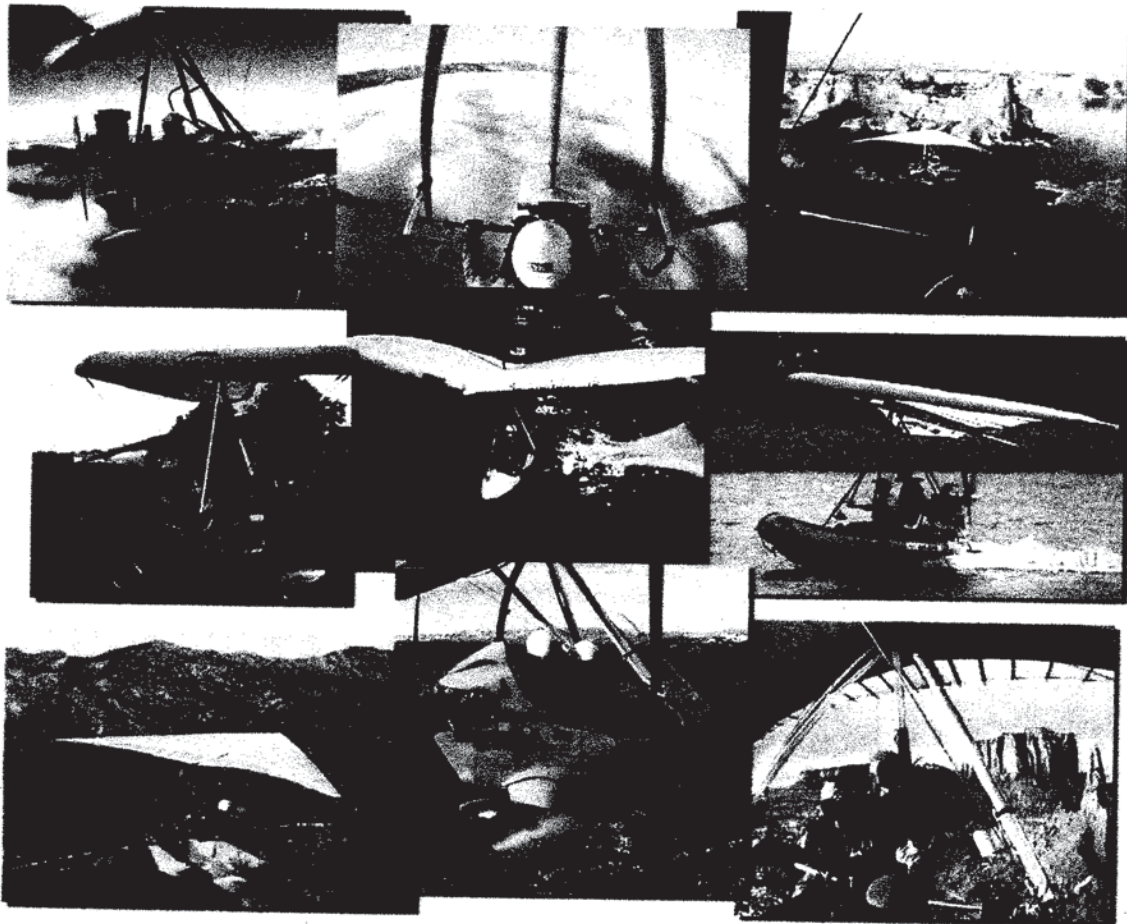


Training Syllabus & Work Book

Weight-Shift Control Trike

For Sport Pilots, Private Pilots and Instructors of Light-Sport Aircraft



HAMILTON PILOT TRAINING SYSTEM
FOR SPORT PILOTS

SportAviationCenter.com



A scenario based flight and ground course for
Sport Pilot, Private Pilot and Instructor certification



Epic Storm

Table of Contents

PART 1 – TRAINING SYSTEM

About This System, Steps You Need to Take, Flow diagram.....	2
Sport Pilot Certification Course, Minimum Time Compliance Table.....	5
Training Materials, Typical Session Example.....	7

PART 2 - SPORT PILOT LESSON PLANS

Stage 1: First Flights – Learning to Fly.....	9
Stage 2: Flight Maneuvers and Aeronautical Knowledge To Solo.....	21
Solo Endorsements	31
Stage 3: Student Pilot – Regulations – To Cross-country	32
Cross-Country Endorsements	39
Stage 4: Preparation to Pass the FAA Knowledge and Practical Tests	45
Applicants Practical Test Checklist and Form 8710-11.....	51
Stage 5: Additional Endorsements for Vh Airspeed and Class B, C, or D Airspace	55
Adding the WSC Sea Rating	58
Stage test question banks	
Stage 1.....	72
Stage 2	90
Stage 3	100
Scenario-Based Training Toolbox	103
HPTS Sport Pilot Guide of What to Study.....	111
FAA/ASA FAR/AIM	111

PART 3 Sport Pilot/Private Pilot Transition Guide

Sport Pilot/Private Pilot Transition Guide	112
--	-----

PART 4 – CERTIFICATED FLIGHT INSTRUCTOR (CFI) PROGRAM WITH LESSON PLANS

Instructor Training Syllabus and Lesson Plans	130
---	-----

Module 1 – Discover the Freedom to Fly

Flight Lesson 1 – Introductory Flight.

Objective:

Introduce the student to basic ground operations and flight procedures. It is to have fun, discuss the basics of flight, allow the student to control the aircraft on the ground and in the air while providing the student with a pleasant experience.

(Note: For the first introductory lesson the student is typically in the passenger seat.)

Content:

- 1. Safety briefing
- 2. Cockpit entry
- 3. Starting procedures
- 4. Taxi
- 5. Positive exchange of controls
- 6. Checklist introduction and use
- 7. Normal takeoff introduction
- 8. Introduction to four basics: ☒ straight and level, ☒ climbs, ☒ descents, ☒ turns
- 9. Collision avoidance procedures
- 10. Normal approach and landing
- 11. Post-flight procedures
- 12. Aircraft post flight
- 13. Logbook entries

Completion Standards:

The student should operate the controls on the ground and in the air with the instructor emphasizing the positive exchange of controls. The student should want to move on for future lessons from the pleasant experience.

Assignment:

Go to Flight Lesson 2 and assign material covered for that lesson.

Lesson Results:

Date of completion 10/10/13 Instructor Signature/ID [Signature]
Student Signature _____ Time flown 1.2

Instructor remarks:

Module 2 – Aircraft Familiarization and Basic Flight Operations

Flight Lesson 2 – Aircraft pre-flight, start, taxi, controls, four basics.

(Student may move to the pilot's seat for this lesson.)

Objective:

For the student to be introduced to and become familiarized with pre-flight inspections, checklist operations, starting and taxi procedures, and the function and use of the controls.

Content:

Review:

- 1. Cockpit entry
- 2. Positive exchange of controls
- 3. Starting procedures
- 4. Taxi
- 5. Normal takeoff (instructor demonstrate)
- 6. Four basics: straight and level flight, climbs, descents, turns
- 7. Collision avoidance procedures
- 8. Normal approach and landing (instructor demonstrate)
- 9. Post-flight procedures
- 10. Aircraft post-flight
- 11. Logbook entries - Example showing all the required entries:

Date 6-30-2010 Locations CXP local

Type of Training 1.5 hrs dual received Type & Aircraft ID Airborne XT/Streak3 N630XX
(private pilots indicate night)

Description of training Use of checklists - basic aircraft control in the air and on the ground.

Reviewed four basics and started turns to headings. Simulated emergency landing.

Instructor Signature Joe Instructor FAA certificate number [REDACTED]

CFI certificate expiration date 02-30-2012

- 12. Lesson plan and task log entries

New

- 1. Pre-flight inspection with checklist and aircraft documents
- 2. Control effects on ground and in flight
- 3. Airspeeds with movement of bar
- 4. Climb, cruise and descents with use of throttle

Completion Standards:

This lesson is complete when the student has an understanding of pre- flighting the aircraft, the four basics of flight, collision avoidance, and logbook/training entries, and begins using checklists.

Assignment for this lesson:

- Watch the *Learn to Fly* DVD (Section 1 and 2); answer DVD fill-in-the-blank questions for sections watched (fill in the blank questions can be found at www.pilot-stores.com - Downloads & Updates).
- Read and understand FAA *Weight –Shift Control Flying Handbook* 8083-5 Chapter 5
- Watch the Pre-Flight DVD.
- Sea/Water training only: Read and understand FAA *Seaplane, Skiplane and Float/Sky Equipped Helicopter Operations Handbook* referred to as "FAA-H-8083-23 *Seaplane Operations Handbook*" Chapter 4 *Seaplane Operations* sections *Preflight Inspection, Starting the Engine, Taxiing & Sailing.*

Lesson Results:

Date of completion 10/14/13 Instructor Signature/ID [REDACTED]

Student Signature _____ Time flown 1.0

Instructor remarks:

Module 3 – Basic Flight Maneuvers and Aircraft Systems

Flight Lesson 3 – Turns, precision, airspeeds, throttle.

Ground lesson 3 should be completed before this flight lesson.

Objective:

For the student to become proficient with the four basics of flight: straight and level flight, climbs, turns, and descents; and collision avoidance procedures.

Content:

Review

- ☒ Pre-flight ☒ Checklist use
- ☒ Control effects on ground and in flight
- ☒ Normal takeoff and climb-out (instructor demonstrate)
- ☒ Collision avoidance procedures
- ☒ Climbs ☒ Straight and level flight
- ☒ Descents: with and without power
- ☒ Scanning procedures
- ☒ Normal approach and landing (instructor demonstrate)
- ☒ Post-flight procedures
- ☒ Airspeeds
- ☒ Use of throttle

New

- ☒ Student performs the pre-flight with checklist
- ☒ Student starts aircraft and taxies with checklist
- ☒ Turns: 90, 180, 360 degrees, and turns to headings

Completion Standards:

This lesson is complete when the student can conduct the ground operations of: pre-flight using the checklist with minimum assistance, proper use of all checklists, start the aircraft, taxi, and operate the controls. Flight operations requirements include: understanding the four basics of flight, and maintaining altitude within 200 feet, airspeed for within 15 knots, and heading within 20 degrees, while performing the maneuvers listed in the content of this module.

Assignment for this lesson:

- Watch the *Learn to Fly* DVD (Section 3) and answer the fill-in-the-blank DVD questions for section watched (fill in the blank questions can be found at www.ap-stores.com - Downloads & Updates).
- Read and understand FAA *Weight –Shift Control Flying Handbook* 8083-5 Chapter 6 through page 6-16 (section "pitch and power")
- Read Manufactures "Pilots Operating Handbook/Flight manual" Section "Normal Procedures"
- Seaplane only: Read and understand FAA-H-8083-23 *Seaplane Operations Handbook* Chapter 6 starting with Postflight Procedures page 6-8 to end of chapter.

Lesson Results:

Date of completion

10/17/13

Instructor Signature/ID



Student Signature

Time flown

1.0

Instructor remarks:

Module 4 – Flight Environment – Inside and Outside the cockpit – Airport Introduction

Flight Lesson 4 – Instruments, normal takeoffs/departures.

Ground lesson 4 must be completed before this flight lesson.

Objective:

For the student to become proficient in post-flight and trimming procedures. The student will also be introduced to slow flight procedures and become oriented with the practice area.

Content:

Review

- ☒ Student perform the pre-flight with checklist
 - ☒ Turns: 90, 180, 360 degrees, and turns to headings
 - ☒ Speeds
 - ☒ Use of throttle
 - ☒ Collision avoidance
 - ☒ Normal approach and landing (instructor demonstrates)
 - ☒ Post-flight procedures
- ##### New
- ☒ Student normal takeoff and departure
 - ☒ Trimming (if appropriate)
 - ☒ Slow flight

Completion Standards:

This lesson is complete when the student can maintain flight within 200 feet altitude, 20 degrees heading, and 10 knots airspeed, while performing the maneuvers listed in the content of this module. Also the student must be proficient in the art of trimming, post-flight operations, and be oriented with slow flight.

Assignment for this lesson:

- Watch the *Learn to Fly* DVD (Section 4) and answer DVD fill-in-the-blank questions (fill in the blank questions can be found at www.ap-stores.com - Downloads & Updates).
- Read and understand FAA *Weight – Shift Control Flying Handbook* 8083-5 Chapter “7 Takeoff and Departure Climbs”
- Seaplane only: Read and understand FAA-H-8083-23 *Seaplane Operations Handbook* Chapter 4 starting with Takeoffs page 4-10 to the end of chapter.

Lesson Results:

Date of completion 11/5/13 Instructor Signature/ID [Signature]
Student Signature _____ Time flown 1.0

Instructor remarks:

Module 4 – Flight Environment – Inside and Outside the cockpit – Airport Introduction

Flight Lesson 4 – Instruments, normal takeoffs/departures.

Ground lesson 4 must be completed before this flight lesson.

Objective:

For the student to become proficient in post-flight and trimming procedures. The student will also be introduced to slow flight procedures and become oriented with the practice area.

Content:

Review

- Student perform the pre-flight with checklist
- Turns: 90, 180, 360 degrees, and turns to headings
- Speeds
- Use of throttle
- Collision avoidance
- Normal approach and landing (instructor demonstrates)
- Post-flight procedures

- Student normal takeoff and departure
- Trimming (if appropriate)
- Slow flight

Completion Standards:

This lesson is complete when the student can maintain flight within 200 feet altitude, 20 degrees heading, and 10 knots airspeed, while performing the maneuvers listed in the content of this module. Also the student must be proficient in the art of trimming, post-flight operations, and be oriented with slow flight.

Assignment for this lesson:

- Watch the Learn to Fly DVD (Section 4) and answer DVD fill-in-the-blank questions (fill in the blank questions can be found at www.ep-stores.com - Downloads & Updates).
- Read and understand FAA *Weight – Shift Control Flying Handbook* 8083-5 Chapter 7 Takeoff and Departure Climbs
- Seaplane only: Read and understand FAA-H-8083-23 *Seaplane Operations Handbook* Chapter 4 starting with Takeoffs page 4-10 to the end of chapter.

Lesson Results:

Date of completion 11/5/13 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.0

Instructor remarks:

Ground Lesson 4 – Procedures and Operations

Objective:

For the student to understand basic ground and flight operations.

Content:

- Preflight Procedures
- Checklists
- Seatbelts
- Controls Exchange
- Surface Operations
- Aircraft maneuvering
- Airport Traffic Area Communication Procedures and Light Signals
- Traffic Advisories
- Formation Flight and Dropping Objects
- Right-of-Way Rules
- Minimum Safe Altitudes
- Basic VFR Weather Minimums
- Collision Avoidance
- Wake Turbulence Avoidance

Completion Standards:

This lesson is complete when the student understands the ground and flight operations in this lesson.

Assignment for this lesson:

- Read/study the information and questions in the Prepware CD in the Procedures and Operations sections. Refer to the 14 CFR regulation in the FAR/AIM Part 61 and 91 reference for each question.
- Read and understand FAA *Weight – Shift Control Flying Handbook* 8083-5 Chapter 1 through page 1-10 section *Positive Transfer of Controls*.
- Seaplane only: Read and understand FAA-H-8083-23 *Seaplane Operations Handbook* Chapter 3.

Lesson Results:

Date of completion _____ Instructor Signature/ID _____

Student Signature _____ Ground Time _____

Instructor remarks:

Module 5 – Pilot Capabilities and Aircraft Limitations (introduction to scenario-based tasks)

Flight 5 – Advanced maneuvers introduction, and stalls.

Ground lesson 5 must be completed before this flight lesson.

Objective:

For the student to become proficient in the use of trimming, and to be introduced to power-off stalls, and steep turns.

Content:

Review

- Pre-flight ☒ Student normal takeoff and departure
- Collision avoidance procedures ☐ Slow flight
- Normal approach and landing (instructor demonstrates)
- Post-flight procedures
- Trimming
- Obtain weather briefing ☒ Go/no go decision based on weather information
- Power-off stalls
- Performance Maneuver – (Steep turns)
- Tumble awareness and avoidance

Scenario-based task (see toolbox page 103)

Example: Find a place to perform some maneuvers, perform them, and then take you back to the airport

Hazards for Pilot _____

Aircraft _____

Environment _____

External Pressures _____

Results _____

Completion Standards:

This module is complete when the student can maintain flight within 200 feet altitude, 20 degrees heading, and 10 knots airspeed while performing the maneuvers listed in the content of this module.

Assignment for this lesson:

- Read and understand FAA *Weight –Shift Control Flying Handbook* 8083-5 Chapter 6 starting with section *Steep Turn Performance Maneuver* Page 6-16 through the end of chapter 6.
- Read “*Scenario-Based Training Toolbox*” in this book.

Lesson Results:

Date of completion 2/10/14 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.8

Instructor remarks:

Stage 1 Check

Flight Check:

Flight proficiency for Stage 1 Check

- ☒ Pre-flight
- ☒ Obtain weather, go/no go decision
- ☒ Taxi
- ☒ Checklist use
- ☒ Student normal takeoff and departure
- ☒ Four basics
- ☒ Use of throttle
- ☒ Speeds
- ☒ Performance (Steep turns)
- ☒ Slow flight
- ☒ Power-off stalls
- ☒ Tumble awareness and avoidance
- ☒ Collision avoidance
- ☒ Turns to heading
- ☒ Normal approach and landing (student understands)
- ☒ Post-flight procedures

Completion Standards:

The student should be able to maintain flight within 200 feet altitude, 20 degrees of heading, and 10 knots of airspeed while performing the maneuvers listed in the content of this module.

Ground Check:

Aeronautical Knowledge Stage 1 Test. The instructor may customize or shorten the test by choosing specific questions from the question bank multiple choice questions (such as odd, even, or specific questions highlighted).

Completion Standards:

70% or better. All missed questions must be reconciled to 100%.

Stage 1 Review:

Any additional flight or ground training needed to meet completion standards of stage 1 tasks.

Lesson Results:

Date of completion 2/11/14 Instructor Signature/ID 

Student Signature _____

Instructor remarks:

Module 6 -- Ground Reference Maneuvers, Aircraft Performance

Flight Lesson 6 -- Ground reference maneuvers, landings.

Ground lesson 6 must be completed before this flight lesson.

Objective:

For the student to be introduced to ground reference maneuvers and do the first assisted landings.

Content:

Review

- ☒ Pre-flight ☒ Obtain weather, go/no go decision
- ☒ Normal and/or crosswind takeoff and departure ☒ Steep turns
- ☒ Slow flight
- ☒ Power-off stalls ☒ Post-flight procedures

New

Ground reference maneuvers:

Rectangular Course

- ☒ Site selection ☒ Wind direction and speed ☒ Entry track ☒ Altitude
- ☒ Aircraft speed ☒ Emergency operations

S-turns

- ☒ Site selection ☒ Wind direction and speed ☒ Entry track ☒ Altitude
- ☒ Aircraft speed ☒ Emergency operations

Turns about a point

- ☒ Site selection ☒ Wind direction and speed ☒ Entry track ☒ Altitude
- ☒ Aircraft speed ☒ Emergency operations

☒ Student low approach

Scenario-based task (see toolbox page 103) _____

Hazards for Pilot _____

Aircraft _____

Environment _____

External Pressures _____

Results _____

Completion Standards:

This module is complete when the student can maintain flight within 150 feet, 15 degrees, and 10 knots while performing the maneuvers listed in the content of this module.

Assignment for this lesson

- Read and understand FAA *Weight-Shift Control Flying Handbook* 8083-5 Chapter 9 starting with page 9-4 section *Rectangular Course* through the end of chapter and Chapter 11 through page 11-13 section *Go Arouds*.
- Seaplane only: Read and understand FAA-H-9083-23 *Seaplane Operations Handbook* Chapter 6 through *Emergency Landing* up to *Postflight Procedures* page 6-8.

Lesson Results:

Date of completion 2/11/14 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.8

Instructor remarks:

Module 7 Crosswinds/Ground track, Aeromedical Issues

Flight Lesson 7 – Crosswinds and ground track

Objective:

For the student to be introduced to crosswinds.

Content:

Review

- ☒ Pre-flight
- ☒ Obtain weather, go/no go decision
- ☒ Steep turns
- ☒ Slow flight
- ☒ Power-off stalls
- ☒ Post-flight procedures

New

Crosswinds and wind

- ☒ Ground operations ☒ Takeoff ☒ Departure
- ☒ Flight headings and crab angle
- ☒ Approach ☒ Low approach
- ☒ Crosswind drift ☒ Crosswind components
- ☒ Crosswind components on takeoff and en route
- ☒ Headwind components on takeoff and en route
- ☒ Tailwind components on takeoff, en route and en route

Scenario-based task (see toolbox page 103) _____

Hazards for Pilot _____

Aircraft _____

Environment _____

External Pressures _____

Results _____

Completion Standards:

This module is complete when the student can maintain flight within 150 feet, 15 degrees, and +/-10 knots while performing the maneuvers listed in the content of this module.

Assignment for this lesson:

- Read and understand FAA *Weight –Shift Control Flying Handbook* 8083-5 Chapter 9 through page 9-4 section *Drift and Ground Track Control*.

Lesson Results:

Date of completion 6/21/14 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.0

Instructor remarks:

Module 8 -- Airport Operations, Communications and Landings

Flight Lesson 8 – Airport patterns, communications and Landings.

Objective:

For the student to become proficient with traffic pattern operations and be the sole manipulator of the controls.

Content:

Review

- ☐ Pre-flight ☐ Obtain weather, go/no go decision
- ☐ Normal/crosswind takeoff and departure
- ☐ Ground reference maneuvers
 - ☐ Rectangular course ☐ S-turns ☐ Turns about a point
 - ☐ Low approach
 - ☐ Normal/crosswind approach and landing
 - ☐ Post-flight procedures

New

- ☐ Landings
 - ☐ Pattern work ☐ Airport communications
 - ☐ Wake turbulence avoidance

Scenario-based task (see toolbox page 103) _____

Hazards for Pilot _____

Aircraft _____

Environment _____

External Pressures _____

Results _____

Completion Standards:

This module is complete when the student can maintain flight within 150 feet, 15 degrees, and +/-10 knots while performing the maneuvers listed in the content of this module. is the student can operate proficiently in traffic patterns and can takeoff and land being the sole manipulator of the controls.

Assignment for this lesson:

- Read and understand FAA *Weight –Shift Control Flying Handbook* 8083-5 Chapter 10.

Lesson Results:

Date of completion 10/20/14 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.0

Instructor remarks:

Module 8 – Airport Operations, Communications and Landings

Flight Lesson 8 – Airport patterns, communications and Landings.

Objective:

For the student to become proficient with traffic pattern operations and be the sole manipulator of the controls.

Content:

Review

- ☐ Pre-flight ☐ Obtain weather, go/no go decision
- ☐ Normal/crosswind takeoff and departure
- ☐ Round reference maneuvers
- ☐ Rectangular course ☐ S-turns ☐ Turns about a point
- ☐ Low approach
- ☐ Normal/crosswind approach and landing
- ☐ Post-flight procedures
- ☐ Landings
- ☐ Pattern work ☐ Airport communications
- ☐ Wake turbulence avoidance

Scenario-based task (see toolbox page 103)

Hazards for Pilot

- Aircraft
- Environment
- External Pressures

Results

Completion Standards:

This module is complete when the student can maintain flight within 150 feet, 15 degrees, and +/-10 knots while performing the maneuvers listed in the content of this module. Is the student can operate proficiently in traffic patterns and can takeoff and land being the sole manipulator of the controls.

Assignment for this lesson:

- Read and understand FAA Weight-Shift Control Flying Handbook 8083-5 Chapter 10.

Lesson Results:

Date of completion 10/20/14 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.0

Instructor remarks:

Ground Lesson 8 – Airspace, airports, airport signs and lights, communications.

Objective:

For the student to have an understanding of the airspace system, airport markings and communications.

Content:

Charts:

- ☐ Sectional charts
- ☐ VFR Terminal Area charts

Airspace:

- ☐ Class A ☐ Class B ☐ Class C ☐ Class D ☐ Class E ☐ Class G
- ☐ Special use airspace ☐ Other airspace

Airport Markings:

- ☐ Taxiway and runway markings
- ☐ Airport lighting
- ☐ VASI

Airport operations:

- ☐ ATIS
- ☐ Standard traffic pattern
- ☐ Legs of a traffic pattern
- ☐ Wind effect in the traffic pattern
- ☐ Departing the traffic pattern
- ☐ Entering the traffic pattern

Airport Communications:

- ☐ Light signals
- ☐ Communication phraseology
- ☐ Communications exiting pattern
- ☐ Communications approaching airport
- ☐ Communications entering pattern
- ☐ Communications within pattern

Completion Standards:

This lesson is complete when the student has successfully completed all assigned reading and understands the items listed in this lesson.

Assignment for this lesson:

- Read and understand FAA Weight-Shift Control Flying Handbook 8083-5 Chapter 8
- Read Weight-Shift Control Aircraft Pilot's Handbook of Aeronautical Knowledge, Chapters 13 and 14.
- Study and practice questions on the Prepware CD Sport Pilot "Airports, Airspace and Charts"

Lesson Results:

Date of completion _____ Instructor Signature/ID _____

Student Signature _____ Ground Time _____

Instructor remarks:

Module 9 -- Advanced Takeoffs/Landings and Emergency Operations

Flight Lesson9 – Advanced takeoffs and landings, emergency landings.

Ground lesson 9 must be completed before this flight lesson.

Objective:

For the student to become proficient in emergency situations, including system and equipment malfunctions, forward slips to landing, aborted takeoffs, and go- arounds.

Content:

Review

- Pre-flight
- Be the sole manipulator of the controls for the entire flight
- Normal and crosswind takeoffs 10 Pattern work
- Airport communications 3 Wake turbulence avoidance
- Normal and crosswind landings 10 Post-flight procedures

New

- Be the sole manipulator of the controls for the entire flight
- Emergency approach and landings (simulated engine-out practice area)
- Emergency approach and landings (simulated engine-out in pattern)
- Aborted takeoff (warn Tower before starting)
- Cross wind landings 3 Go-around procedures 10 Steep approach
- Short Field Takeoff 10 Short Field landing
- Rough/soft field takeoff 10 Rough/soft field landing
- Spirals and recovery

Scenario-based task

Hazards for Pilot

Aircraft

Environment

External Pressures

Results

Completion Standards:

This module is complete when the student can operate in emergency situations in all phases of flight: cruise, takeoff, and landing. Emergencies include: equipment and system malfunctions, conditions forcing an aborted takeoff, and forced landings. Flight in all phases must be within 150 feet, 15 degrees, and 10 knots, and coordination must be maintained at all times.

Assignment for this lesson:

- Read and understand FAA *Weight –Shift Control Flying Handbook* 8083-5 Chapter 11 starting page 11-13 section *Short and Soft Field Landing Techniques* through end of chapter.
- Read Manufacturers "Pilots Operating Handbook/Flight Manual" Sections "3. Emergency Procedures"

Lesson Results:

Date of completion 1/13/15 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.0

Instructor remarks:

Stage 2 Check for Solo Flight

Flight review as required:

- ☒ Review of all items in flight lesson 10 for accuracy and student flying competently and confidently and sole manipulator of controls for all items
- ☒ Discussion of pre-solo requirements (14 CFR § 61.87)

Ground Check

Stage 2 pre-solo written exam. This includes a written test by the CFI for the specific airport to solo plus the multiple choice questions in this book which are now on line.

Stage test procedures now available on line at www.SportAviationCenter.com and the actual tests on line at www.aviation-elearning.com

Completion Standards:

Multiple choice test with all questions reconciled to 100%.

Stage 2 Review:

Any additional flight or ground training needed to meet completion standards.

Consistent landings.

Pre-solo aeronautical knowledge endorsement.

Solo flight:

(The suggestion is to conduct this module in two parts: (1) dual flight, (2) supervised solo.)

Flight 1 (Dual)

- ☒ Pre-flight ☒ Review of pre-solo maneuvers (per 14 CFR § 61.87)
- ☒ Normal/crosswind takeoff and landing ☒ Emergency situations ☒ Pattern work
- ☒ Student is sole manipulator of controls for entire flight
- ☒ Post-flight
- ☒ Pre-solo flight training logbook and student certificate endorsement 2 for first solo flight

Flight 2 (Supervised Solo)

Pattern work

- ☒ Instructor endorsement in logbook and on back of student pilot certificate
- ☒ Pre-flight
- ☒ 3 minimum takeoffs and landings with patterns around airport
- ☒ 2 emergency go-arounds ☒ Post-flight

Completion Standards:

This module is complete when the student is signed off for solo work, and the student has conducted one supervised solo flight strictly in the pattern perfecting takeoffs and landings.

Assignment for this lesson:

- Get a student pilot certificate from an AME or DPE.

Lesson Results:

Date of completion 11/2/15 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.5

Instructor remarks:

Module 10 -- Solo Precision, Limitations, and Regulations

Flight Lesson 10 - Solo precision.

Objective:

For the student to become proficient in maneuvers for solo flight after first solo in Stage 2.

Content:

Part 1: Dual flight with instructor

- ☒ Pre-flight ☒ Obtain weather, go/no go decision ☒ Normal/crosswind takeoff and departure
- ☒ Ground reference maneuvers
 - ☒ Rectangular course ☒ S-turns ☒ Turns about a point ☒ Low approach
- ☒ Pattern work ☒ Airport communications ☒ Wake turbulence and collision avoidance
- ☒ Normal/crosswind approach and landing ☒ Post-flight procedures
- ☒ Be the sole manipulator of the controls for the entire flight with instructor demonstrating precision as required

Scenario-based task (see toolbox page 103) _____

Hazards for Pilot _____

Aircraft _____

Environment _____

External Pressures _____

Results _____

- ☒ Obtain supervised solo endorsement 2b

Part 2: Supervised Solo flight 2

- ☒ Pre-flight ☒ Obtain weather, go/no go decision ☒ Normal/crosswind takeoff and departure
- ☒ Ground reference maneuvers
 - ☒ Rectangular course ☒ S-turns ☒ Turns about a point ☒ Low approach
- ☒ Go-arounds ☒ Pattern work with touch and goes ☒ Airport communications
- ☒ Wake turbulence and collision avoidance ☒ Normal/crosswind approach and landing
- ☒ Post-flight procedures

Continue solo flight

- ☒ Continue supervised solo flights as required until student reaches proficiency for unsupervised solo
- ☒ Instructor endorses student for unsupervised solo endorsement 3 (1 to 10 days typically, with 90 days maximum for special situations)

Completion Standards:

Maneuvers listed in this lesson are performed within PTS tolerances (altitude +/- 100 feet, airspeed +/- 10 knots). Student has obtained endorsement to fly unsupervised solo.

Lesson Results:

Date of completion 11/14/16 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 1.0

Instructor remarks:

Module 10 -- Solo Precision, Limitations, and Regulations

Flight Lesson 10 - Solo precision.

Objective:

For the student to become proficient in maneuvers for solo flight after first solo in Stage 2.

Content:

Part 1: Dual flight with instructor

- 1. Pre-flight Obtain weather, go/no go decision Normal/crosswind takeoff and departure
- 2. Ground reference maneuvers
 - a. Rectangular course
 - b. S-turns
 - c. Turns about a point
 - d. Low approach
- 3. Pattern work Airport communications Wake turbulence and collision avoidance
- 4. Normal/crosswind approach and landing Post-flight procedures
- 5. Be the sole manipulator of the controls for the entire flight with instructor demonstrating precision as required

Scenario-based task (see toolbox page 103)

Hazards for Pilot

Aircraft

Environment

External Pressures

Results

- 1. Obtain supervised solo endorsement 2b

Part 2: Supervised Solo flight 2

- 1. Pre-flight Obtain weather, go/no go decision Normal/crosswind takeoff and departure
- 2. Ground reference maneuvers
 - a. Rectangular course
 - b. S-turns
 - c. Turns about a point
 - d. Low approach
- 3. Go-arounds Pattern work with touch and goes Airport communications
- 4. Wake turbulence and collision avoidance Normal/crosswind approach and landing
- 5. Post-flight procedures

Continue solo flight

- 1. Continue supervised solo flights as required until student reaches proficiency for unsupervised solo
- 2. Instructor endorses student for unsupervised solo endorsement 3 (1 to 10 days typically, with 90 days maximum for special situations)

Completion Standards:

Maneuvers listed in this lesson are performed within PTS tolerances (altitude +/- 100 feet, airspeed +/- 10 knots). Student has obtained endorsement to fly unsupervised solo.

Lesson Results:

Date of completion 11/14/16 Instructor Signature/ID [Signature]

Student Signature [Signature] Time flown 1.0

Instructor remarks:

Ground Lesson 10 - Limitations and Regulations.

Objective:

For the student to be introduced to the Federal Aviation Regulations (FARs) and the Airman's Information Manual (AIM).

Content:

Federal Aviation Regulations (FARs)

CFR Part 1 Definitions

CFR Part 61

Subpart A General Subpart C Student Pilots Subpart J Sport Pilots

CFR Part 91

Subpart A General Subpart B Flight Rules
Subpart C Equipment, Instrument, and Certificate Requirements
Subpart D Special Flight Operations
Subpart E Maintenance, Preventative Maintenance, and Alterations

CRR Part 830 Accidents and Incidents

Airman's Information Manual (AIM)

Chapter 1 Navigation Aids
Chapter 2 Aeronautical Lighting and Other Airport Visual Aids
Chapter 3 Airspace
Chapter 4 Air Traffic Control
Chapter 5 Air Traffic Procedures
Chapter 6 Emergency Procedures
Chapter 7 Safety of Flight
Chapter 8 Medical Facts for Pilots
Chapter 9 Aeronautical Charts and Related Publications
Pilot Controller Glossary
Appendix 3 Abbreviations and Acronyms

Airworthiness

Registration certificate Airworthiness certificate
Approved flight manual Inspection and Maintenance

Completion Standards:

Students reads through the FAR/AIM book and understands where to find everything asked. Student is familiar with all sections of the Pilots Operating Handbook/Flight Manual.

Assignment for this lesson:

- Read/study the FAR/AIM as specified in "HPTS Sport Pilot Guide of What to Study," in this book
- Read/study Weight-Shift Control Aircraft Pilot's Handbook of Aeronautical Knowledge, Chapter 8.
- Read manufactures "Pilots Operating Handbook/Flight manual" Sections "9. Supplements" and "10. Safety Tips"
- Study and practice questions on the Prepware CD Sport Pilot "Regulations"

Lesson Results:

Date of completion Instructor Signature/ID

Student Signature Ground Time

Instructor remarks:

Module 11 -- Cross-Country Fundamentals

Flight Lesson 11 -- Cross-country flight.

Ground lesson 11 must be completed before this flight lesson.

Objective:

For the student to become familiar at performing cross-country duties by flying the first cross-country flight.

Content:

Review

☒ Pre-flight ☒ Normal/Crosswind takeoff and departure
☒ Normal/Crosswind approach and landing ☒ Post-flight

New

Cross-country planning

☒ Plotting course ☒ Flight log ☒ Weather ☒ Filing flight plan
☒ Flight computer ☒ Setting GPS waypoints ☒ Alternate airport information/performance

Cross-country flight

☒ Use of flight log ☒ Navigation with pilotage and dead reckoning ☒ Using GPS
☒ Radio communications at new airport ☒ Landing at different airport

Scenario-based task (see toolbox page 103) _____

Hazards for Pilot _____

Aircraft _____

Environment _____

External Pressures _____

Results _____

Completion Standards:

This module is complete when the student performs a dual cross-country flight to a nearby airport or location, lands at the location, and returns to the original airport. The student is the sole manipulator of the controls and changes to the proper radio frequency (if appropriate).

Assignment for this Lesson:

- Use the Cross-Country Flight Planning checklists on the next page to plan for the assigned flight to _____ airport.

Lesson Results:

Date of completion 3/15/16 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 2.0

Instructor remarks:

Ground Lesson 11 – Cross-country planning.

Objective:

For the student to understand the fundamentals of visual navigation.

Content:

Visual navigation fundamentals

☒ Aeronautical charts ☒ Pilotage ☒ Dead reckoning ☒ Radio navigation
☒ Course ☒ Minimum safe altitude ☒ Altitude/flight level ☒ True airspeed
☒ Winds aloft forecast ☒ Ground track/ground speed ☒ Drift/wind correction angle
☒ True heading ☒ Magnetic heading accounting for variation and deviation
☒ Tracking error ☒ Latitude/longitude ☒ Nautical mile ☒ Knot ☒ VFR cruise altitude
☒ Standard/local time ☒ UTC/Zulu time ☒ Daylight time ☒ Dateline

Solo cross country (more than 25 NM) requirements per 14 CFR §61.93(m)

☒ Use of aeronautical charts for VFR navigation
☒ Use of aircraft performance charts pertaining to cross-country flight.
☒ Procurement and proper analysis of aeronautical weather reports and forecasts
☒ Emergency procedures.
☒ Traffic pattern procedures including departure, arrival, entry into the traffic pattern, and approach.
☒ Collision avoidance, wake turbulence precautions, and wind-shear avoidance.
☒ Recognition, avoidance, and operational restrictions of hazardous terrain for flights
☒ Procedures for operating the instruments and equipment installed in the aircraft to be flown
☒ If equipped for flight using navigation radios, the use of radios for VFR navigation.
☒ Recognition of weather and upper air conditions favorable for the cross-country flight.
☒ Takeoff, approach and landing procedures, including crosswind approaches and landings.

Completion Standards:

This lesson is complete when the student has successfully read the assigned chapters and understands the items listed in this lesson.

Assignment:

- Read *Weight-Shift Control Aircraft Pilot's Handbook of Aeronautical Knowledge*, Chapter 15.
- Read/Study practice questions on the *Sport Pilot Prepware CD* "Cross Country" section.

Lesson Results:

Date of completion 3/16/16 Instructor Signature/ID [Signature]

Student Signature _____ Ground Time _____

Instructor remarks:

Ground Lesson 11 – Cross-country planning.

Objective:

For the student to understand the fundamentals of visual navigation.

Content:

Visual navigation fundamentals

Aeronautical charts Pilotage Dead reckoning Radio navigation
Course Minimum safe altitude Altitude/flight level True airspeed
Winds aloft forecast Ground track/ground speed Drift/wind correction angle
True heading Magnetic heading accounting for variation and deviation
Tracking error Latitude/longitude Nautical mile Knot VFR cruise altitude
Standard/local time UTC/Zulu time Daylight time Dateline

Solo cross country (more than 25 NM) requirements per 14 CFR §61.93(m)

- Use of aeronautical charts for VFR navigation.
- Use of aircraft performance charts pertaining to cross-country flight.
- Procurement and proper analysis of aeronautical weather reports and forecasts.
- Emergency procedures.
- Traffic pattern procedures including departure, arrival, entry into the traffic pattern, and approach.
- Collision avoidance, wake turbulence precautions, and wind-shear avoidance.
- Recognition, avoidance, and operational restrictions of hazardous terrain for flights.
- Procedures for operating the instruments and equipment installed in the aircraft to be flown.
- If equipped for flight using navigation radios, the use of radios for VFR navigation.
- Recognition of weather and upper air conditions favorable for the cross-country flight.
- Takeoff, approach and landing procedures, including crosswind approaches and landings.

Completion Standards:

This lesson is complete when the student has successfully read the assigned chapters and understands the items listed in this lesson.

Assignment:

- Read *Weight-Shift Control Aircraft Pilot's Handbook of Aeronautical Knowledge*, Chapter 15.
- Read/Study practice questions on the *Sport Pilot Prepware CD* "Cross Country" section.

Lesson Results:

Date of completion 3/16/16 Instructor Signature/ID [Signature]
Student Signature _____ Ground Time _____
Instructor remarks:

Solo Cross-Country Endorsements

Student Pilot certificate:

Instructor who performs cross country training endorses back of Student Pilot Certificate make/model for cross country per § 61.93(c) (1).

Logbook endorsements:

Solo takeoffs and landings at another airport within 25 NM: § 61.93(b) (1)

I certify that (First name, MI, Last name) has received the required training of § 61.93(b)(1). I have determined that he/she is proficient to practice solo takeoffs and landings at (airport name). The takeoffs and landings at (airport name) are subject to the following conditions: (List any applicable conditions or limitations.) *J. J. Jones*, 12-25-2004 J. J. Jones [Signature]

Prior to each solo cross-country flight: (Any instructor who reviews the flight planning):

Solo cross-country flight: § 61.93 (c) (2)

I have reviewed the cross-country planning of (First name, MI, Last name). I find the planning and preparation to be correct to make the solo flight from (location) to (destination) via (route of flight) with landings at (name the airports) in a (make and model aircraft) on (date). (List any applicable conditions or limitations.) *J. J. Jones*, 12-25-2004 J. J. Jones [Signature]

Repeated solo cross-country flights not more than 50 nm from point of departure, §61.93(b) (2):

I certify that (First name, MI, Last name) has received the required training in both directions between and at both (airport names). I have determined that he/she is proficient of § 61.93(b)(2) to conduct repeated solo cross-country flights over that route, subject to the following conditions: (List any applicable conditions or limitations.) *J. J. Jones*, 12-25-2004 J. J. Jones [Signature]

Solo flight in Class B, C, and D airspace, § 61.94(a) (required each additional 90-day period):

I certify that (First name, MI, Last name) has received the required training of § 61.94 (a). I have determined he/she is proficient to conduct solo flights in (name of Class B, C, or D) airspace. (List any applicable conditions or limitations.) *J. J. Jones*, 12-25-2004 J. J. Jones [Signature]

10. Solo flight to, from, or at an airport located in Class B, C, or D airspace or on an airport having an operational control tower, §§ 61.94(a) and 91.131(b)(1) (required each additional 90-day period):

I certify that (First name, MI, Last name) has received the required training of § 61.94 (a) (1). I have determined that he/she is proficient to conduct solo flight operations at (name of airport) located in Class B, C, or D airspace or on an airport having an operational control tower. (List any applicable conditions or limitations.) *J. J. Jones*, 12-25-2004 J. J. Jones [Signature]

Module 12 -- Cross-Country Competency

Flight Lesson 12 -- Cross-country solo.

Ground lessons 11 and 12 must be completed before this flight lesson.

Objective:

For the student to become competent at performing cross-country duties, obtain a logbook endorsement for solo cross-country, and perform first solo cross-country flight.

Content:

Part 1: Dual Cross-Country Flight

Review:

Cross-country discussion

☒ Plotting course ☒ Flight log ☒ Weather ☒ Filing flight plan
☒ Pre-flight ☒ Cross-country flight ☒ Flight log use ☒ Navigation
☒ Radio communications ☒ Post-flight
☒ Cross-Country Endorsement when qualified

Scenario-based task (see toolbox page 103)

Hazards for Pilot

Aircraft

Environment

External Pressures

Results

Part 2: Student solo cross-country flight

Cross-country discussion

☒ Plotting course ☒ Flight log ☒ Weather ☒ Filing flight plan
☒ Pre-flight ☒ Cross-country flight ☒ Flight log use
☒ Navigation ☒ Radio communications ☒ Post-flight

Completion Standards:

This module is complete when the student is competent to conduct solo cross-country operations, obtains endorsement 5 to do cross-country solo flight to another airport (if applicable), and performs the first solo cross-country flight.

Assignment for this lesson:

Fill out Flight Planning Log for both cross-country flights to airports.

Lesson Results:

Date of completion 3/16/16 Instructor Signature/ID [Signature]

Student Signature _____ Time flown 2.0

Instructor remarks: