

### **Stage 1 consists of two Phases**

- Developing Instrument Skills
- Polishing Instrument Skills

### **Stage Objective:** During this stage you will

- Become familiar with the training airplane
- Review safe practices and checklist usage
- Review runway incursion avoidance procedures
- Safely control the airplane using proper instrument cross-check and interpretation
- Fly in simulated or actual instrument conditions using basic instrument flight maneuvers
- Learn how to file an IFR flight plan and receive an IFR clearance
- Practice flying by reference to instruments without the use of a heading indicator
- Become familiar with controlling the airplane without reference to the primary flight instruments
- Be able to recover from unusual flight attitudes with reference to instruments only
- Fly with a check instructor to evaluate your progress and instructor pairing

### **Stage Completion Standards:** The stage will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items encompassed in the phases that comprise the stage.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phases that make up the stage.
  - Each phase contains **Web-based Knowledge Instruction**
    - The web-based knowledge instruction for the phase will be completed prior to starting the flight scenarios to ensure fundamental knowledge before the flight.

Each phase contains multiple **Flight Lessons** that can be customized for the local training environment and repeated if necessary.

# **PHASE 1: Developing Instrument Skills**

**Phase Objective:** During this phase you will learn

- Preflight preparation for IFR flight
- Instrument scan techniques
- Basic instrument flight maneuvers
- Use of the magnetic compass and timed turns in the case of a heading indicator failure
- Postflight procedures for IFR flight

**Phase Completion Standards:** The phase will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Know and can complete all preflight preparation required for an instrument flight
- Can determine the airplane is safe for IFR flight
- Can safely control the airplane by reference to instruments only
- Can perform basic instrument flight maneuvers

## **Web-based KNOWLEDGE**

### **EXPLORING INSTRUMENT FLYING**

#### **FLIGHT INSTRUMENTS**

#### **RADIO NAVIGATION AIDS AND THE MAGNETIC COMPASS**

#### **SINGLE-PILOT RESOURCE MANAGEMENT**

### **1.1 EXPLORING INSTRUMENT FLYING**

**Objectives:** You will learn about human sensory systems, how to control the airplane by reference to instruments only, and the importance of checking your instruments before flight.

#### **1.1.1 Becoming an Instrument-Rated Pilot**

How You will Become Instrument-Rated

#### **1.1.2 Physiology**

Sensory Systems

Spatial Disorientation

#### **1.1.3 Instrument Flying Technique**

Heading and Altitude

Leaving Straight-and-Level

Primary Instruments

Supporting Instruments

#### **1.1.4 Getting Ready for Flight**

Before You Get Into the Airplane

IFR Preflight

Checking the Instruments

### **1.2 FLIGHT INSTRUMENTS**

**Objective:** You will understand how electronic and standby flight instruments work along with their associated systems.

#### **1.2.1 Flight Instruments**

Gyroscopic Principles and Attitude Heading Reference Systems (AHRS)

How Your Attitude and Heading Gyros Work

How Your Electric Turn Coordinator Gyro Works

Pressure Sensing Flight Instruments and Air Data Computers (ADC)

Pitot or Static System Blockage  
Altitude Types and How to Read the Altimeter  
Using the G1000 PFD  
Using the G1000 MFD

### **1.2.2 Putting IFR Skills Together**

Good Habits for IFR Flying  
Turning Climbs and Descents

## **1.3 RADIO NAVIGATION AIDS AND THE MAGNETIC COMPASS**

**Objective:** You will gain understanding of VORs, how speed affects turn radius, and how to use a magnetic compass and clock when the heading indicator has failed.

### **1.3.1 Electronic Navigation Aids**

VHF Omni-directional Range (VOR)  
The VOR Indicator and How to Use It  
Horizontal Situation Indicator (HSI)  
Distance Measuring Equipment (DME)  
Understanding RNAV and GPS

### **1.3.2 Turns**

Understanding Forces in a Turn and Controlling Load Factor  
Limiting Load Factor in Turbulence  
Controlling Your Rate and Radius of Turn

### **1.3.3 Flying without a Heading Indicator**

Magnetic Compass Errors  
Timed Turns

## **1.4 SINGLE-PILOT RESOURCE MANAGEMENT**

**Objective:** You will discover the art and science of managing all resources available to a pilot to ensure the successful outcome of a flight.

### **1.4.1 IFR Risks and Hazards**

General Aviation Instrument Flying  
Risk Awareness and Recognizing Hazards

### **1.4.2 Single-Pilot Resource Management (SRM)**

Single-Pilot Resource Management (SRM)  
Risk Management (RM)  
Task Management (TM)  
Situational Awareness (SA)  
Controlled Flight into Terrain (CFIT) Awareness  
Automation Management (AM)  
Aeronautical Decision Making (ADM)

## **FLIGHT LESSONS**

**DEVELOPING YOUR INSTRUMENT SCAN  
IMPROVING YOUR INSTRUMENT SKILLS  
LOSS OF HEADING INDICATOR (G1000)  
LOSS OF HEADING INDICATOR (ANALOG)**

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 1-1**

**Developing Your Instrument Scan**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

In this first flight you will see how easy it is for you to control your airplane in straight and level altitude flight and in turns, climbs, and descents solely by reference to instruments. You will discover that you only need to make little corrections.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Safety Practices and Procedures
- \_\_\_ Study Material and Habit
- \_\_\_ Preflight Preparation for an IFR Flight
- \_\_\_ Instrument Cockpit Check
- \_\_\_ Use of Checklists
- \_\_\_ Positive Exchange of Flight Controls
- \_\_\_ Aviation Weather
- \_\_\_ Performance
- \_\_\_ Cockpit Management
- \_\_\_ Airport Diagrams, Signage, Incursion
- \_\_\_ Completion of Performance Table
- \_\_\_ Power, Pitch, Configuration, Etc.

**New This Flight:**

**U S F#**

- \_\_\_ Preflight Inspection
- \_\_\_ Instrument Check during Taxi
- \_\_\_ Before Takeoff Check and Engine Runup
- \_\_\_ Normal Takeoff and Climb
- \_\_\_ Level Off
- \_\_\_ Straight and Level
- \_\_\_ Trimming
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Postflight Procedures
- \_\_\_ Level Off

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can perform a complete preflight inspection of your airplane for an IFR flight. You will be able to maintain your heading within 20°, angle of bank within 10° of a standard rate turn, altitude within 200 feet, and airspeed within 15 knots. You will be able to level-off within 200 feet of the assigned altitude.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 1.4 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flying Flight Lesson 1-2**

**Improving Your Instrument Skills**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight will learn how to control your airplane while changing airspeed in level altitude flight. You will also learn how to control your rate of climb and descent, as well as how to turn while doing it.

**Content:**

**Preflight Discussion**

\_\_\_ Turns To Headings

**U S F#**

- \_\_\_ Risk Management
- \_\_\_ Attitude Instrument Flying
- \_\_\_ Charts and Publications
- \_\_\_ Aircraft Flight Instruments and Navigation Equipment
- \_\_\_ Aircraft Systems Related To IFR Operations
- \_\_\_ Single-Pilot Resource Management (SRM)

**Improving Your Skills:**

**U S F#**

- \_\_\_ Preflight Inspection
- \_\_\_ Taxi Checks
- \_\_\_ Before Takeoff Check and Engine Runup
- \_\_\_ Normal Takeoff and Climb
- \_\_\_ Straight and Level
- \_\_\_ Trimming
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Postflight Procedures

**New This Flight:**

**U S F#**

- \_\_\_ Preflight Inspection
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents with Constant Airspeed
- \_\_\_ Airspeed Changes
- \_\_\_ Turning Climbs and Descents

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can maintain the specified rate of descent or climb with 200 feet per minute, your heading within 20°, angle of bank within 10° of the specified bank angle, altitude within 200 feet, and airspeed within 15 knots. You will be able to level-off within 200 feet of the assigned altitude.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.9 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

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Flight Lesson for: \_\_\_\_\_

**Flight Lesson 1-3**

**Loss of Heading Indicator**

**Dual-Local**

**Platform:** G1000

**Lesson Objectives:**

During this flight you will learn how to use your magnetic compass and your clock to make your turns come out right on time.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Instrument Rating Practical Test Standards (PTS)
- \_\_\_ Attitude Instrument Flying – Primary and Supporting Method vs. Control and Performance Concept
- \_\_\_ Partial Panel

**New This Flight:**

**U S F#**

- \_\_\_ Timed Turns To Magnetic Headings
- \_\_\_ Compass Turns To Magnetic Headings
- \_\_\_ Loss of Heading Indicator

**Improving Your Skills:**

**U S F#**

- \_\_\_ Preflight Inspection
- \_\_\_ Taxi Checks
- \_\_\_ Before Takeoff Check and Engine Runup
- \_\_\_ Normal Takeoff and Climb
- \_\_\_ Straight and Level
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents
- \_\_\_ Postflight Procedures

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can turn your airplane to a specific heading using your magnetic compass. You will be able to maintain your angle of bank within 10° of a standard or half-standard rate turn, altitude within 150 feet, airspeed within 10 knots, and roll out within 20° of specified heading. You will be able to maintain your desired climb or descent rate within 200 feet per minute.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.9 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

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Flight Lesson for: \_\_\_\_\_

**Flight Lesson 1-4**

**Loss of Heading Indicator**

**Dual-Local**

**Platform:** Analog

**Lesson Objectives:**

During this flight you will learn how to use your magnetic compass and your clock to make your turns come out right on time.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Instrument Rating Practical Test Standards (PTS)
- \_\_\_ Attitude Instrument Flying – Primary and Supporting Method vs. Control and Performance Concept
- \_\_\_ Partial Panel

**New This Flight:**

**U S F#**

- \_\_\_ Timed Turns To Magnetic Compass Headings
- \_\_\_ Compass Turns To Magnetic Headings
- \_\_\_ Loss of Heading Indicator

**Improving Your Skills:**

**U S F#**

- \_\_\_ Preflight Inspection
- \_\_\_ Taxi Checks
- \_\_\_ Before Takeoff Check and Engine Runup
- \_\_\_ Normal Takeoff and Climb
- \_\_\_ Straight and Level
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents
- \_\_\_ Postflight Procedures

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can turn your airplane to a specific heading using your magnetic compass. You will be able to maintain your angle of bank within 10° of a standard or half-standard rate turn, altitude within 150 feet, airspeed within 10 knots, and roll out within 20° of specified heading. You will be able to maintain your desired climb or descent rate within 200 feet per minute.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.9 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## **Phase 1: Ground Training Checklist:**

Safety practices and procedures
Study material and habits
Preflight preparation for an IFR flight
Instrument cockpit check
Aircraft systems related to IFR operations
Aircraft flight instruments and navigation equipment
Single-pilot resource management (SRM)
Instrument Rating Practical Test Standards (PTS)

## **Phase 1: Proficiency Checklist:**

<b>Single-pilot resource management</b>
Risk management <i>Is able to identify any problem, analyze the information and make an informed decision with assistance</i>
<b>Preflight procedures</b>
Evaluating weather information <i>Can accurately evaluate weather data from an FAA-approved source</i>
Weather briefing and/or acceptable weather sources <i>Knows FAA-approved weather resources and proper format to request an IFR weather briefing</i>
Takeoff and landing data <i>Accurately calculates the required takeoff and landing distances</i>
Weight and balance <i>Determines that the flight will be conducted within weight and balance limitations</i>
Charts <i>Has current aeronautical charts and publications</i>
Preflight inspection
Cockpit management <i>Organizes the cockpit, has easy access to the checklist and utilizes items such as a kneeboard, paper and pen/pencil to record information</i>
Checklist usage <i>Uses checklist for preflight and all phases of flight</i>
Positive exchange of flight controls <i>Uses the 3-part verification system to confirm who has control of the airplane</i>
Correlating airport diagrams with taxiway and runway signs and markings <i>Uses the airport diagram, if available, for situational awareness</i>
Instrument cockpit check <i>Performs an instrument cockpit check to ensure all required items are in working order prior to flight</i>
Positive exchange of flight controls <i>Uses the 3-part verification system to confirm who has control of the airplane</i>
<b>In-flight</b>
Collision avoidance (visually and in response to ATC traffic calls) <i>Uses resources to ensure collision avoidance and responds to ATC traffic calls</i>
Pitch and power settings required for basic instrument maneuvers <i>Knows and uses appropriate pitch and power settings</i>
Straight-and-level flight <i>Uses proper techniques and power settings to achieve level flight: altitude <math>\pm 250</math> feet, heading <math>\pm 20^\circ</math></i>
Airspeed changes in level flight <i>Adjusts pitch and power as necessary to adjust speed and trims as appropriate to maintain level flight</i>
Standard-rate level turns <i>Uses instrumentation to assist in achieving standard rate turns during simulated or actual IFR</i>



<b>180 degree standard-rate turns</b> <i>Uses a standard rate turn to achieve a course reversal</i>
<b>Constant airspeed climbs and descents</b> <i>Utilizes a constant power setting and uses pitch to control airspeed</i>
<b>Constant rate climbs and descents</b> <i>Utilizes a constant power setting and uses pitch to control vertical speed</i>
<b>Constant rate climbs and descents with constant airspeed</b> <i>Uses power setting and pitch to control desired vertical speed and airspeed</i>
<b>Turning climbs and descents</b> <i>Uses proper rudder/control wheel inputs to maintain coordinated flight and uses standard rate</i>
<b>Level-offs</b> <i>Sets pitch, applies power as appropriate, and then trims as appropriate</i>
<b>Loss of primary flight instrument—heading indicator</b> <i>Assesses instrument loss and incorporates magnetic compass into scan for heading control</i>
<b>Compass turns to magnetic headings</b> <i>Displays understanding of compass dip errors, maintains <math>\pm 10^\circ</math> bank, <math>\pm 150</math> feet altitude, and rolls out <math>\pm 20^\circ</math> to assigned heading</i>
<b>Timed turns to magnetic headings</b> <i>Maintains <math>\pm 10^\circ</math> bank, <math>\pm 150</math> feet altitude and rolls out <math>\pm 20^\circ</math> to assigned heading</i>
<b>Postflight procedures</b>
<b>After landing, parking and securing</b> <i>Completes appropriate checklists</i>

***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**CFI Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

***Phase 1 completion standards:***

You have completed Phase 1 when you

- Know and can complete all preflight preparation required for an instrument flight
- Can determine the airplane is safe for IFR flight
- Can safely control the airplane by reference to instruments only
- Can perform basic instrument flight maneuvers

## **PHASE 2: Polishing Instrument Skills**

**Phase Objective:** During this phase you will develop the skills necessary to

- File an IFR flight plan
- Receive, copy and fly an IFR clearance
- More precisely control the airplane by reference to instruments only
- Control the airplane with failure of primary flight instruments
- Recover from an unusual flight attitude

**Phase Completion Standards:** The phase will be completed successfully when the customer:

- Has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- Answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Can accurately and safely prepare for an IFR flight
- Have improved your ability to more precisely fly basic instrument maneuvers
- Can use the magnetic compass and time to make turns to a desired heading
- Can copy, understand, and fly a clearance
- Complete the Progress Check (Refer to page 2-20 or 2-22 as applicable for standards of completion)

### **Web-based KNOWLEDGE**

#### **IFR ENROUTE CHARTS, CLEARANCES, AND STAYING ORGANIZED UNDERSTANDING THE WEATHER**

#### **INSTRUMENT FAILURES AND UNUSUAL ATTITUDES**

#### **READING THE WEATHER**

### **2.1 IFR ENROUTE CHARTS, CLEARANCES, AND STAYING ORGANIZED**

**Objective:** You will explore IFR low altitude enroute charts, techniques for writing down an ATC clearance, and how to stay organized.

#### **2.1.1 Low Altitude Enroute Charts**

- Airspace
- Airports and Nav aids
- Airways
- Intersections and Reporting Points
- Altitudes
- More Altitudes

#### **2.1.2 Copying an IFR Clearance and Staying Organized**

- How to Copy a Clearance
- Cockpit Organization

### **2.2 UNDERSTANDING THE WEATHER**

**Objective:** You will know the causes of various weather conditions, frontal systems, and hazardous weather phenomena.

#### **2.2.1 Weather Theory**

- What Makes Weather
- The Atmosphere
- Wind Circulation
- Water Vapor and Cloud Types

#### **2.2.2 Weather Patterns**

- Stable and Unstable Air
- Air Masses and Fronts

#### **2.2.3 Moisture in the Air**

- Fog
- Ice

## 2.2.4 Weather Hazards

- Thunderstorms
- Wind Shear
- Microbursts
- Practical Tips for Flying in Rough Weather

## 2.3 INSTRUMENT FAILURES AND UNUSUAL ATTITUDES

**Objective:** You will identify when an instrument or system has failed and be able to recognize and recover from an unusual attitude.

### 2.3.1 Instrument Failure

- G1000 Failures Including AHRS and ADC
- Figuring Out Which Instruments Have Failed
- Partial Panel
- Recovering From Unusual Attitudes

## 2.4 READING THE WEATHER

**Objective:** You will gain skill in reading weather reports, forecasts, and interpreting weather charts.

### 2.4.1 Current Weather Reports

- Aviation Routine Weather Report (METAR)
- Automated Weather Observations (ASOS/AWOS)

### 2.4.2 Weather Forecasts

- Terminal Aerodrome Forecast (TAF)
- Area Forecast (FA)
- Winds and Temperatures Aloft Forecast (FD)

### 2.4.3 In-Flight Weather Advisories and Services

- In-Flight Weather Advisories
- Supplemental and In-Flight Weather Services

### 2.4.4 Current Weather Charts

- Surface Analysis Chart
- Weather Depiction Chart
- Radar Summary Chart

### 2.4.5 Forecast Weather and Upper Air Charts

- Low Level Significant Weather Prognostic Charts
- High Level Significant Weather Prognostic Charts
- Severe Weather Forecasts
- More Upper Air Charts

## **FLIGHT LESSONS**

### **IFR FLIGHT PREPARATION AND CLEARANCE**

**UNUSUAL ATTITUDES AND FAILED INSTRUMENTS (G1000)**

**UNUSUAL ATTITUDES AND FAILED INSTRUMENTS (ANALOG)**

**UNUSUAL ATTITUDES AND FAILED INSTRUMENTS (G1000 ATD)**

**INCREASING PROFICIENCY (G1000)**

**INCREASING PROFICIENCY (ANALOG)**

***\*PROGRESS CHECK\* (G1000)***

***\*PROGRESS CHECK\* (ANALOG)***

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

\*\*\*Please note that “Postflight procedures”, such as “After landing, parking and securing”, will be omitted from each Phase Proficiency Checklist hereon and are expected to be performed as a part of normal flight procedures\*\*\*

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2-1**

**IFR Flight Preparation and Clearance**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight you will learn how to copy down and understand a simple clearance on the ground and then fly it after takeoff.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Aviation Weather Services
- \_\_\_ Filing an IFR Flight Plan and Alternate Planning
- \_\_\_ How to Receive an IFR Clearance At A Towered and Non-Towered Airport
- \_\_\_ Shorthand To Write Down The Clearance
- \_\_\_ Task Management
- \_\_\_ Situational Awareness

**New This Flight:**

**U S F#**

- \_\_\_ Copy Simple Clearance
- \_\_\_ Compliance with ATC Instruction

**Improving Your Skills:**

**U S F#**

- \_\_\_ Preflight Preparation
- \_\_\_ Preflight Inspection
- \_\_\_ Checklist Usage
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents
- \_\_\_ Timed Turns to Magnetic Headings

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can write down, read back, and fly a simple clearance. You will also be able to maintain the specified bank angle, altitude within 100 feet, and airspeed within 10 knots. You will be able to level-off within 100 feet of the assigned altitude.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.8 hrs.				ROUTE OF FLIGHT		A/C CLASS		LANDINGS		TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT	ROUTING	TOTAL	S E L	M E L	DAY	NIGHT	A T D	NIGHT	ACT INST.	SIM INST	APPCH	X- CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2-2**

**Unusual Attitudes and Failed Instruments**

**Dual-Local**

**Platform:** G1000

**Lesson Objectives:**

During this flight you will learn how, when using your instruments to make a 45° banked turn, you can precisely maintain altitude, bank angle, and airspeed, and roll out on your desired heading and altitude. Also, you will recover the airplane from an unusual attitude, recognize primary flight instrument failures, and control the aircraft using standby instruments.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ System and Instrument Failures Affecting IFR Operations
- \_\_\_ Recovery from Unusual Flight Attitudes
- \_\_\_ Controlled Flight into Terrain Awareness
- \_\_\_ Required ATC Report (12 Items)

**New This Flight:**

**U S F#**

- \_\_\_ Steep Turns (45° Bank, 360° Turn)
- \_\_\_ Loss of Primary Flight Instruments
- \_\_\_ ATC Reports
- \_\_\_ Recovery from Unusual Flight Attitudes

**Improving Your Skills:**

**U S F#**

- \_\_\_ Preflight Preparation
- \_\_\_ Preflight Inspection
- \_\_\_ Checklist Usage
- \_\_\_ Clearance
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can enter a turn using bank angle of 45° and maintain the angle of bank within 10°, altitude within 200 feet, airspeed within 10 knots, roll out within 20° of a specified heading.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.8 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2-3**

**Unusual Attitudes and Failed Instruments**

**Dual-Local**

**Platform:** Analog

**Lesson Objectives:**

During this flight you will learn how, when using your instruments to make a 45° banked turn, you can precisely maintain altitude, bank angle, and airspeed, and roll out on your desired heading and altitude. Also, you will recover the airplane from unusual attitude, recognize primary flight instrument failures, and control the aircraft using standby instruments.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ System and Instrument Failures Affecting IFR Operations
- \_\_\_ Recovery from Unusual Flight Attitudes
- \_\_\_ Controlled Flight into Terrain Awareness
- \_\_\_ Required ATC Report (12 Items)

**New This Flight:**

**U S F#**

- \_\_\_ Steep Turns (45° Bank, 360° Turn)
- \_\_\_ Loss of Primary Flight Instruments
- \_\_\_ ATC Reports
- \_\_\_ Recovery from Unusual Flight Attitudes
- \_\_\_ Vacuum Pump Failure

**Improving Your Skills:**

**U S F#**

- \_\_\_ Preflight Preparation
- \_\_\_ Preflight Inspection
- \_\_\_ Checklist Usage
- \_\_\_ Clearance
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can enter a turn using bank angle of 45° and maintain the angle of bank within 10°, altitude within 200 feet, airspeed within 10 knots, roll out within 20° of a specified heading.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.8 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2-4**

**Unusual Attitudes and Failed Instruments**

**Dual-Local**

**Platform:** AATD

**Lesson Objectives:**

During this flight you will improve your ability your to make a 45° banked turn, and maintain altitude, bank angle, and airspeed, and roll out on your desired heading and altitude. You will learn how to recognize multiple instrument and equipment failures and develop proper aeronautical decision making during abnormal/emergency situations.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ System and Instrument Failures Affecting IFR Operations

**New This Flight:**

**The following only applies to G1000 equipped AATD:**

**U S F#**

- \_\_\_ PFD Failure (G1000 AATD)
- \_\_\_ MFD Failure (G1000 AATD)
- \_\_\_ AHRS Failure (G1000 AATD)
- \_\_\_ ADC Failure (G1000 AATD)
- \_\_\_ Magnetometer Failure (G1000 AATD)

**The following only applies to Analog equipped AATD:**

- \_\_\_ Attitude Indicator Failure (Analog AATD)
- \_\_\_ Heading Indicator Failure (Analog AATD)
- \_\_\_ Pitot/Static System Failure (Analog AATD)

**The following applies to either equipped AATD:**

**U S F#**

- \_\_\_ Low Voltage Scenario
- \_\_\_ Simulated Icing Scenario
- \_\_\_ Recovery from Unusual Attitudes
- \_\_\_ Auto Pilot Failure

**Improving Your Skills:**

- \_\_\_ Clearance
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Altitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents
- \_\_\_ Steep Turns (45° Bank, 360° Turn)

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can enter a turn using bank angle of 45° and maintain the angle of bank within 10°, altitude within 200 feet, airspeed within 10 knots, roll out within 20° of a specified heading.

Total Time: 1.1 hrs. IFT: 1.0 hrs. GROUND: 0.6 hrs.				ROUTE OF FLIGHT		A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT	ROUTING	TOTAL	S E L	M E L	DAY	NIGHT		NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC	DUAL			

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2-5**

**Increasing Proficiency**

**Dual-Local**

**Platform:** G1000

**Lesson Objectives:**

During this flight you will learn how to control your airplane without your attitude indicator and heading indicator. You will also learn how to recover from unusual attitudes even when your attitude indicator fails. In the event that an unusual attitude gets you into a stall, you will learn how to recover from the stall using both full and partial panel.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Airplane Flight Instruments and Navigation Equipment

**Improving Your Skills:**

**U S F#**

- \_\_\_ Clearances
- \_\_\_ Steep Turns
- \_\_\_ Time Turns
- \_\_\_ Compass Turns
- \_\_\_ Straight and Level Flight

**Partial Panel:**

**U S F#**

- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Unusual Attitude Recoveries (Full and Partial Panel)
- \_\_\_ Stall Recovery, Power On (Full and Partial Panel)
- \_\_\_ Stall Recovery in A 30° Bank (Full and Partial Panel)

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can recognize both nose high and nose low unusual flight attitudes and recover to straight and level altitude flight using power, pitch and bank in the correct order. You will also be able to control your airplane with the loss of your attitude indicator and heading indicator by maintaining your heading within 15°, angle of bank within 10° of the specified bank angle, altitude within 100 feet, and airspeed within 10 knots. You will be able to level-off within 100 feet of the assigned altitude.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.5 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).



Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2-6**

**Increasing Proficiency**

**Dual-Local**

**Platform:** Analog

**Lesson Objectives:**

During this flight you will learn how to control your airplane without your attitude indicator and heading indicator. You will also learn how to recover from unusual attitudes even when your attitude indicator fails. In the event that an unusual attitude gets you into a stall, you will learn how to recover from the stall using both full and partial panel.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Airplane Flight Instruments and Navigation Equipment

**Improving Your Skills:**

**U S F#**

- \_\_\_ Clearances
- \_\_\_ Steep Turns
- \_\_\_ Time Turns
- \_\_\_ Compass Turns
- \_\_\_ Straight and Level Flight

**Partial Panel:**

**U S F#**

- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Unusual Attitude Recoveries (Full and Partial Panel)
- \_\_\_ Stall Recovery, Power On (Full and Partial Panel)
- \_\_\_ Stall Recovery in A 30° Bank (Full and Partial Panel)

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can recognize both nose high and nose low unusual flight attitudes and recover to straight and level altitude flight using power, pitch and bank in the correct order. You will also be able to control your airplane with the loss of your attitude indicator and heading indicator by maintaining the specified rate of descent or climb within 150 feet per minute, your heading within 15°, angle of bank within 10° of the specified bank angle, altitude within 100 feet, and airspeed within 10 knots. You will be able to level-off within 100 feet of the assigned altitude.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.5 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME						GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST.	APPCH	X-CNTRY		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 2 Ground Training Checklist

Shorthand to write down the clearance
System and instrument failures affecting IFR flights
Recovery from unusual flight attitudes

## Phase 2 Proficiency Checklist

<b>Single-pilot resource management</b>
Risk management <i>Is able to identify any problem, analyze the information and make an informed decision with assistance</i>
<b>Preflight procedures</b>
Preflight preparation <i>Performs necessary items such as weather, takeoff and landing data, weight and balance, appropriate charts, and applies risk management in decision making</i>
Preflight inspection <i>Performs a preflight inspection finding the airplane airworthy for instrument flight</i>
Filing an IFR flight plan <i>Knows and uses the appropriate format to file an IFR flight plan</i>
Alternate planning <i>Recognizes when alternate planning is required or necessary</i>
How to receive your clearance <i>Knows how to contact ATC to receive an IFR clearance</i>
Copying your clearance <i>Uses shorthand to copy an IFR clearance</i>
Runway incursion avoidance procedures <i>Uses airport diagrams and writes down taxi clearances</i>
Checklist usage <i>Uses checklist for preflight and all phases of flight</i>
Cockpit management <i>Effectively maintains an organized cockpit environment and has necessary items within reach</i>
<b>In-flight</b>
Collision avoidance <i>Uses resources to ensure collision avoidance and responds to ATC traffic calls</i>
Basic instrument flight maneuvers <i>Maintains altitude <math>\pm 150</math> feet, airspeed <math>\pm 10</math> knots, heading <math>\pm 15</math> degrees, bank <math>\pm 5</math> degrees</i>
Timed turns to magnetic headings <i>Rolls out <math>\pm 15</math> degrees of the desired heading and uses standard-rate turns</i>
Compass turns to magnetic headings <i>Knows the errors associated with the magnetic compass and can achieve desired headings</i>
Compliance with ATC clearances <i>Complies with clearances as necessary maintaining altitude <math>\pm 150</math> feet and heading <math>\pm 15</math> degrees</i>
Loss of primary flight instruments <i>Recognizes the loss of a primary flight instrument indicator and safely controls the airplane without use of primary instruments, reports failure to ATC as necessary</i>
Recovery from unusual flight attitudes <i>Recovers using proper pitch, power, and bank inputs and restores positive aircraft control</i>

***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

***Phase 2 completion standards:***

You have completed Phase 2 when you

- Can accurately and safely prepare for an IFR flight
- Have improved your ability to more precisely fly basic instrument maneuvers
- Can use the magnetic compass and time to make turns to a desired heading
- Can copy, understand, and fly a clearance
- Pass the Progress Check

**Instructor Notes:**

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2A-7**

**Progress Check**

**Dual-Local**

**Platform:** G1000

**Lesson Objectives:**

During this Progress Check you will have the chance to demonstrate the maneuvers you have learned according to the completion standards in the Instrument Rating Practical Test Standards.

**Content:**

**Testing Your Skills:**

**Preflight Discussion and Mission Briefing:**

**U S F#**

- \_\_\_ Preflight Preparation
- \_\_\_ Weather Briefing and Acceptable Weather Resources
- \_\_\_ Filing an IFR Flight Plan
- \_\_\_ Cockpit Management
- \_\_\_ Runway Incursion and Collision Avoidance
- \_\_\_ Risk Management
- \_\_\_ Performance Determination
- \_\_\_ Weight and Balance
- \_\_\_ Charts and Publications
- \_\_\_ Preflight Inspection

**In Flight:**

**U S F#**

- \_\_\_ Taxi Checks
- \_\_\_ Before Takeoff Check And Engine Runup
- \_\_\_ Clearance
- \_\_\_ Runway Incursion and Collision Avoidance
- \_\_\_ Normal Takeoff and Climb
- \_\_\_ Straight and Level

- \_\_\_ Trimming

**In Flight (cont'd):**

**U S F#**

- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Attitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Checklist Usage
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents
- \_\_\_ Steep Turns (45° Bank, 360° Turn)
- \_\_\_ Unusual Attitude Recoveries

**Partial Panel:**

- \_\_\_ Straight and Level Flight
- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Timed Turns To Magnetic Headings
- \_\_\_ Compass Turns to Magnetic Headings
- \_\_\_ Unusual Attitude Recoveries
- \_\_\_ Risk Management
- \_\_\_ Postflight Procedures

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have completed your Progress Check satisfactorily by accurately preflighting the airplane, correctly using the appropriate checklists for all ground and flight operations, and controlling the airplane in all basic IFR maneuvers. You will be able to control your airplane both with and without your attitude indicator and heading indicator by maintaining the specified rate of descent or climb within 100 feet per minute, your heading 10°, angle of bank within 5° of the specified bank angle, altitude within 100 feet, and airspeed within 10 knots. You will be able to level-off within 100 feet of the assigned altitude.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 1.3 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X- CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 2A-8**

**Progress Check**

**Dual-Local**

**Platform:** Analog

**Lesson Objectives:**

During this Progress Check you will have the chance to demonstrate the maneuvers you have learned according to the completion standards in the Instrument Rating Practical Test Standards.

**Content:**

**Testing Your Skills:**

**Preflight Discussion and Mission Briefing:**

**U S F#**

- \_\_\_ Preflight Preparation
- \_\_\_ Weather Briefing and Acceptable Weather Resources
- \_\_\_ Filing an IFR Flight Plan
- \_\_\_ Cockpit Management
- \_\_\_ Runway Incursion and Collision Avoidance
- \_\_\_ Risk Management
- \_\_\_ Performance Determination
- \_\_\_ Weight and Balance
- \_\_\_ Charts and Publications
- \_\_\_ Preflight Inspection

**In Flight:**

**U S F#**

- \_\_\_ Taxi Checks
- \_\_\_ Before Takeoff Check and Engine Runup
- \_\_\_ Clearance
- \_\_\_ Runway Incursion and Collision Avoidance
- \_\_\_ Normal Takeoff and Climb
- \_\_\_ Straight and Level

- \_\_\_ Trimming

**In Flight (cont'd):**

**U S F#**

- \_\_\_ Airspeed Changes In Level Flight
- \_\_\_ Standard Rate Level Attitude Turns
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Checklist Usage
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents
- \_\_\_ Steep Turns (45° Bank, 360° Turn)
- \_\_\_ Unusual Attitude Recoveries
- \_\_\_ Risk Management
- \_\_\_ Postflight Procedures

**Partial Panel:**

- \_\_\_ Straight and Level Flight
- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Timed Turns To Magnetic Headings
- \_\_\_ Compass Turns to Magnetic Headings
- \_\_\_ Unusual Attitude Recoveries

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have completed your Progress Check satisfactorily by accurately preflighting the airplane, correctly using the appropriate checklists for all ground and flight operations, and controlling the airplane in all basic IFR maneuvers. You will be able to control your airplane both with and without your attitude indicator and heading indicator by maintaining the specified rate of descent or climb within 100 feet per minute, your heading 10°, angle of bank within 5° of the specified bank angle, altitude with 100 feet, and airspeed within 10 knots. You will be able to level-off within 100 feet of the assigned altitude.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 1.3 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X- CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 2 \*Progress Check\*

<b>Single-pilot resource management</b>
<b>Risk management</b> <i>Can explain the four fundamental risk elements associated with the flight, uses a tool, such as the PAVE checklist, to help assess the four risk elements</i>
<b>Preflight procedures</b>
<b>Preflight preparation</b> <i>Understands the preparation necessary for an IFR flight</i>
<b>Weather briefing and/or acceptable weather resources</b> <i>Knows FAA-approved weather sources and can interpret them</i>
<b>Takeoff and landing data</b> <i>Uses POH/PIM to determine takeoff and landing distances required</i>
<b>Weight and balance</b> <i>Determines weight and balance calculations correctly and understands the impact on performance</i>
<b>Charts</b> <i>Is aware of the chart and publications cycles, uses current publications and charts</i>
<b>Preflight inspection</b> <i>Determines the airplane is airworthy for instrument flight</i>
<b>Checklist usage</b> <i>Uses the checklist before, during, and after the flight</i>
<b>Instrument cockpit check</b> <i>Performs and understands the elements and purpose of the check</i>
<b>Runway incursion avoidance</b> <i>Uses airport diagrams, maintains situational awareness, and complies with ATC instructions as necessary</i>
<b>In-flight</b>
<b>Cockpit management</b> <i>Maintains an organized cockpit and utilizes all resources available to ensure the safety of flight</i>
<b>Collision avoidance</b> <i>Utilizes a safety pilot or ATC to ensure collision avoidance</i>
<b>Basic instrument flight maneuvers</b> <i>Maintains altitude <math>\pm 150</math> feet, airspeed <math>\pm 10</math> knots, heading <math>\pm 15</math> degrees, bank <math>\pm 5</math> degrees</i>
<b>Loss of primary flight instruments</b> <i>Recognizes the loss of a primary flight instrument indicator and safely controls the airplane by reference to supporting instruments, reports failure to ATC as necessary</i>
<b>Timed turns to magnetic headings</b> <i>Can use time to accurately turn to a desired heading in the case of a heading indicator failure</i>
<b>Compass turns to magnetic headings</b> <i>Understands compass errors and accurately turns to a desired heading in the case of a heading indicator failure</i>
<b>Recovery from unusual flight attitudes</b> <i>Recovers using proper pitch, power, and bank inputs and restores positive aircraft control</i>
<b>Postflight procedures</b>
<b>After landing, parking and securing</b> <i>Completes appropriate checklists, taxis the airplane back to parking and properly secures it</i>

### Phase 2 \*Progress Check\* completion standards:

You have completed the Phase 2 \*Progress Check\* when you

- Demonstrate knowledge of risk management
- Can perform the preparation necessary for an IFR flight
- Perform basic instrument flight maneuvers

***I certify the above line items in the Progress Check Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

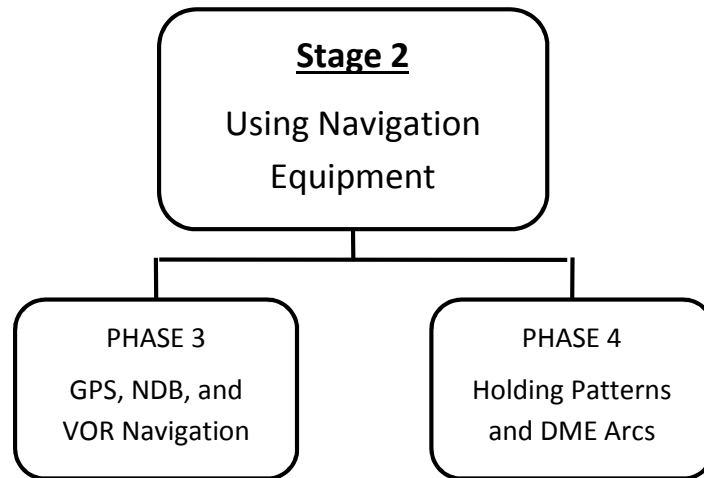
**Date:** \_\_\_\_\_

**CFI Signature:** \_\_\_\_\_

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

**Instructor Notes:**





**Stage 2 consists of two Phases**

- GPS, NDB, and VOR Navigation
- Holding Patterns and DME Arcs

**Stage Objective:** During this stage you will

- Become more familiar with VOR navigation and situational awareness
- Utilize GPS navigation and be familiar with its use for IFR
- Explore navigating with an NDB if your airplane has this equipment
- Safely control the airplane using proper instrument cross-check and interpretation
- Utilize published airways
- Discover instrument holding procedures including entry, reports, and patterns
- Be able to recover from unusual flight attitudes with reference to instruments only
- Discover DME arcs and their primary use
- Fly with a check instructor to check your course progress

**Stage Completion Standards:** The stage will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items encompassed in the phases that comprise the stage.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phases that make up the stage.
  - Each phase contains **Web-based Knowledge Instruction**
    - The web-based knowledge instruction for the phase will be completed prior to starting the flight scenarios to ensure fundamental knowledge before the flight.

Each phase contains multiple **Flight Lessons** that can be customized for the local training environment and repeated if necessary.

## **PHASE 3: GPS, NDB, and VOR Navigation**

**Phase Objective:** During this phase you will develop the skills and confidence necessary to:

- Use RNAV and GPS for IFR navigation
- Use the NDB, if installed, for IFR navigation
- Use the VOR for IFR navigation
- Safely depart using published IFR procedures

**Phase Completion Standards:** The phase will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Can determine if the navigation aid is suitable for IFR use
- Maintain situational awareness when using navigation aids
- Can accurately intercept and track navigation systems
- Correct for wind drift as needed to maintain a specified course

### **Web-based KNOWLEDGE**

#### **UNDERSTANDING RNAV AND GPS NAVIGATION UNDERSTANDING NDB NAVIGATION UNDERSTANDING VOR NAVIGATION IFR DEPARTURES AND THE AIRSPACE SYSTEM**

#### **3.1 UNDERSTANDING RNAV AND GPS NAVIGATION**

**Objective:** You will gain insight on area navigation (RNAV) and using GPS as a navigation aid.

##### **3.1.1 RNAV and GPS Navigation**

GPS Requirements and Using GPS for IFR

##### **3.1.2 Required Navigation Performance (RNP)**

Understanding RNP

What WAAS Does for You

##### **3.1.3 Using GPS for Navigation**

Creating and Modifying a GPS Flight Plan

Enroute GPS

Loading Instrument Procedures

#### **3.2 UNDERSTANDING NDB NAVIGATION**

**Objective:** You will explore how to use an ADF and RMI for NDB navigation.

##### **3.2.1 NDB Navigation**

Understanding the ADF

Homing and Bearings to the Station

The Moveable Card Indicator ADF

Intercepting and Tracking NDB Bearings

RMI Orientation and Navigation

#### **3.3 UNDERSTANDING VOR NAVIGATION**

**Objective:** You will gain knowledge about VOR checks, accuracy, orientation, how to intercept and track radials, and how to identify intersections.

##### **3.3.1 VOR Navigation**

VOR Checks

VOR Navigation

Receiving Localizers on the VOR Radios

Intercepting and Tracking VOR Radials

Using an HSI for VOR Navigation

### **3.4 IFR DEPARTURES AND THE AIRSPACE SYSTEM**

**Objective:** You will learn how to use published departure procedures, to depart under IFR at an airport with or without a control tower, and about the airspace system.

#### **3.4.1 IFR Departures**

- Safe IFR Departures
- Departure Procedure Charts (ODPs and SIDs)
- Loading and Flying Departure Procedures
- Departing Airports With Control Towers
- Departing Airports Without Control Towers

#### **3.4.2 Airspace**

- The Airspace System
- Class G Airspace
- Class E Airspace
- Class D Airspace
- Class C Airspace
- Class B Airspace
- Class A Airspace

#### **3.4.3 Weather Minimums**

- VFR Weather Minimums
- Special VFR

## **FLIGHT LESSONS**

### **GPS FOR IFR USE AND ADF/NDB NAVIGATION (IF INSTALLED) VOR NAVIGATION FLYING PUBLISHED DEPARTURE PROCEDURES**

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 3-1**

**GPS for IFR Use**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

In this flight lesson you will see how to use your GPS receiver to find where you are to your surroundings. You will also see how to track GPS bearings both to and from both fixes and navigation stations while correcting for a crosswind.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ GPS for IFR Navigation
- \_\_\_ GPS/OBS Operation
- \_\_\_ Aeronautical Decision Making
- \_\_\_ GPS Signal/RNP/RAIM Prediction

**Improving Your Skills:**

**U S F#**

- \_\_\_ VOR Radial Interception and Tracking
- \_\_\_ Constant Airspeed Climbs and Descents

**Postflight Discussion**

**New This Flight:**

**U S F#**

- \_\_\_ GPS Orientation
- \_\_\_ GPS Bearing Interception and Tracking
- \_\_\_ GPS Direct To Navigation

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can operate the GPS unit and decide if it may be used for navigation. You will be able to determine the relative bearing to the fix/station. You will also be able to intercept a bearing and use the proper corrections to maintain a bearing within 15°.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 1.5 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 3-2**

**VOR Navigation**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight you will learn how to use ATC instructions and procedures after you take off to get you on course. You will also learn how to keep your airplane on course using your VOR equipment for navigation.

**Content:**

**Preflight Discussion**

**U S F#**

\_\_\_ VOR for IFR Navigation

**New This Flight:**

**U S F#**

\_\_\_ Departing On Instruments

\_\_\_ VOR Orientation

\_\_\_ VOR Radial Interception and Tracking

\_\_\_ VOR Test

**Improving Your Skills:**

**U S F#**

\_\_\_ Steep Turns (45° Bank, 360° Turn)

\_\_\_ Unusual Attitude Recoveries, Full Panel

\_\_\_ Airspeed Changes In Level Flight

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can follow actual or simulated ATC instructions to intercept and track your initial route after takeoff. You will be able to tune and identify a VOR facility, determine if it may be used for navigation, and locate your position relative to the facility. You will be able to intercept a radial at a predetermined angle and track it with no more than a three-quarter-scale deflection of the CDI while maintaining your heading within 10°, altitude with 100 feet, and airspeed within 10 knots.

NOTE: IFR clearances will be issued and evaluated for each flight as required including vectors, airway interception and tracking, and off-airway navigation. Therefore, they will not appear in the lesson content outline.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.8 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME						GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 3-3**

**Flying Published Departure Procedures**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

In this flight lesson you will see how you can safely depart from an uncontrolled airport in IFR conditions. You will also see how to use a published Departure Procedure to ensure that you will be clear of terrain and obstructions when you can't see the ground.

**Content:**

**Preflight Discussion**

**U S F#**

\_\_\_ Terminal Procedures Publications (TPP)

\_\_\_ Departure Procedures

**New This Flight:**

**U S F#**

\_\_\_ Air Traffic Control Clearances and Procedures

\_\_\_ VOR Radial Interception and Tracking

\_\_\_ Departure Procedures (DPs)

**Improving Your Skills:**

**U S F#**

\_\_\_ GPS Bearing Interception and Tracking

\_\_\_ Constant Rate Climbs and Descents

**Partial Panel**

**U S F#**

\_\_\_ Straight and Level Flight

\_\_\_ Turns

\_\_\_ Climbs

\_\_\_ Descents

\_\_\_ Timed Turns To Magnetic Compass Headings

\_\_\_ Unusual Attitude Recoveries

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards**

You will have satisfactorily completed this lesson when you can follow actual or simulated ATC instructions to fly a charted or published departure procedure to intercept your route of flight.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 1.2 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 3 Ground Training Checklist:

GPS for IFR navigation
ADF/NDB navigation for IFR
VOR for IFR navigation
How to receive an IFR clearance at a towered and non-towered airport
Published Obstacle Departure Procedures

## Phase 3 Proficiency Checklist:

<b>Single-pilot resource management</b>
Aeronautical decision making <i>Exhibits sound decision making during planning and execution of the planned flight</i>
Risk management <i>Is able to recognize risks and uses good judgment to reduce associated risks</i>
<b>Preflight procedures</b>
Preflight preparation <i>Performs all preparation required for an IFR flight</i>
Checklist usage <i>Uses checklist for preflight and all phases of flight</i>
Determining suitability of GPS for IFR flight <i>Can determine if the GPS is suitable for IFR flight</i>
Familiarity with avionics <i>Is familiar with the airplane avionics and can effectively use them</i>
Instrument cockpit check <i>Determines the airplane is in condition for safe instrument flight including all items listed in the PTS</i>
<b>In-flight</b>
Navigating to a waypoint or an off-airway fix at a safe altitude <i>Maintains obstacle clearance and can safely navigate to a waypoint or off-airway fix</i>
Navigation system orientation (GPS and/or NDB) <i>Uses installed navigation systems to establish/maintain situational awareness</i>
Navigation system course intercepting and tracking (GPS and/or NDB) <i>Intercepts and tracks courses maintaining altitude <math>\pm 150</math> feet, headings <math>\pm 10</math> degrees, airspeed <math>\pm 10</math> kts, and course within <math>\frac{3}{4}</math> scale CDI deflection or <math>\pm 10</math> degrees on RMI</i>
VOR accuracy check <i>Confirms usability of VOR for IFR navigation, including required checks and identification in the air</i>
Navigation system orientation (VOR) <i>Uses VOR to establish/maintain situational awareness</i>
Navigation system course intercepting and tracking (VOR) <i>Intercepts and tracks courses maintaining altitude <math>\pm 150</math> feet, headings <math>\pm 10</math> degrees, airspeed <math>\pm 10</math> kts, and course within <math>\frac{3}{4}</math> scale CDI deflection or <math>\pm 10</math> degrees on RMI</i>
Victor airway intercepting and tracking <i>Understands the boundary of the Victor airway and can accurately maintain navigation on the airway</i>
Recovery from unusual flight attitudes <i>Applies appropriate pitch, bank, and power corrections in the correct sequence</i>
Compliance with published departure procedures <i>Conforms to procedure restrictions, courses, and altitudes</i>
Basic instrument flight maneuvers <i>Maintains altitude <math>\pm 150</math> feet, headings <math>\pm 15</math> degrees, airspeed <math>\pm 10</math> kts, and bank <math>\pm 5</math> degrees</i>

***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

***Phase 3 completion standards:***

You have completed Phase 3 when you

- Can determine if the navigation aid is suitable for IFR use
- Maintain situational awareness when using navigation aids
- Can accurately intercept and track navigation systems
- Correct for wind drift as needed to maintain on course

**Instructor Notes:**



## **PHASE 4: Holding Patterns and DME Arcs**

**Phase Objective:** During this phase you will

- Be able to fly an appropriate entry into a holding pattern
- Understand the required reports associated with holding procedures
- Accurately fly a holding pattern
- Be able to fly a DME arc
- Successfully complete a Progress Check

**Phase Completion Standards:** The phase will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Can perform all preparation required for an IFR flight
- Are able determine the proper entry to a holding pattern, make all required ATC reports, and appropriately fly the holding pattern
- Intercept and fly a DME arc
- Have completed the Progress Check (Refer to page 2-38 for completion standards)

### **Web-based KNOWLEDGE**

#### **HOLDING PATTERNS AND ARRIVALS DME ARCS APPROACH CHARTS**

##### **4.1 HOLDING PATTERNS AND ARRIVALS**

**Objective:** You will understand holding patterns and arrivals to the terminal area.

###### **4.1.1 Holding Patterns**

The Holding Pattern  
How to Fly a Holding Pattern  
Holding Pattern Entries  
Holding at Intersections and Waypoints  
Flying Holding Patterns with the G1000

###### **4.1.2 Arrivals**

Format and Symbols on STAR Charts  
Loading and Flying Arrival Procedures

##### **4.2 DME ARCS**

**Objective:** You will learn how to fly a DME arc.

###### **4.2.1 Flying DME Arcs**

DME Arcs Using VOR and DME  
DME Arcs Using the G1000

##### **4.3 APPROACH CHARTS**

**Objective:** You will gain knowledge about approach segments and approach charts.

###### **4.3.1 Approach Charts and Approach Segments**

Approach Segments  
Overview of Approach Charts  
Approach Chart Design

###### **4.3.2 Sections of the Approach Chart**

Margin Identification  
Pilot Briefing  
Plan View  
Profile View  
Minimums Section  
Airport Sketch

## FLIGHT LESSONS

### FLYING A HOLDING PATTERN DME ARCS AND NON-PUBLISHED HOLDING PATTERNS

#### *\*PROGRESS CHECK\**

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 4-1**

**Flying a Holding Pattern**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight you will learn how to take the stress out of receiving a holding clearance. You will learn some handy tips on how to decide which holding entry to use, and how to compensate for the wind to make sure you track the proper pattern. You will also learn what holding looks like at both a VOR and using GPS.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Determining and Flying the Appropriate Entry to a Holding Pattern
- \_\_\_ Flying a Holding Pattern
- \_\_\_ Required ATC Reports When Holding

**New This Flight:**

**U S F#**

- \_\_\_ Holding Patterns and Entries
- \_\_\_ Wind Corrections in Holding Patterns
- \_\_\_ VOR Holding
- \_\_\_ GPS Holding

**Improving Your Skills:**

**U S F#**

- \_\_\_ Air Traffic Control Clearances and Procedures
- \_\_\_ Departure Procedures (DPS)
- \_\_\_ VOR Radial Interception and Tracking
- \_\_\_ Constant Rate and Airspeed Climbs and Descents

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can enter a holding pattern using a procedure that allows you to remain within the holding pattern airspace. You will also be able to use proper timing criteria and wind correction techniques to maintain the desired pattern and arrive over the fix as close as possible to a specified time. You will be able to maintain airspeed within 10 knots, altitude within 100 feet, headings 10°, and track a specified course, radial, or bearing.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 1.2 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 4-2**

**DME ARCS, And Non-Published Holding at Intersections**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight you will learn how to enter and fly a holding pattern at the intersection of two VOR radials. To make things more interesting, you will also learn the techniques you can use to hold at a two-radial intersection with only one VOR receiver. You will also learn how to use DME for intersection holding and how to fly a DME arc.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Intersection Holding
- \_\_\_ How to Fly A DME Arc Using GPS or VOR/DME
- \_\_\_ STARs

**New This Flight:**

**U S F#**

- \_\_\_ STARs
- \_\_\_ Intersection Holding
- \_\_\_ VOR Intersection Holding With One VOR

- \_\_\_ DME Arcs (If Aircraft Equipped)

**Improving Your Skills:**

**U S F#**

- \_\_\_ Steep Turns (45° Bank, 360° Turn)
- \_\_\_ Unusual Attitude Recoveries, Full Panel

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can intercept a DME arc and maintain that arc  $\pm 2$  nautical miles. You will be able to follow actual or simulated ATC instructions to fly a STAR. You will also be able to hold using proper timing criteria and wind correction techniques to maintain the desired pattern and arrive over the VOR intersection within 30 seconds of a specified time, using one or two VOR receivers. You will be able to maintain airspeed within 10 knots, altitude within 100 feet, headings within 10°, and track a specified radial.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 1.1 hrs.				ROUTE OF FLIGHT		A/C CLASS		LANDINGS			TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT	ROUTING	TOTAL	S E L	M E L	DAY	NIGHT	A T D	NIGHT	ACT INST.	SIM INST	APPCH	X- CNTRY	PIC	DUAL		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 4 Ground Training Checklist:

Determining and flying the appropriate entry to a holding pattern
Required ATC reports when holding
Flying a holding pattern
Intersection holding
How to fly a DME arc using GPS or VOR/DME
Approach Charts
Determining your approach category

## Phase 4 Proficiency Checklist:

<b>Single-pilot resource management (SRM)</b> <i>Utilizes all resources available to ensure the successful completion of the flight</i>
<b>Preflight procedures</b>
Preflight preparation <i>Performs all necessary preparation for a safe IFR flight</i>
Instrument cockpit check <i>Determines the airplane is safe for IFR including items listed in the PTS</i>
<b>In-flight</b>
Holding entries and procedures <i>Uses the appropriate entry, makes all required ATC reports, and can accurately fly a holding pattern</i>
Basic instrument flight maneuvers <i>Maintains altitude <math>\pm 150</math> feet, headings <math>\pm 15</math> degrees, airspeed <math>\pm 10</math> kts, and bank <math>\pm 5</math> degrees</i>
Intercepting and tracking navigational systems <i>Tunes and identifies the navigation facility, applies proper correction to maintain the specified course</i>
Compliance with departure procedures <i>Uses current navigation publications and complies with requirements</i>
Recovery from unusual flight attitudes <i>Applies appropriate pitch, bank, and power corrections to return the airplane to stabilized flight</i>
Loss of primary flight instrument <i>Recognizes the loss of a primary instrument, simulates reporting to ATC as necessary, and applies risk management in the aeronautical decision making relating to the safety of the flight</i>
Intercepting and tracking DME arcs <i>Intercepts and maintains the DME arc <math>\pm 1</math> nautical mile</i>
Non-published holding procedures <i>Flies to the intersection, uses the appropriate entry, communicates as required with ATC, maintain situational awareness, and can maintain altitude <math>\pm 150</math> feet</i>

***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

### ***Phase 4 completion standards:***

You have completed Phase 4 when you

- Can perform all preparation required for an IFR flight
- Are able determine the proper entry to a holding pattern, make all required ATC reports, and appropriately fly the holding pattern
- Intercept and fly a DME arc
- Have passed the Progress Check

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 4A-3**

**Progress Check**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

In this Progress Check you will demonstrate your skill using navigation systems for orientation, intercepting and tracking courses and arcs, and complying with holding instructions.

**Content:**

**Testing Your Skills:**

**Preflight Discussion and Mission Brief**

**U S F#**

- \_\_\_ Preflight Preparation
- \_\_\_ Required ATC Reports When Holding
- \_\_\_ Terminal Procedures Publications (TPPs)
- \_\_\_ Departure Procedures (DPs)
- \_\_\_ STARs

**In Flight:**

**U S F#**

- \_\_\_ Departing On Instruments
- \_\_\_ VOR Test
- \_\_\_ VOR Orientation
- \_\_\_ VOR Radial Interception and Tracking
- \_\_\_ GPS Orientation
- \_\_\_ GPS Bearing Interception and Tracking
- \_\_\_ Air Traffic Control Clearances And Procedures
- \_\_\_ Departure Procedures (DPs)

- \_\_\_ Holding Patterns and Entries

- \_\_\_ Wind Corrections in Holding Patterns

**In Flight (cont'd):**

**U S F#**

- \_\_\_ VOR and/or GPS Holding
- \_\_\_ DME Arcs (If Aircraft Equipped)
- \_\_\_ Intersection Holding
- \_\_\_ Holding with DME Legs (If Aircraft Equipped)

**Partial Panel:**

**U S F#**

- \_\_\_ Straight and Level Flight
- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Timed Turns to Magnetic Headings
- \_\_\_ Compass Turns to Magnetic Headings
- \_\_\_ Unusual Attitude Recoveries

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have completed this Progress Check satisfactorily when you can intercept and track selected DME arcs within ± 1 nautical mile, and radials or bearings within three-quarters CDI needle. You will also be able to establish a correct holding pattern at a VOR, and using GPS, or an intersection while staying within the protected airspace. While in holding you will be able to correct for wind by adjusting leg timing and headings to track the inbound course within three-quarters CDI needle, and you will arrive over the holding fix within 30 seconds of a specified time. You will be able to follow actual or simulated ATC instructions using Departure Procedures and STAR charts. You will be able to maintain your altitude within 100 feet, heading 10°, and airspeed within 10 knots.

Total Time: 1.3 hrs. IFT: 1.0 hrs. GROUND: 0.7 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X- CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**CFI Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 4 *\*Progress Check\*- Oral*

Required ATC reports when holding
Single-pilot resource management
Procedures for loss of communication in the hold

## Phase 4 *\*Progress Check\*- Flight*

<b>Single-pilot resource management</b> <i>Utilizes all resources available to ensure the successful completion of the flight</i>
<b>Preflight procedures</b>
Preflight preparation <i>Can perform all preparation necessary for a safe IFR flight</i>
Instrument cockpit check <i>Performs and determines the airplane is suitable for IFR flight</i>
<b>In-flight</b>
Basic instrument flight maneuvers <i>Maintains altitude <math>\pm 150</math> feet, headings <math>\pm 15</math> degrees, airspeed <math>\pm 10</math> kts, and bank <math>\pm 5</math> degrees</i>
Intercepting and tracking navigational systems <i>Tunes and identifies the navigation facility, applies proper correction to maintain the specified course</i>
Intercepting and tracking DME arcs <i>Intercepts and maintains the DME arc <math>\pm 1</math> nautical mile</i>
Holding procedures <i>Uses the appropriate entry, makes all required ATC reports, and can accurately fly a holding pattern</i>
Compliance with departure procedures <i>Uses current navigation publications and complies with requirements</i>
Recovery from unusual flight attitudes <i>Applies appropriate pitch, bank, and power corrections to return the airplane to stabilized flight</i>
Loss of primary flight instrument <i>Recognizes the loss of a primary instrument, simulates reporting to ATC as necessary, and applies risk management in the aeronautical decision making relating to the safety of the flight</i>

### **Phase 4 *\*Progress Check\* completion standards:***

You have completed the Phase 4 *\*Progress Check\** when you

- Perform and understand all preparation necessary for IFR flight
- Perform to the specified standards
- Demonstrate to the check instructor that the safety of flight is never in doubt

***I certify the above line items in the Progress Check Checklist have been satisfactory completed within the standards of this phase.***

Customer Signature: \_\_\_\_\_

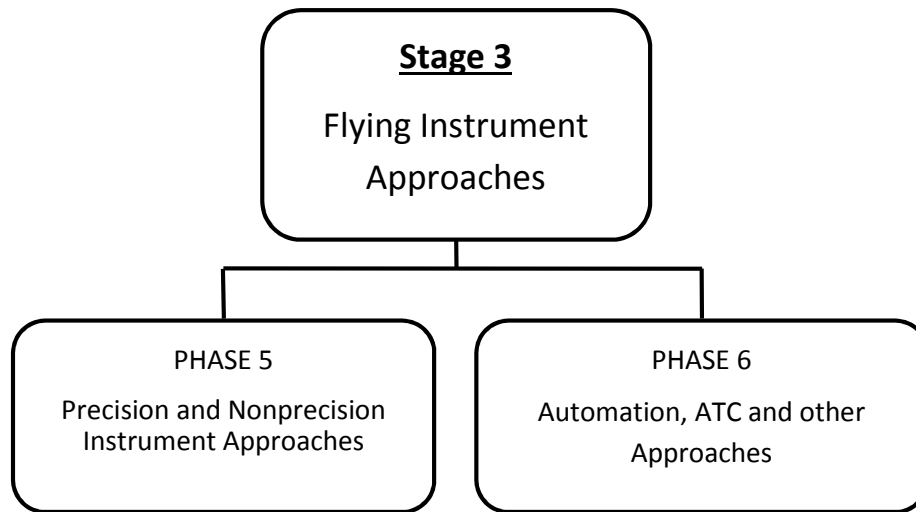
Date: \_\_\_\_\_

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

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

### **Instructor Notes:**





### Stage 3 consists of two Phases

- Precision and Nonprecision Instrument Approaches
- Automation, ATC and Other Approaches

### Stage Objective:

During this stage you will

- Understand the elements of precision and nonprecision approaches
- Utilize appropriate, current approach procedure charts
- Learn how to brief, fly, and communicate with ATC during an instrument approach
- Know how to determine a missed approach point
- Be able to make a decision whether to continue for a landing or initiate missed approach procedures when arriving at the missed approach point
- Safely control the airplane using proper instrument cross-check and interpretation
- Discover how to perform a circling maneuver from an approach that does not place you in position for a straight-in to the landing runway
- Know items that you are required to report to ATC
- Fly precision and nonprecision approaches utilizing single-pilot resource management
- Fly with a check instructor to check your course progress

### Stage Completion Standards:

The stage will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items encompassed in the phases that comprise the stage.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phases that make up the stage.
  - Each phase contains **Web-based Knowledge Instruction**
    - The web-based knowledge instruction for the phase will be completed prior to starting the flight scenarios to ensure fundamental knowledge before the flight.

Each phase contains multiple **Flight Lessons** that can be customized for the local training environment and repeated if necessary.

## **PHASE 5: Precision and Nonprecision Instrument Approaches**

**Phase Objective:** During this phase you will

- Fly precision and nonprecision approaches
- Land from a straight-in approach
- Learn the required visual references for making the appropriate decision to land or follow the missed approach procedure

**Phase Completion Standards:** The phase will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Consistently and safely control the airplane in all phases of an instrument approach
- Recognize when a missed approach is required and safely initiate missed approach procedures

### **Web-based KNOWLEDGE**

#### **IFR RULES AND APPROACH TYPES ILS APPROACHES LOCALIZER APPROACHES RNAV APPROACHES**

##### **5.1 IFR RULES AND APPROACH TYPES**

**Objective:** You will learn more about instrument flight rules and the types of approaches.

###### **5.1.1 Instrument Flight Rules**

- Pilot and Airplane IFR Requirements
- Maintaining Your IFR Skills
- Continuing Beyond the Missed Approach Point

###### **5.1.2 Instrument Approach Types**

- Precision Approaches and APVs
- Nonprecision Approaches

###### **5.1.3 Course Reversals**

- Getting Turned Around to Make an Approach

###### **5.1.4 Localizer Courses**

- How to Fly Localizer Courses

##### **5.2 ILS APPROACHES**

**Objective:** You will gain knowledge about the Instrument Landing System (ILS).

###### **5.2.1 Instrument Landing System (ILS) Components**

- Guidance
- Range
- Visual Components
- Runway Visual Range (RVR)
- Inoperative ILS Components

###### **5.2.2 How to Fly an ILS**

- Choosing Which Approach to Fly
- Self-Briefing the Approach
- Setting Up for the Approach
- Flying the ILS
- Flying the Missed Approach

##### **5.3 LOCALIZER APPROACHES**

**Objective:** You will discover how to use the localizer front and back courses.

###### **5.3.1 Localizer Approaches**

- Flying a Localizer Front Course

Flying a Localizer Back Course  
Flying SDF and LDA Approaches  
Flying DME Arcs to a Localizer

## **5.4 RNAV APPROACHES**

**Objective:** You will gain insight on the different types of RNAV approaches.

### **5.4.1 RNAV Approaches**

RNAV Approaches

### **5.4.2 RNAV (GPS) Approach Types**

LPV and LP Approaches

LNAV/VNAV Approach

LNAV Approach

GPS and Missed Approaches

## **FLIGHT LESSONS**

### **ILS APPROACHES**

**RNAV (GPS) APPROACHES WITH VERTICAL GUIDANCE (WAAS)**

**RNAV (GPS) APPROACHES WITHOUT VERTICAL GUIDANCE**

**LOCALIZER (LOC) APPROACHES**

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 5-1**

**ILS Approaches**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight you will learn how to prepare for and fly the most satisfying maneuver in the instrument environment, an ILS approach. You will learn proven techniques for pre-approach self-briefing, and flying the localizer course and glide slope with precision. You will also learn how to safely execute a missed approach.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Approach Charts
- \_\_\_ Approach Briefing
- \_\_\_ Determining Your Approach Category
- \_\_\_ When a Missed Approach is Required
- \_\_\_ Precision Approach Procedures

**New This Flight:**

**U S F#**

- \_\_\_ Approach and Self-Briefing
- \_\_\_ ILS Approach and Missed Approach

**Improving Your Skills:**

**U S F#**

- \_\_\_ Constant Rate and Airspeed Descents

**Partial Panel**

- \_\_\_ Straight and Level Flight
- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Timed Turns to Magnetic Compass Headings
- \_\_\_ Unusual Attitude Recoveries

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have completed this lesson satisfactorily when you can fly an ILS approach to the decision height and then execute a missed approach. You will be able to maintain your altitude within 100 feet, heading within 10°, and airspeed within 10 knots prior to beginning the final approach segment. You will be able to intercept the localizer and electronic glide slope, and allow less than full scale deflection of either needle. You be able to maintain the specified airspeed within 10 knots while on the final approach segment. You will also be able to execute the missed approach procedure at the DH if the runway environment is not in sight.

Total Time: 1.7 hrs. IFT: 1.4 hrs. GROUND: 1.1 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 5-2**

**RNAV (GPS) Approaches With Vertical Guidance (WAAS)**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

In this flight lesson you will see how to prepare for an approach that demands a little more preparation but rewards you with improved accuracy, a GPS approach. You will also see how to self-brief for the approach including items unique to GPS. You will see how to set up GPS equipment for an approach, fly a non-precision GPS instrument approach, and descend to approach minimums without the aid of an electronic glide slope. You will also learn to safely execute a missed approach.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Non-precision Approach Procedures
- \_\_\_ GPS Approaches With and Without Vertical Guidance

**New This Flight:**

**U S F#**

- \_\_\_ GPS Approach and Missed Approach

**Improving Your Skills:**

**U S F#**

- \_\_\_ Approach and Self-Briefing
- \_\_\_ Departure Procedures (DPS)

**U S F#**

- \_\_\_ Holding Patterns and Entries
- \_\_\_ Procedure Turns

**Partial Panel**

- \_\_\_ Straight and Level Flight
- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Timed Turns To Magnetic Compass Headings
- \_\_\_ Unusual Attitude Recoveries

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can fly GPS approach and missed approach. Prior to beginning the final approach segment you will maintain altitude within 100 feet, heading within 10°, allow less than full-scale deflection of the CDI, and airspeed within 10 knots. While on the final approach segment you will assure that RAIM is available and the GPS has transitioned to the approach active mode, allow no more than three-quarter-scale deflection of the CDI, and maintain the specified airspeed within 10 knots. You will be able to recognize the MAP, and will be able to immediately execute the missed approach procedure if the runway environment is not in sight.

Total Time: 1.7 hrs. IFT: 1.4 hrs. GROUND: 0.8 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 5-3**

**RNAV (GPS) Approaches Without Vertical Guidance**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

Learn how to fly an RNAV (GPS) non-precision approach to the minimum descent altitude (MDA) and missed approach point, and decide whether to make a missed approach or continue below the approach minimums visually.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ GPS Approaches With and Without Vertical Guidance

**New This Flight:**

**U S F#**

- \_\_\_ GPS Approach and Missed Approach  
Localizer Front Course and Missed Approach

**Improving Your Skills:**

**U S F#**

- \_\_\_ Steep Turns (45° Bank, 360° Turn)
- \_\_\_ Approach Self-Briefing
- \_\_\_ ILS Approach and Missed Approach

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can fly GPS approach and missed approach. Prior to beginning the final approach segment you will maintain altitude within 100 feet, heading within 10°, allow less than full-scale deflection of the CDI, and airspeed within 10 knots. While on the final approach segment you will assure that RAIM is available and the GPS has transitioned to the approach active mode, allow no more than three-quarter-scale deflection of the CDI, and maintain the specified airspeed within 10 knots. You will maintain the MDA + 100 feet, -0 feet to the MAP. You will be able to recognize the MAP, and will be able to immediately execute the missed approach procedure if the runway environment is not in sight.

Total Time: 1.7 hrs. IFT: 1.4 hrs. GROUND: 0.6 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 5-4**

**Localizer (LOC) Approaches**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight you will learn how to use small corrections and precise heading control to accurately track a sensitive localizer course. You will also learn how, when you're flying a localizer back course, you get back on course by flying away from your course needle. You will also learn how to safely get yourself turned back towards the airport when an approach procedure initially takes you away from it.

**Content:**

**New This Flight:**

**U S F#**

- \_\_\_ Localizer Front Course and Missed Approach
- \_\_\_ Tracking the Localizer
- \_\_\_ Tracking the Back Course Localizer
- \_\_\_ Procedure Turns and Other Course Reversals

**Improving Your Skills:**

**U S F#**

- \_\_\_ VOR Radial Interception and Tracking
- \_\_\_ GPS Bearing Inception and Tracking
- \_\_\_ DME Arcs (If Aircraft Equipped)

**Post Flight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can fly a published procedure turn as charted. You will also be able to track a localizer front course and back course while allowing less than a full scale deflection of the localizer CDI. You will be able to maintain airspeed within 10 knots, altitude within 100 feet, and headings within 10°, while tracking a specified course, radial, or bearing.

Total Time: 1.7 hrs. IFT: 1.4 hrs. GROUND: 0.5 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 5 Ground Training Checklist:

Precision approach procedures
Nonprecision approach procedures
Approach briefing
Flying the approaches
When a missed approach is required

## Phase 5 Proficiency Checklist:

<b>Single-pilot resource management (SRM)</b> <i>Utilizes all resources available to ensure the successful completion of the flight</i>
<b>Checklist usage</b> <i>Uses checklist during all phases of flight as required</i>
<b>Intercepting and tracking navigational systems</b> <i>Maintains situational awareness and is never more than 3/4 scale deflection off course</i>
<b>Communication with ATC</b> <i>Is able to respond to and understand ATC calls</i>
<b>Compliance with ATC clearance</b> <i>Understands, confirms, and flies clearances. Queries ATC if clearance may compromise safety</i>
<b>Approach briefing</b> <i>Thoroughly briefs the approach as early as possible</i>
<b>Vectors to final approach course</b> <i>Can accurately fly ATC issued vectors to the final approach course</i>
<b>Intercept and track localizer course</b> <i>Anticipates and accurately intercepts the localizer course, does not exceed 3/4 scale deflection</i>
<b>Intercept and track glideslope</b> <i>Anticipates and accurately intercepts the glideslope, does not exceed 3/4 scale deflection</i>
<b>Precision approach</b> <i>No more than 3/4 scale deflection, continues to the missed approach point</i>
<b>Load and verify RNAV approach into navigation system</b> <i>Can accurately load and verify the RNAV approach</i>
<b>RNAV approach with vertical guidance</b> <i>No more than 3/4 scale deflection, continues to the missed approach point</i>
<b>Intercept and track RNAV approach course</b> <i>Anticipates and accurately intercepts the approach course, does not exceed 3/4 scale deflection</i>
<b>Intercept and track electronic vertical guidance</b> <i>Anticipates and accurately intercepts the glidepath, does not exceed 3/4 scale deflection</i>
<b>Terminal arrival area (TAA) procedure or course reversal</b> <i>Accurately flies the TAA procedure or course reversal as published or cleared by ATC</i>
<b>RNAV approach without vertical guidance</b> <i>No more than 3/4 scale deflection, continues to the missed approach point</i>
<b>Descent to the minimum descent altitude (MDA)</b> <i>Descends to the MDA and maintains +100 feet / -0 feet until the missed approach point</i>
<b>Identify the missed approach point</b> <i>Is able to accurately identify and appropriately respond to arrival at the missed approach point</i>
<b>Localizer approach</b> <i>No more than 3/4 scale deflection, continues to the missed approach point</i>
<b>Identify missed approach point using time from final approach fix (FAF)</b> <i>Appropriately uses time to navigate from the final approach fix to the missed approach point</i>
<b>Descend from MDA at visual descent point (VDP)</b> <i>Makes decision to descend below MDA at the VDP if visual cues are acquired</i>
<b>Execute missed approach procedure</b> <i>Initiates the missed approach promptly when the required visual references are not acquired by the MAP and conforms to the published or assigned alternate procedure</i>
<b>Transition to landing from an approach</b> <i>Makes a safe transition from the approach to landing touchdown</i>



***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

***Phase 5 completion standards:***

You have completed Phase 5 when you

- Consistently and safely control the airplane in all phases of an instrument approach
- Recognize when a missed approach is required and safely initiate missed approach procedures

**Instructor Notes:**

## **PHASE 6: Automation, ATC, and Other Approaches**

**Phase Objective:** During this phase you will

- Polish precision and nonprecision instrument approach procedures
- Discover use of the autopilot for instrument approaches
- Learn about using a circling maneuver to align with the landing runway
- Land from both straight-in and circling approaches
- Complete a progress check to ensure you can safely fly instrument approaches

**Phase Completion Standards:** The phase will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Fully understand instrument approach procedures
- Fly precision and nonprecision instrument approaches to meet the practical test standards
- Make required communications with ATC
- Understand procedures for loss of communications
- Maintain situational awareness during actual or simulated IMC flights
- Use the checklist throughout the flight and on the ground as necessary
- Make safety-conscious approach briefings
- Completed the Progress Check (Refer to page 2-47 for completion standards)

### **Web-based KNOWLEDGE** **INCORPORATING AUTOMATION** **VOR AND NDB APPROACHES** **ATC CLEARANCES, SERVICES, AND MORE APPROACHES** **ATC PROCEDURES**

#### **6.1 INCORPORATING AUTOMATION**

**Objective:** You will learn how automatic flight control systems work and how to use the one in your airplane to manage risk.

##### **6.1.1 Automatic Flight Control System (AFCS)**

How an Automatic Flight Control System (AFCS) Works  
Using an Automatic Flight Control System (AFCS)

#### **6.2 VOR AND NDB APPROACHES**

**Objective:** You will learn about VOR and NDB approach procedures.

##### **6.2.1 VOR Approaches**

VOR Approach

##### **6.2.2 Flying the NDB Approach**

NDB Approach

#### **6.3 ATC CLEARANCES, SERVICES, AND MORE APPROACHES**

**Objective:** You will know your responsibilities when operating under an IFR clearance and techniques for flying circle-to-land, contact and visual approaches.

##### **6.3.1 Clearances, Procedures, and Responsibilities**

Clearances  
IFR Clearances That Include VFR Conditions  
Radar Services in the Terminal Area  
Aeronautical Information Manual (AIM)

##### **6.3.2 Circling, Contact, and Visual Approaches**

Circling Approaches  
Contact and Visual Approaches

## **6.4 ATC PROCEDURES**

**Objective:** You will know what to do in the case of a communications failure.

### **6.4.1 ATC Procedures**

Increasing Traffic Flow  
Communications Failure  
Complete Radio Failure

## **FLIGHT LESSONS** **VOR/NDB APPROACHES** **CIRCLING APPROACHES** **MORE ILS AND NONPRECISION APPROACHES** ***\*PROGRESS CHECK\****

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 6-1**

**VOR Approaches**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

In this flight you will see how to prepare for the somewhat more imprecise VOR approach. You will see how to self-brief a VOR approach and set up your navigation equipment to fly it, and you will see how to fly the VOR course with as much precision as the system provides. You will learn to circle to land safely after you are in visual conditions. You will also learn how to safely execute a missed approach.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Using an Automatic Flight Control System
- \_\_\_ Loss of Communications
- \_\_\_ Emergency Instrument Procedures

**New This Flight:**

**U S F#**

- \_\_\_ VOR Approach and Missed Approach
- \_\_\_ Loss of Communications

**Improving Your Skills:**

**U S F#**

- \_\_\_ Approach Self-Briefing
- \_\_\_ Localizer Front Course

**Post Flight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can fly a VOR approach and missed approach. Prior to beginning the final approach segment you will maintain altitude within 100 feet, heading within 10° and allow less than full-scale deflection of the CDI, and airspeed within 10 knots. While on the final approach segment you will allow no more than three-quarter-scale deflection of the CDI and maintain the specified airspeed within 10 knots. You will maintain the MDA + 100 feet, -0 feet to the MAP. You will be able to recognize the MAP, and will be able to immediately execute the missed approach procedure if the runway environment is not in sight. When circling to land, you will not descend below the appropriate circling altitude until in a position from which a descent for normal landing can be made.

Total Time: 1.8 hrs. IFT: 1.5 hrs. GROUND: 1.0 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 6-2**

**Circling Approaches**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

In this flight you will discover how to prepare for a circling approach, and you will see how to self-brief a circling approach and set up your navigation equipment to fly it. You will also learn how to safely execute a missed approach.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Determining Circling Approach Minima
- \_\_\_ Circling Approach
- \_\_\_ Emergency Instrument Procedures
- \_\_\_ Loss of Communications

**New This Flight:**

**U S F#**

- \_\_\_ Missed Approach from a Circling Approach
- \_\_\_ Landing from a Circling Approach

**Improving Your Skills:**

**U S F#**

- \_\_\_ Approach Self-Briefing
- \_\_\_ GPS Approach
- \_\_\_ ILS Approach
- \_\_\_ VOR Approach and Missed Approach
- \_\_\_ Loss of Communications

**Post Flight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can fly a circling approach and missed approach and a circling approach and landing. Prior to beginning the final approach segment you will maintain altitude within 100 feet, heading and bearing within 10° and airspeed within 10 knots. While on the final approach segment you will allow a deviation of no more than 10° from the specified bearing and maintain the specified airspeed within 10 knots. You will maintain the MDA + 100 feet, -0 feet to the MAP. You will be able to recognize the MAP, and will be able to immediately execute the missed approach procedure if the runway environment is not in sight.

Total Time: 1.7 hrs. IFT: 1.4 GROUND: 1.0				ROUTE OF FLIGHT		A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT	ROUTING	TOTAL	S E L	M E L	DAY	NIGHT		NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC	DUAL			

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 6-3**

**More ILS and Non-Precision Approaches**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this flight you will learn how to prepare for and fly the most satisfying maneuver in the instrument environment, an ILS approach. You will learn proven techniques for pre-approach self-briefing, and flying the localizer course and glide slope with precision. You will also learn how to safely execute a missed approach.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Required ATC Communications
- \_\_\_ IFR Procedures and Reports
- \_\_\_ Emergency Instrument Procedures

**Improving Your Skills:**

**U S F#**

- \_\_\_ Constant Rate and Airspeed Descents
- \_\_\_ Approach and Self-Briefing
- \_\_\_ ILS Approach and Missed Approach

**Improving Your Skills (cont'd):**

**Partial Panel**

**U S F#**

- \_\_\_ Straight and Level Flight
- \_\_\_ Turns
- \_\_\_ Climbs
- \_\_\_ Descents
- \_\_\_ Timed Turns to Magnetic Headings
- \_\_\_ Compass Turns to Magnetic Headings
- \_\_\_ Unusual Attitude Recoveries

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have completed this lesson satisfactorily when you can fly an ILS approach to the decision height and then execute a missed approach. You will be able to maintain your altitude within 100 feet, heading within 10° and airspeed within 10 knots prior to beginning the final approach segment. You will be able to intercept the localizer and electronic glide slope, and allow less than full scale deflection of either needle. You will be able to maintain the specified airspeed within 10 knots while on the final approach segment. You will also be able to execute the missed approach procedure at the DH if the runway environment is not in sight.

Total Time: 1.7 hrs. IFT: 1.4 GROUND: 1.0				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME						GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 6 Ground Training Checklist:

Using an automatic flight control system
Determining circling approach minima
Circling approach
Required ATC communications
Loss of communications

## Phase 6 Proficiency Checklist:

<b>Single-pilot resource management</b> <i>Utilizes all resources available to ensure the successful completion of the flight</i>
<b>Preflight preparation</b> <i>Utilizes all resources necessary and current publications to prepare for the IFR flight, including research of published NOTAMS for any updates to approach minimums</i>
<b>Checklist usage</b> <i>Uses checklists for all phases of flight</i>
<b>Communication with ATC</b> <i>Is able to respond to and understand ATC calls</i>
<b>Compliance with ATC clearance</b> <i>Understands, confirms, and flies clearances. Queries ATC if clearance may compromise safety</i>
<b>Departure procedures</b> <i>Follows instructor, ATC, or published procedures ensuring obstacle clearance</i>
<b>Approach briefing</b> <i>Makes an adequate, concise approach briefing to include missed approach point and procedures</i>
<b>Terminal Arrival Area (TAA) procedure or course reversal</b> <i>Accurately flies the TAA or course reversal as published or cleared by ATC</i>
<b>VOR/NDB approach</b> <i>No more than 3/4 scale deflection, continues from the MDA or makes a missed approach</i>
<b>Descend to minimum descent altitude (MDA)</b> <i>Descends to +100 feet / -0 feet of MDA and flies to the missed approach point</i>
<b>Identify the missed approach point (MAP)</b> <i>Identifies the MAP and makes a decision to continue below minimums or execute a missed approach</i>
<b>Circling approach</b> <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Determine circling minima</b> <i>Correctly determines approach category and required distance to maintain from runway</i>
<b>Select and fly circling maneuver</b> <i>Selects and complies with the appropriate circling approach procedure considering turbulence, wind shear, and maneuvering capabilities of aircraft</i>
<b>Execute missed approach during circling approach</b> <i>Executes a safe missed approach procedure if sight of the runway is lost</i>
<b>Transition to landing from a circling approach</b> <i>Does not exceed visibility criteria or descend below the circling altitude until a position from which a descent to a normal landing can be made</i>
<b>Holding procedures</b> <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Loss of communications</b> <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Precision approach</b> <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Nonprecision approach</b> <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Execute missed approach procedure</b> <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Transition to landing from a straight-in approach</b> <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>

***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

***Phase 6 completion standards:***

You have completed Phase 6 when you

- Fully understand instrument approach procedures
- Fly precision and nonprecision instrument approaches to meet the practical test standards
- Make required communications with ATC
- Understand procedures for loss of communications
- Maintain situational awareness during actual or simulated IMC flights
- Use the checklist throughout the flight and on the ground as necessary
- Make safety-conscious approach briefings

**Instructor Notes:**



Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 6A-4**

**Progress Check**

**Dual-Local**

**Platform:** G1000

**Lesson Objectives:**

In this Progress Check, you will demonstrate your skill in self-briefing and executing instrument approaches, missed approaches, and circle to land maneuvers. You will also demonstrate your knowledge of lost communication procedures.

**Content:**

**Testing your skills:**

**Preflight Discussion and Mission Brief**

**U S F#**

- \_\_\_ Automatic Flight Control System
- \_\_\_ Determining Descent Profile
- \_\_\_ Determining Required Circling Approach Minima
- \_\_\_ Loss of Communications
- \_\_\_ Required ATC Communications

**In Flight:**

**U S F#**

- \_\_\_ ATC Communications
- \_\_\_ Holding Procedures
- \_\_\_ Approach and Self-Briefing
- \_\_\_ ILS Approach and Missed Approach
- \_\_\_ GPS Approach (If Aircraft Equipped) and Missed Approach
- \_\_\_ VOR Approach with Circle to Land
- \_\_\_ Loss of Communications

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have completed this progress check satisfactorily when you execute ILS, GPS, and VOR approaches with straight in landings, circle to land, and missed approaches. Prior to final approach you will maintain altitudes within 100 feet, headings within 10°, airspeed within 10 knots, and CDI deflection less than full scale. On final or non-precision approaches, you will maintain no more the three-quarters scale deflection of the CDI and airspeed within 10 knots. On final for ILS approaches you will maintain no more the three-quarter scale deflection of either the localizer or glide slope indicators and airspeed within 10 knots. Upon reaching the MDA or circling altitude, you will maintain +100 feet and -0 feet. You will demonstrate your knowledge of lost communication procedures. Throughout the flight you will adhere to accepted procedures, and demonstrate good technique and judgment.

Total Time: 2.2 hrs. IFT: 1.9 hrs. GROUND: 1.0 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 6A-5**

**Progress Check**

**Dual-Local**

**Platform:** Analog

**Lesson Objectives:**

In this Progress Check, you will demonstrate your skill in self-briefing and executing instrument approaches, missed approaches, and circle to land maneuvers. You will also demonstrate your knowledge of lost communication procedures.

**Content:**

**Testing your skills:**

**Preflight Discussion and Mission Brief**

**U S F#**

- \_\_\_ Automatic Flight Control System
- \_\_\_ Determining Descent Profile
- \_\_\_ Determining Required Circling Approach Minima
- \_\_\_ Loss of Communications
- \_\_\_ Required ATC Communications

**In Flight:**

**U S F#**

- \_\_\_ ATC Communications
- \_\_\_ Holding Procedures
- \_\_\_ Approach and Self-Briefing
- \_\_\_ ILS Approach and Missed Approach
- \_\_\_ GPS Approach (If Aircraft Equipped) and Missed Approach
- \_\_\_ VOR Approach with Circle to Land
- \_\_\_ Loss of Communications

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have completed this progress check satisfactorily when you execute ILS, GPS, and VOR approaches with straight in landings, circle to land, and missed approaches. Prior to final approach you will maintain altitudes within 100 feet, headings within 10°, airspeed within 10 knots, and CDI deflection less than full scale. On final or non-precision approaches you will maintain no more the three-quarters scale deflection of the CDI and airspeed within 10 knots. On final for ILS approaches you will maintain no more the three-quarter scale deflection of either the localizer or glide slope indicators and airspeed within 10 knots. Upon reaching the MDA or circling altitude, you will maintain +100 feet and -0 feet. You will demonstrate your knowledge of lost communication procedures. Throughout the flight you will adhere to accepted procedures and demonstrate good technique and judgment.

Total Time: 2.2 hrs. IFT: 1.9 hrs. GROUND: 1.0 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

### Phase 6 \*Progress Check\*- Oral:

Instrument approach procedures
Single-pilot resource management
Loss of communications
Departure procedures
Holding procedures
Required ATC communications
Emergency operations

### Phase 6 \*Progress Check\*- Flight:

Single-pilot resource management <i>Utilizes all resources available to ensure the successful completion of the flight</i>
Preflight preparation <i>Utilizes all resources necessary and current publications to prepare for the IFR flight, including research of published NOTAMs for any updates to approach minimums</i>
Checklist usage <i>Utilizes checklist during all ground and flight operations</i>
Instrument cockpit check <i>Performs and ensures airplane is fit for IFR flight</i>
Communication with ATC <i>Is able to respond to and understand ATC calls</i>
Compliance with ATC clearances <i>Understands, confirms, and flies clearances. Queries ATC if clearance may compromise safety</i>
Departure procedures <i>Follows instructor, ATC, or published procedures ensuring obstacle clearance</i>
Holding procedures <i>Uses correct entry and communication procedures and flies a stable holding pattern</i>
Approach briefing <i>Briefs approaches before FAF</i>
Terminal arrival area (TAA) procedure or course reversal <i>Accurately flies the TAA or course reversal as published or cleared by ATC</i>
Precision approach <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Nonprecision approach <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Circling approach <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Execute missed approach procedures <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Landing from a straight-in or circling approach <i>Approach to landing and touchdown are safe and utilize normal procedures conforming to PTS</i>
Loss of communications <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>

### Phase 6 \*Progress Check\* completion standards:

You have completed the Phase 4 \*Progress Check\* when you

- Perform and understand all preparation necessary for IFR flight
- Can safely perform instrument approach procedures to meet the practical test standards
- Apply single-pilot resource management
- Demonstrate to the check instructor that the safety of flight is never in doubt

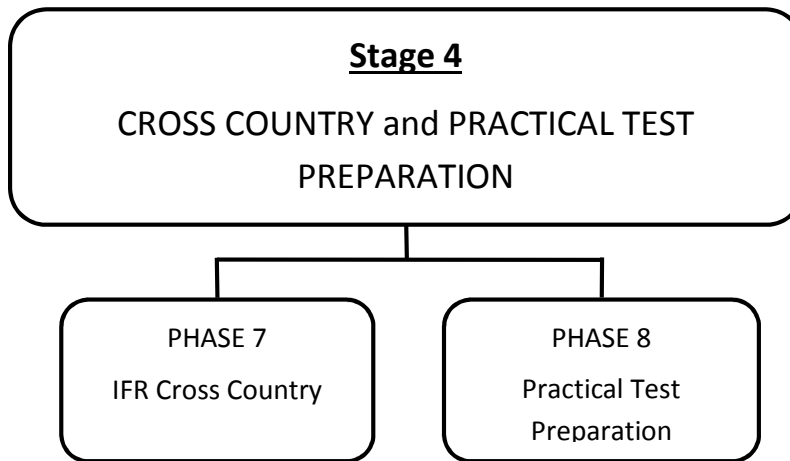
***I certify the above line items in the Progress Check Checklist have been satisfactory completed within the standards of this phase.***

Customer Signature: \_\_\_\_\_

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

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

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



### **Stage 4 consists of two Phases**

- IFR Cross Country
- Practical Test Preparation

**Stage Objective:** During this stage you will

- File an IFR flight plan and receive an IFR clearance
- Fly cross country on an instrument flight plan
- Complete FAA IFR cross-country requirements
- Safely control the airplane using proper instrument cross-check and interpretation
- Polish all instrument flying skills
- Review for the oral and flight portion of the practical test
- Fly with a check instructor to check your readiness for the FAA practical test

**Stage Completion Standards:** The stage will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items encompassed in the phases that comprise the stage.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phases that make up the stage.
  - Each phase contains **Web-based Knowledge Instruction**
    - The web-based knowledge instruction for the phase will be completed prior to starting the flight scenarios to ensure fundamental knowledge before the flight.

Each phase contains multiple **Flight Lessons** that can be customized for the local training environment and repeated if necessary.

## **PHASE 7: IFR Cross Country**

**Phase Objective:** During this phase you will

- Safely plan and conduct IFR cross-country flights
- Meet the FAA requirements for cross-country training

**Phase Completion Standards:** The phase will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Complete FAA IFR cross-country requirements
- Maintain situational awareness during actual or simulated IMC flights
- Use the checklist throughout the flight and on the ground as necessary
- Make safety-conscious approach briefings

### **Web-based KNOWLEDGE INSTRUCTION**

#### **PROCEDURES FOR FLYING CROSS-COUNTRY IFR PLANNING YOUR CROSS-COUNTRY FLIGHT SAFETY TIPS AND TOOLS**

##### **7.1 PROCEDURES FOR FLYING CROSS COUNTRY IFR**

**Objective:** You will know how to fly cross-country under instrument flight rules.

###### **7.1.1 Cross-Country IFR**

Radar Procedures and Services Enroute  
IFR Procedures and Reports

##### **7.2 PLANNING YOUR CROSS-COUNTRY FLIGHT**

**Objective:** You will discover the wealth of resources available to help you plan a safe IFR cross-country flight.

###### **7.2.1 IFR Cross-Country Planning**

Airport/Facility Directory  
Gathering Weather Information  
Preflight Planning  
IFR Flight Plan

##### **7.3 SAFETY TIPS AND TOOLS**

**Objective:** You will gain insight on how to enhance safety during ground, departure, and arrival phases of your IFR flight.

###### **7.3.1 Tips and Tools**

Visual Illusions  
Aeromedical Factors and Oxygen Rules  
Avoiding Other Aircraft  
Arriving IFR at a Non-Towered Airport  
Flying Across Pressure and Temperature Changes  
Avoiding Special Hazards at Airports  
Visual Glideslope Indicators  
Airport Signs and Markings  
Flying in Icing Conditions  
Operating the Autopilot During IFR Flight

###### **7.3.2 Risk Management**

Personal Minimums  
PAVE Checklist  
CARE Checklist  
Two Rules for Safe IFR Flying

## FLIGHT LESSONS

### FLYING AN IFR CROSS COUNTRY APPROACH WITH LOSS OF PRIMARY FLIGHT INSTRUMENTS LONG IFR CROSS COUNTRY

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 7-1**

**Flying an IFR Cross-Country**

**Dual-Cross-Country**

**Platform:** Any

**Lesson Objectives:**

During this flight you will plan and fly a cross-country flight of at least 50 nautical miles under IFR. You will fly an instrument approach at each airport, and use three different kinds of approaches with the use of navigation systems. You will also see how to test and use an autopilot during IFR flight if your airplane is equipped.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Weather Information
- \_\_\_ Cross Country Flight Planning

**Testing Your Skills:**

**U S F#**

- \_\_\_ Cross-Country
- \_\_\_ Autopilot Use (If Aircraft Equipped)

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you have conducted the assigned cross-country flight under IFR. You will be able to follow ATC instructions and conduct instrument approaches that meet the criteria of the FAA Instrument Rating Practical Test Standards.

Total Time: 2.1 hrs. IFT: 1.7 hrs. X-CNTRY: 1.8 hrs. GROUND: 2.0 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME						GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 7-2**

**Approach with Loss of Primary Flight Instruments**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this lesson you will demonstrate your IFR skills with an emphasis on partial panel instrument approaches. You will also have an opportunity to improve your skills by flying different types of precision and non-precision approaches. While flying approaches, you will meet the criteria of the FAA Instrument Rating Practical Test Standards.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Loss of Primary Flight Instruments
- \_\_\_ Emergency Procedures

**New This Flight:**

**U S F#**

- \_\_\_ Approach Self-Briefing
- \_\_\_ ILS Approach and Missed Approach (Partial Panel)
- \_\_\_ Localizer Approach and Missed Approach (Partial Panel)
- \_\_\_ GPS Approach (If Aircraft Equipped) and Missed Approach (Partial Panel)
- \_\_\_ VOR Approach with Circle to Land (Partial Panel)

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you can fly each type of instrument approach while consistently meeting the criteria of the FAA Instrument Rating Practical Test Standards.

Total Time: 1.8 hrs. IFT: 1.5 hrs. GROUND: 1.0 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC		

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).



Cessna Instrument Rating Course

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 7-3**

**Long IFR Cross-Country**

**Dual-Cross-Country**

**Platform:** Any

**Lesson Objectives:**

During this lesson you will plan and fly a cross-country flight of at least 250 nautical miles under IFR. You will plan one segment to be a straight-line distance of at least 100 nautical miles between airports. You will fly an instrument approach at each airport while making sure that you include at least three different kinds of instrument approaches during the flight.

**Content:**

**Preflight Discussion**

**U S F#**

- \_\_\_ Weather Information
- \_\_\_ Cross Country Flight Planning

**New This Flight:**

**U S F#**

- \_\_\_ Long Cross-Country

**Improving Your Skills:**

**U S F#**

- \_\_\_ Air Traffic Control Clearances Procedures

**Improving Your Skills (cont'd):**

**U S F#**

- \_\_\_ Departure Procedures (DPs)
- \_\_\_ VOR Radial Interception and Tracking
- \_\_\_ Approach Self-Briefing
- \_\_\_ Precision/Non-Precision Approach and Missed Approach
- \_\_\_ Loss of Communications

**Postflight Discussion**

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have satisfactorily completed this lesson when you have planned and conducted the assigned cross-country flight under IFR. You will be able to follow ATC instructions and procedures and conduct approaches satisfying the criteria of the FAA Instrument Rating Practical Test Standards.

Total Time: 3.5 hrs. IFT: 3.0 hrs. X-CNTRY: 3.2 hrs. GROUND: 1.0 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 7 Ground Training Checklist:

Cross-country planning procedures

Filing an IFR flight plan and alternate planning

IFR procedures and reports

## Phase 7 Proficiency Checklist:

### Single-pilot resource management

*Utilizes all resources available to ensure the successful completion of the flight*

#### Task management

*Prioritizes and completes tasks, executes checklists in a manner that minimizes distraction from flying the airplane*

#### Automation management

*Use the autopilot to reduce workload as appropriate*

#### Situational awareness

*Utilizes and monitors available resources to maintain situational awareness*

### Preflight procedures

#### Cross-country planning procedures

*Uses all appropriate resources to plan for cross-country flight*

### In-flight

#### Communications with ATC

*Is able to respond to and understand ATC calls*

#### Compliance with ATC clearances

*Follows instructor, ATC, or published procedures ensuring obstacle clearance*

#### Required ATC reports

*Makes any required reports*

#### Intercepting and tracking navigational systems

*Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library*

#### Precision approach

*Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library*

#### Nonprecision approach

*Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library*

#### Precision approach with the loss of primary flight instruments

*Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library*

#### Nonprecision approach with the loss of primary flight instruments

*Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library*

#### Landing from a straight-in or circling approach

*Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library*

#### Autopilot use

*Can engage/manipulate the appropriate functions of the autopilot and monitor its operation*

#### Compliance with departure, en route, and arrival procedures

*Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library*

#### Alternator failure in IMC

*Takes prompt, decisive action to deal with and mitigate this emergency*

#### No-flap approach and landing

*Evaluates conditions, runway suitability, and makes the adjustments necessary for successful landing*

***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

### **Phase 7 completion standards:**

You have completed Phase 7 when you

- Complete FAA IFR cross-country requirements
- Maintain situational awareness during actual or simulated IMC flights
- Use the checklist throughout the flight and on the ground as necessary
- Make safety-conscious approach briefings

## **PHASE 8: Practical Test Preparation**

**Phase Objective:** During this phase you will

- Review all required material in preparation for the practical test
- Meet or exceed the Instrument Rating Practical Test Standards (PTS)

**Phase Completion Standards:** The phase will be completed successfully:

- When the customer has demonstrated a satisfactory completion level of all knowledge and performance items covered in the phase.
- When the customer answers all of the questions correctly on the Web-based Knowledge quiz for each ground lesson within the phase.
- Meet the standards outlined in the Instrument Rating Practical Test Standards.
- Completed the Progress Check (Refer to page 2-75 for completion standards)

### **Web-based KNOWLEDGE**

#### **ACHIEVING YOUR INSTRUMENT RATING**

##### **8.1 ACHIEVING YOUR INSTRUMENT RATING**

**Objectives:** You will know how to pass your practical test and use your instrument rating.

###### **8.1.1 Instrument Rating Practical Test**

Passing the Test  
Your New Rating

### **FLIGHT LESSONS**

#### **POLISHING ALL IFR SKILLS *\*FINAL PROGRESS CHECK\****

\*Flight lessons will be repeated as necessary to reach the desired proficiency\*

\*\* The desired proficiency will be will be graded by the instructor as Satisfactory marked with an “S” in conjunction with each line item. If the item is found to be Unsatisfactory, the item will be marked “U” and will be repeated until the item is found to be Satisfactory. The lesson number “F#” will also be referenced upon the item being satisfactorily completed\*\*

Flight Lesson for: \_\_\_\_\_

**Flight Lesson 8-1**

**Polishing All IFR Skills**

**Dual-Local**

**Platform:** Any

**Lesson Objectives:**

During this lesson, your instructor will evaluate your performance and determine which areas (if any) need additional practice to bring your performance to the level required by the FAA Instruments Rating Practical Test Standards.

**Content:**

**Testing Your Skills:**

**Preflight and Mission Briefing:**

**U S F#**

- \_\_\_ Icing Condition, Operation Hazards, and Anti-Icing and De-Icing Equipment
- \_\_\_ Emergency Operations
- \_\_\_ Minimum Equipment
- \_\_\_ Aeromedical Factors
- \_\_\_ Supplemental Oxygen

**Pilot Qualifications**

**U S F#**

- \_\_\_ Certificate and Documents

**Preflight, Cross-Country Flight Planning, ATC Procedures and Clearances, IFR Regulations, Weather Information, Airworthiness, and Safety of Flight**

**U S F#**

- \_\_\_ IFR Preflight Inspections
- \_\_\_ Basic Aerodynamics
- \_\_\_ FARs and NTSB 830
- \_\_\_ Weather Information
- \_\_\_ Basic VFR Weather Minimums
- \_\_\_ IFR Cross-Country Flight Planning and Navigation
- \_\_\_ Aircraft Performance and Limitations
- \_\_\_ Weight and Balance
- \_\_\_ Flight Publications
- \_\_\_ Enroute Charts
- \_\_\_ Approach Charts
- \_\_\_ The National Airspace System
- \_\_\_ Obtaining IFR Clearance
- \_\_\_ IFR Takeoff Procedures
- \_\_\_ IFR Departure Procedures
- \_\_\_ IFR Enroute Procedures
- \_\_\_ IFR Arrival Procedures
- \_\_\_ IFR Approach Procedures

**Aircraft Systems**

**U S F#**

- \_\_\_ Operation of Systems: Airframe, Avionics Engine, Propeller, Fuel, Flight instruments, Brakes, Environmental, and Electrical System

**Special Emphasis Areas:**

**U S F#**

- \_\_\_ Positive Aircraft Control
- \_\_\_ Positive Exchange of Controls
- \_\_\_ Stall Spin Awareness
- \_\_\_ Collision Avoidance
- \_\_\_ Wake Turbulence Avoidance
- \_\_\_ Land and Hold Short Operation
- \_\_\_ Runway Incursion Avoidance
- \_\_\_ Checklist Usage
- \_\_\_ SRM

## Testing Your Skills (Cont.):

### U S F#

- \_\_\_ Preflight Preparation
- \_\_\_ Preflight Inspection
- \_\_\_ Taxi Checks
- \_\_\_ Instrument Cockpit Check
- \_\_\_ VOR Test
- \_\_\_ Before Takeoff Check and Engine Runup
- \_\_\_ Departing on Instruments
- \_\_\_ Air Traffic Control Clearances and Procedures

## Basic Instrument Flight Maneuvers

### U S F#

- \_\_\_ Straight and Level
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes in Level Flight
- \_\_\_ Standard Rate Level Altitude Turn
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents

## Performance Maneuvers

### U S F#

- \_\_\_ Steep Turns (45° bank, 360° turn)

## Stalls

### U S F#

- \_\_\_ Stall Recoveries

## Loss of Communication

### U S F#

- \_\_\_ Loss of Communications

## Navigation Systems

### U S F#

- \_\_\_ VOR Orientation
- \_\_\_ VOR Radial Interception and Tracking
- \_\_\_ GPS Orientation (if aircraft equipped)
- \_\_\_ GPS Bearing Interception and Tracking (if aircraft equipped)

## Holding Procedures

### U S F#

- \_\_\_ Holding Patterns and Entries
- \_\_\_ Wind Corrections in Holding Patterns
- Must perform at least one type of holding**
- \_\_\_ VOR Holding,
- \_\_\_ GPS Holding (if aircraft equipped),
- \_\_\_ Intersection Holding,
- \_\_\_ Holding with DME legs (if aircraft equipped).

## Instrument Procedures and DME Arcs

### U S F#

- \_\_\_ Terminal Arrival Area, Procedure Turn, and/or DME arc (if aircraft equipped)

## Precision Approaches

### U S F#

- \_\_\_ Approach Self-Briefing
- Must perform at least one Precision Approach**
- \_\_\_ ILS Approach and Missed Approach
- \_\_\_ GPS Approach with vertical guidance (if equipped) and Missed Approach

## Nonprecision Approaches

### U S F#

- \_\_\_ Approach Self-Briefing
- Must perform at least two Nonprecision Approaches. One Nonprecision Approach must be performed partial panel.**
- \_\_\_ Localizer Front Course and Missed Approach
- \_\_\_ VOR Approach and Circle to Land
- \_\_\_ GPS Approach without vertical guidance (if equipped) and Missed Approach

## *Instrument Flight Maneuvers with Loss of Primary Flight Instrument Indicators*

### U S F#

- \_\_\_ Unusual Attitude Recoveries
- \_\_\_ Timed Turns to Magnetic Headings
- \_\_\_ Compass Turns to Magnetic Headings

## Postflight Procedure

U S F#

\_\_\_ Postflight Procedures

## Postflight Discussion

*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

### Completion Standards:

You will have satisfactorily completed this lesson when you can perform each maneuver and procedure at the level required to meet the FAA Instrument Rating Practical Test Standards.

Total Time: 2.3 hrs. IFT: 2.0 hrs. GROUND: 2.5 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X- CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 8 Ground Training Checklist:

Special emphasis areas
Single-pilot resource management
Pilot qualifications
Weather information
Cross-country flight planning
Airplane systems related to IFR operations
Airplane flight instruments and navigation equipment
Instrument cockpit check
Terminal Publication Procedures (TPP)
Aeronautical decision making
Risk management
Task management
Situational awareness
Controlled flight into terrain awareness
Automation management
Crew resource management
Use of checklists
Use of distractions during practical test
Positive exchange of flight controls
Attitude instrument flying
Emergency instrument procedures

## Phase 8 Proficiency Checklist:

<b>Single-pilot resource management (SRM)</b> <i>Utilizes all resources available to ensure the successful completion of the flight</i>
<b>Preflight procedures</b>
Preflight preparation <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Instrument cockpit check <i>Performs preflight on instruments, avionics, and navigation equipment</i>
Checklist usage <i>Utilizes checklist during all ground and flight operations</i>
<b>In-flight</b>
Communication with air traffic control and clearances <i>Is able to respond to and understand ATC calls and clearances and make required reports</i>
Compliance with departure, en route, and arrival procedures and clearances <i>Follows clearances and assigned published procedures</i>
Holding procedures <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Basic instrument flight maneuvers <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Recovery from unusual flight attitudes <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Intercepting and tracking navigational systems and DME arcs <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Nonprecision approach (NPA) <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Precision approach (PA) <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Missed approach <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Circling approach <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>

Landing from a straight-in or circling approach <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Emergency operations — Loss of communications <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Emergency operations — Approach with loss of primary flight instrument indicators <i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Postflight procedures</b>
Checking instrument and equipment <i>Notes all flight equipment for proper operation and documents malfunctions</i>

***I certify the above line items in the Ground Training and Proficiency Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**CFI Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

***Phase 8 completion standards:***

You have completed Phase 8 when you

- Meet the standards outlined in the Instrument Rating Practical Test Standards.



Flight Lesson for: \_\_\_\_\_

**Flight Lesson 8A-2**

**Final Progress Check**

**Dual-Local**

**Platform:** G1000 or Analog

**Lesson Objectives:**

During the briefing you will take your Oral Exam to make sure you are ready for the ground portion of the FAA Instruments Rating Practical Test Standards. This is the time to discuss any questions you have with your instructor. During the flight you should demonstrate Instrument rating proficiency in all your flying. In addition, you will exhibit sound judgment in decision making. It is recommended that this Progress Check be conducted by the Chief/Assistant Chief Flight Instructor.

**Content:**

**Testing Your Skills:**

**Preflight and Mission Briefing:**

**Pilot Qualifications**

**U S F#**

- \_\_\_ Certificate and Documents

**Preflight, Cross-Country Flight Planning, ATC Procedures and Clearances, IFR Regulations, Weather Information, Airworthiness, and Safety of Flight**

**U S F#**

- \_\_\_ IFR Preflight Inspections
- \_\_\_ Basic Aerodynamics
- \_\_\_ FARs and NTSB 830
- \_\_\_ Weather Information
- \_\_\_ Basic VFR Weather Minimums
- \_\_\_ IFR Cross-Country Flight Planning and Navigation
- \_\_\_ Aircraft Performance and Limitations
- \_\_\_ Weight and Balance
- \_\_\_ Flight Publications
- \_\_\_ Enroute Charts
- \_\_\_ Approach Charts
- \_\_\_ The National Airspace System
- \_\_\_ Obtaining IFR Clearance
- \_\_\_ IFR Takeoff Procedures
- \_\_\_ IFR Departure Procedures
- \_\_\_ IFR Enroute Procedures

**U S F#**

- \_\_\_ IFR Arrival Procedures
- \_\_\_ IFR Approach Procedures
- \_\_\_ Icing Condition, Operation Hazards, and Anti-Icing and De-Icing Equipment
- \_\_\_ Emergency Operations
- \_\_\_ Minimum Equipment
- \_\_\_ Aeromedical Factors
- \_\_\_ Supplemental Oxygen

**Aircraft Systems**

**U S F#**

- \_\_\_ Operation of Systems: Airframe, Avionics Engine, Propeller, Fuel, Flight instruments, Brakes, Environmental, and Electrical System

**Special Emphasis Areas:**

**U S F#**

- \_\_\_ Positive Aircraft Control
- \_\_\_ Positive Exchange of Controls
- \_\_\_ Stall Spin Awareness
- \_\_\_ Collision Avoidance
- \_\_\_ Wake Turbulence Avoidance
- \_\_\_ Land and Hold Short Operation
- \_\_\_ Runway Incursion Avoidance
- \_\_\_ Checklist Usage
- \_\_\_ SRM

aircraft equipped)

### Testing Your Skills (Cont.):

**U S F#**

- \_\_\_ Preflight Preparation
- \_\_\_ Preflight Inspection
- \_\_\_ Taxi Checks
- \_\_\_ Instrument Cockpit Check
- \_\_\_ VOR Test
- \_\_\_ Before Takeoff Check and Engine Runup
- \_\_\_ Departing on Instruments
- \_\_\_ Air Traffic Control Clearances and Procedures

### Basic Instrument Flight Maneuvers

**U S F#**

- \_\_\_ Straight and Level
- \_\_\_ Trimming
- \_\_\_ Airspeed Changes in Level Flight
- \_\_\_ Standard Rate Level Altitude Turn
- \_\_\_ Constant Airspeed Climbs and Descents
- \_\_\_ Constant Rate Climbs and Descents
- \_\_\_ Turning Climbs and Descents

### Performance Maneuvers

**U S F#**

- \_\_\_ Steep Turns (45° bank, 360° turn)

### Stalls

**U S F#**

- \_\_\_ Stall Recoveries

### Loss of Communication

**U S F#**

- \_\_\_ Loss of Communications

### Navigation Systems

**U S F#**

- \_\_\_ VOR Orientation
- \_\_\_ VOR Radial Interception and Tracking
- \_\_\_ GPS Orientation (if aircraft equipped)
- \_\_\_ GPS Bearing Interception and Tracking (if

### Holding Procedures

**U S F#**

- \_\_\_ Holding Patterns and Entries
- \_\_\_ Wind Corrections in Holding Patterns  
**Must perform at least one type of holding**
- \_\_\_ VOR Holding,
- \_\_\_ GPS Holding (if aircraft equipped),
- \_\_\_ Intersection Holding,
- \_\_\_ Holding with DME legs (if aircraft equipped).

### Instrument Procedures and DME Arcs

**U S F#**

- \_\_\_ Terminal Arrival Area, Procedure Turn, and/or DME arc (if aircraft equipped)

### Precision Approaches

**U S F#**

- \_\_\_ Approach Self-Briefing  
**Must perform at least one Precision Approach**
- \_\_\_ ILS Approach and Missed Approach
- \_\_\_ GPS Approach with vertical guidance (if equipped) and Missed Approach

### Nonprecision Approaches

**U S F#**

- \_\_\_ Approach Self-Briefing  
**Must perform at least two Nonprecision Approaches. One Nonprecision Approach must be performed partial panel.**
- \_\_\_ Localizer Front Course and Missed Approach
- \_\_\_ VOR Approach and Circle to Land
- \_\_\_ GPS Approach without vertical guidance (if equipped) and Missed Approach

### Instrument Flight Maneuvers with Loss of Primary Flight Instrument Indicators

**U S F#**

- \_\_\_ Unusual Attitude Recoveries
- \_\_\_ Timed Turns to Magnetic Headings
- \_\_\_ Compass Turns to Magnetic Headings

**Postflight Procedure**

**U S F#**

\_\_\_ Postflight Procedures

**Postflight Discussion**

- Customer has satisfactorily completed this check ride briefing
- The customer may be permitted to take the FAA flight check
- The customer needs further instruction on one or more items on the Final Progress Check, and must complete a flight check with a check-pilot and show competency in the areas of deficiency before progression to the FAA flight check.
- Additional training completed and customer permitted to take the FAA flight check.

*\*Upon the satisfactory completion of each line item, the flight number (F#) will be cited in conjunction.*

**Completion Standards:**

You will have completed this briefing satisfactorily when you exhibit the knowledge requirements outlined in the Instrument Rating Practical Test Standards. In addition, you must have a clear understanding of the factors affecting good judgment. Additional instruction will be assigned, if necessary, to meet the course completion standards.

Total Time: 2.3 hrs. IFT: 2.0 hrs. GROUND: 2.5 hrs.				ROUTE OF FLIGHT	TOTAL	A/C CLASS		LANDINGS		A T D	TYPE OF PILOTING TIME							GROUND	CFI SIG.	
F#	DATE	A/C MAKE & MODEL	A/C IDENT			ROUTING	S E L	M E L	DAY		NIGHT	NIGHT	ACT INST.	SIM INST	APPCH	X-CNTRY	PIC			DUAL

**Customer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**CFI Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* The instructor and customer will sign and date the bottom of this page upon the completion of this lesson (Final Lesson).

## Phase 8 *\*Progress Check\*- Oral:*

Special emphasis areas
Single-pilot resource management
Pilot qualifications
Weather information
Cross-country flight planning
Airplane systems related to IFR operations
Airplane flight instruments and navigation equipment
Instrument cockpit check
Terminal Publication Procedures (TPP)

## Phase 8 *\*Progress Check\*- Flight:*

<b>Single-pilot resource management (SRM)</b>
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Preflight procedures</b>
Preflight preparation
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Instrument cockpit check
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Checklist usage
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>In-flight</b>
Communication with air traffic control and clearances
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Compliance with departure, en route, and arrival procedures and clearances
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Holding procedures
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Basic instrument flight maneuvers
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Recovery from unusual flight attitudes
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Nonprecision approach (NPA)
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<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Landing from a straight-in or circling approach
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Emergency operations
— Loss of communications
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
Emergency operations
— Approach with loss of primary flight instrument indicators
<i>Refer to Instrument Rating Practical Test Standards (FAA-S-8081-4E) in the course Library</i>
<b>Postflight procedures</b>
Checking instrument and equipment

**Phase 8 \*Progress Check\* completion standards:**

You have completed the Phase 8 \*Progress Check\* when you

- Demonstrate the aeronautical knowledge and skill to safely perform at or above the practical test standards and demonstrate sound decision-making.
- Have demonstrated your ability as an instrument rated pilot

***I certify the above line items in the Progress Check Checklist have been satisfactory completed within the standards of this phase.***

**Customer Signature:** \_\_\_\_\_

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

**CFI Signature:** \_\_\_\_\_

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