

**CIRRUS PILOT**  
**TRAINING SYLLABUS**  
**CIRRUS PERSPECTIVE DIFFERENCES**  
**IFR EDITION**



PLANE GENIUS®

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# IFR Cirrus Perspective Differences Training Syllabus

## Cirrus SR22, SR22 Turbo

**Edition 1  
June, 2008**

**Course Pending FITS Acceptance**

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## Introduction

Welcome to the IFR edition of the Cirrus Perspective Differences course. This course is designed to transition current and proficient Cirrus pilots from a Cirrus aircraft with Avidyne avionics into a Cirrus aircraft installed with the Cirrus Perspective avionics system. Pilots that have previously completed transition training in the *same model* of Cirrus aircraft equipped with an Avidyne PFD and MFD should use this course to learn the operational differences of the Cirrus Perspective avionics system with a high level of instrument competency.

This differences course will teach you the unique operating procedures of the Cirrus Perspective avionics for both normal and abnormal situations. Cirrus pilots will complete an Instrument Proficiency Check (IPC) in conjunction with the final evaluation lesson and will leave the training event current - and more importantly *proficient* - while flying IFR with the Cirrus Perspective avionics package. Upon successful completion of all course objectives, your instructor will issue you a certificate of completion and a course summary detailing flight and ground time acquired during this course.

Specific differences training prerequisites are detailed in this document. It is important to complete all prerequisites prior to starting transition training to ensure a timely and successful completion of the course.

The IFR edition of the Cirrus Perspective Differences course is designed to take approximately three (3) days to complete. Timely completion of this course is dependent on the performance and proficiency of the Cirrus pilot and completion of the required prerequisites. The Cirrus pilot must be aware that the differences course does not include a test or a check ride, but each lesson is an instructional service designed to assess and further improve the pilot's knowledge and skills.

All Cirrus pilots should follow the recurrent training schedule outlined in the Cirrus Pilot Learning Plan after successful completion of this training event.

The course incorporates effective and proven training techniques developed in conjunction with the FAA Industry Training Standards (FITS). Emphasis is placed on developing judgment, aeronautical decision making, risk management and single pilot resource management throughout the entire course through the use of scenario based training.

## Pre-Training Assignments

Successful on-schedule completion of the Differences course is heavily dependent on devoting the proper amount of time to reviewing and studying the pre-training material.

Please review the material you have received in your training kit and as listed in the “References” section of this document.

Since this course is heavily focused on instrument procedures and scenarios, all pilots need to fully understand the regulations and procedures that pertain to instrument flight prior to beginning the course. UNDAF and Cirrus Design recommend that Cirrus pilots complete the *Instrument Proficiency Check Review Guide* from the FAA Safety Team (FAAST) and bring a certificate of completion to the differences training. The course can be found at:

[http://www.faasafety.gov/gslac/ALC/course\\_catalog.aspx](http://www.faasafety.gov/gslac/ALC/course_catalog.aspx).

## Syllabus Overview

The IFR edition of the Differences course is composed of 10 required lessons and 1 optional lesson. The course should take approximately 5 days to complete the required lessons and additional time as required to complete the ground portion of the optional BFR.

The training program includes instruction on normal and emergency procedures as well as proven standard operating procedures developed by UNDAF and Cirrus Design. Aeronautical decision making and effective risk management will be major emphasis areas, while maintaining the highest level of safety.

### Course Overview

- Lesson 1:* This ground lesson will be an introduction to the Cirrus Perspective avionics system. It will include a review of pre-training materials, IFR topics, and a session in a cockpit procedures trainer, hot bench, or an aircraft hooked to ground power.
- Lesson 2:* This flight lesson is an introduction to operating the Cirrus Perspective avionics system under IFR procedures. It is a 4-leg cross country in which the Cirrus pilot will implement normal procedures including checklists, enroute procedures, arrival procedures, and approach procedures. The Cirrus pilot will also demonstrate Basic Attitude Instrument Flying (BAIF) skills and recovery from unusual attitudes using Cirrus Perspective.
- Lesson 3:* During this flight lesson, the Cirrus pilot will first be introduced to abnormal and emergency procedures while in simulated instrument conditions. It is a 3-leg cross country that will emphasize good ADM and risk management while generating acceptable solutions to malfunctions of systems of the aircraft. This lesson is best performed in a Flight Training Device (FTD), but can be accomplished in the aircraft as well.
- Lesson 4:* This flight lesson will focus on avionics malfunctions while in simulated instrument conditions. It is a 3-leg cross country that will focus on abnormalities with the PFD, MFD, and the autopilot.

**Lesson 5:** This flight lesson will give the Cirrus pilot a chance to apply all his/her knowledge that has been learned so far to a very realistic IFR scenario. This scenario will be modeled after Line Oriented Flight Training (LOFT) and is best performed in an FTD but can be accomplished in an aircraft as well. The lesson will also serve as a review lesson that will give the Cirrus pilot a chance to enhance his/her skills to prepare for the final evaluation and IPC.

**Lesson 6:** This flight lesson is the final evaluation flight. The flight is a 3-leg cross country in which the Cirrus pilot will demonstrate the knowledge and skill required to safely fly the Cirrus aircraft in single pilot IFR operations. The content of this lesson is modeled around scenario based training and includes all tasks required to complete an IPC.

**Optional:** Biennial Flight Review

**Course Completion Standards**

A certificate of completion will be awarded at the satisfactory completion of lesson 6 when the Cirrus pilot has met the required desired outcomes for all required tasks while demonstrating judgment, aeronautical decision making abilities, single-pilot resource management, and risk management skills to safely fly a Cirrus aircraft equipped with Cirrus Perspective avionics in Instrument Meteorological Conditions (IMC).

The Cirrus pilot shall perform the maneuvers and procedures at the standard defined in the FAA Practical Test Standards (or international equivalent) for the pilot certificate held.

The following table lists the minimum amount of time, landings, and cross country legs that are required to complete the course. Instructors and Cirrus pilots should keep in mind that these are the absolute minimums, and that successful completion of the course is dependent on meeting the required desired outcomes.

Course Minimums					
Flight Hours			Landings	Cross Country Legs	Ground Time
Total	Airplane	FTD			
7.0	5.0	0.0	14	15	7.0

**Reference Materials**

All instructional procedures, materials, and training activities will conform to the guidelines established for standardized instruction and scenario-based training as outlined in the Instructor Supplement. All guidelines are in compliance with FAA Industry Training Standards (FITS).

- **Interactive Pre-training**
  - Cirrus Perspective Avionics Training
  - Cirrus Perspective PC-Based Trainer
- **Training Publications**
  - Cirrus Flight Operations Manual (FOM)
  - Cirrus Aircraft Workbook
  - Cirrus Standardized Instructor Supplement
  - Cirrus Pilot Learning Plan
- **Aircraft Publications**
  - Aircraft Pilot’s Operating Handbook
  - Appropriate Avionics Manuals
- **Additional Training Resources**
  - Resource Center for Cirrus Training (eZ LMS)
    - <http://cirrus.aero.und.edu/resources.php>
  - Cirrus Aircraft Training Software (CATS)
  - Pilot’s World
    - <http://www.cirrusdesign.com:4515/pilotsworld>
  - FAA Industry Training Standards (FITS)
    - [http://www.faa.gov/education\\_research/training/fits](http://www.faa.gov/education_research/training/fits)
- **FAA Publications**
  - Appropriate Practical Test Standards (PTS)

EZ LMS

EZ LMS is a web-based learning management system with a wealth of resources available to Cirrus pilots and instructors. Pilots can find the latest presentations, publications, and tools for the equipment installed in Cirrus airplanes.

Pilot’s World

Pilots World is an online resource created by Cirrus Design to communicate important training issues and operating techniques for Cirrus pilots. A new topic is posted each month consisting of a ground segment and flight segment. The ground segment contains discussion, information and activities pertinent to that month’s topic. The flight segment has suggested flight training activities related to the ground segment. Topics on Pilots World have ranged from Preventing Controlled Flight into Terrain to Single Pilot IFR Operations.

## How to Use this Course

This syllabus is designed for the following elements to be used in conjunction with the overall course completion standards.

*Note:* Each element will be described in detail throughout this section.

- **Desired Outcome:** This is the grade the Cirrus pilot has achieved for the particular task. (Describe, Explain, Practice, Perform, Manage/Decide)
- **Task Checklist:** These items need to be completed by the Cirrus pilot to the appropriate desired outcome.
- **List of Assessment Items:** Explanation of what needs to be observed by the instructor for the Cirrus pilot to meet the desired outcome for each task.
- **Lesson Completion Standards:** Explanation of the requirements to consider each lesson complete or incomplete.

Within each lesson the instructor and Cirrus pilot will reference the task checklist for each lesson and the appropriate assessment items to determine whether each task is completed to the minimum desired outcome needed to meet the lesson completion standards.

### Desired Outcomes

The objective of scenario-based training is to change the thought processes, habits, and behaviors of the Pilot-In-Training (Cirrus pilot) during the planning and execution of the scenario. A key element of this training is learner-centered grading.

The following two lists describe possible desired outcomes that will help measure the success of the training. These desired outcomes describe to which performance level the Cirrus pilot is currently operating. The grading of each task should be conducted independently by the Cirrus pilot and the instructor, and then compared during the post flight critique.

## Maneuver Grades (Tasks)

- **Describe** – At the completion of the scenario, the Cirrus pilot will be able to describe the physical characteristics and cognitive elements of the scenario activities. *Instructor assistance is required to successfully execute the maneuver.*
- **Explain** – At the completion of the scenario the Cirrus pilot will be able to describe the scenario activity and understand the underlying concepts, principles, and procedures that comprise the activity. *Significant instructor effort will be required to successfully execute the maneuver.*
- **Practice** – At the completion of the scenario the pilot in training will be able to plan and execute the scenario. *Coaching, instruction, and/or assistance from the CFI will correct deviations and errors identified by the CFI.*
- **Perform** – At the completion of the scenario, the Cirrus pilot will be able to perform the activity without assistance from the CFI. *Errors and deviations will be identified and corrected by the Cirrus pilot in an expeditious manner. At no time will the successful completion of the activity be in doubt. (“Perform” will be used to signify that the Cirrus pilot is satisfactorily demonstrating proficiency in traditional piloting and systems operation skills)*
- **Not Observed** – Any event not accomplished or required

## Single Pilot Resource Management (SRM) Grades

- **Explain** – The pilot in training can verbally identify, describe, and understand the risks inherent in the flight scenario. *The pilot in training will need to be prompted to identify risks and make decisions.*
- **Practice** – The pilot in training is able to identify, understand, and apply SRM principles to the actual flight situation. *Coaching, instruction, and/or assistance from the CFI will quickly correct minor deviations and errors identified by the CFI. The pilot in training will be an active decision maker.*
- **Manage/Decide** – The pilot in training can correctly gather the most important data available both within and outside the cockpit, identify possible courses of action, evaluate the risk inherent in each course of action, and make the appropriate decision. *Instructor intervention is not required for the safe completion of the flight.*
- **Not Observed** – Any event not accomplished or required

**Task Checklist**

The task checklist is a tool used for tracking the tasks and their associated desired outcomes during each lesson. The syllabus contains both required and optional tasks. As implied, the required tasks must be completed to the shaded desired outcome for the lesson to be complete. Optional tasks may be executed at the request of the instructor or the Cirrus pilot. Any task that is not observed should receive no check mark.

Below is an example of the task checklist. The left column contains the task. The check boxes provide the Cirrus pilot and instructor a place to record his/her assessment of the flight. The gray shaded box is the required desired outcome for that task for that particular lesson. More information about desired outcomes can be found in the “Desired Outcomes” section of this document.

*Note:* While many tasks will be repeated throughout the lessons in the course, the required desired outcome for those tasks will change throughout the course as the lessons progress.

*Note:* Optional tasks are not shaded.

Task	Desired Outcome	
	Practice	Perform
Steep Turns	<input type="checkbox"/>	<input type="checkbox"/>
Power On Stalls	<input type="checkbox"/>	<input type="checkbox"/>
AP Stall Recognition	<input type="checkbox"/>	<input type="checkbox"/>

**Assessment Items**

Each of the assessment items are given to ensure the appropriate standardized tasks are accomplished to the required desired outcome for each lesson. They are presented in a manner that assists the qualified instructor in successfully determining whether the Cirrus pilot has met both the lesson completion standards and the course completion standards. The Assessment items are not an exhaustive list in nature; a qualified instructor may determine additional assessment items to ensure the Cirrus pilot has met the completion standards of the course.

At the end of each lesson or lesson segment, the Cirrus pilot will use the listed assessment items to self-critique performance. The instructor will also critique the Cirrus pilot’s performance. From this, a guided discussion will follow to determine whether the tasks for the lesson were completed to the required desired outcome.

While these assessment items are essential to properly measure the Cirrus pilot’s behavior, instructors are expected to adhere to the Pilot’s Operating Handbook and standardization procedures included in the Flight Operations Manual. Any tasks not performed to the required desired outcome will be reviewed until the appropriate standards have been met for that lesson.

*Note:* Assessment items have been developed for all available options on a current aircraft; therefore, it may be necessary to exclude assessment items if they are not applicable to your aircraft.

*Note:* The flight instructor’s final determination of whether that task has met the required desired outcome should be withheld until the Cirrus pilot is able to self-critique at the end of the flight.

*Note:* The assessment items for all tasks in this course can be found in the “List of Assessment Items” section of this document.

**Lesson Completion Standards**

Each lesson will be complete when the Cirrus pilot satisfactorily demonstrates ADM and critical thinking skills by completing the required tasks using the assessment criteria within this course.



## Learning Considerations

The following learning considerations will aid the Instructor and Cirrus pilot in optimizing training for maximum effectiveness and ensuring the greatest amount of learning takes place within the safety constraints outlined within the FOM. This process involves satisfying the overall course completion standards while clearly stating lesson objectives that support these standards. This is achieved by incorporating principles that include proper preflight, in-flight, and post flight training considerations, found in the subsequent sections below.

### Preflight Briefing

In addition to any regulatory requirements, the Cirrus pilot and instructor should discuss the following items prior to beginning this course.

- Amount, recency, and type of previous flight experience  
Review the pilot's experience including total time and recency of experience to effectively evaluate the need for a particular task.
- Type of equipment to be utilized  
Assessment shall be given to the type of equipment installed (such as PFD, MFD, Ice protection, etc.)
- Nature of Flight operations  
The instructor should consider the type of flying typically done by the Cirrus pilot to assist in customizing the course content.
- Goals and Objectives  
In addition to the required tasks, Cirrus pilots should have specific goals and objectives to accomplish during the course. Instructors should customize the course to include the requested tasks and verify all required tasks for the course are completed.
- Flight Operations Manual (FOM)  
Review procedures appropriate to the current lesson.
- Additional training resources provided by organizations such as the FAA, COPA, AOPA, UND Aerospace, and electronic resources.  
The instructor should take time to discuss the many training resources available to the Cirrus pilot. These resources provide a vast knowledge base available on the internet.
- Review of Regulations and Aeronautical Information Manual (AIM)  
The instructor should tailor the review of general operating and flight rules that are applicable to the scenario. The objective is to ensure the pilot can comply with all regulatory requirements and operate safely in various types of airspace and weather conditions (in accordance with his/her personal minimums). The instructor should conduct a review that is broad enough to meet areas in which the pilot's knowledge is deficient.

## Flight Training

The instructor will present the material for each lesson in a scenario-based format during a cross country flight. While conducting the differences training the instructor and Cirrus pilot should recognize each individual's role within the differences training:

While performing differences training, the instructor will:

- Be the sole and **final** authority regarding whether or not the desired outcomes and assessment items are considered complete.
- Be the **final** authority in all decisions regarding termination and/or continuation of the differences lesson.

While performing differences training, the Cirrus pilot who is already appropriately rated to operate the aircraft will:

- Act as the pilot-in-command of the aircraft. .
- Transfer controls using positive exchange of flight controls procedures [Reference: "Introduction: Positive Exchange of Flight Controls," Private Pilot for Airplane Single-Engine Land and Sea Practical Test Standards].

### Post Flight Critique

Although a critique may seem intimidating, it is an integral part of the lesson. A good critique closes the chapter on the training event and sets the stage for future learning. The critique is not intended as a barrier to progress, but rather a step that advances the learning process, allowing the learner and the instructor to best evaluate how to proceed. The Cirrus pilot should lead the critique with guidance from the instructor.

At the end of each lesson or lesson segment, the Cirrus pilot should self-critique his or her performance. The Cirrus pilot should review each task in the lesson and use the associated assessment items to determine which desired outcome was achieved for that task. The instructor will also critique the Cirrus pilot's performance. From this, a guided discussion will follow to determine whether the tasks for the lesson were completed to the required desired outcome.

The instructor should keep detailed notes throughout the flight so an effective critique can be accomplished after each lesson. For additional information on performing effective critiques utilize the FAA Aviation Instructor Handbook (FAA-H-8083-9).

## List of Assessment Items

The following list of assessment items will help the instructor determine to which desired outcome the Cirrus pilot is currently conducting the tasks associated with each lesson throughout the course. The purpose of these assessment items is to give guidance as to what needs to be accomplished on each task for each lesson.

*Note:* These assessment items are used to evaluate each task. The level at which these tasks are expected to be performed are based on the Desired Outcomes required in the specific lesson.

## Ground Briefing

### Instructor-Student Relationship

- Cirrus pilot conducted a self assessment related to the safety of flight.
- Cirrus pilot discussed the importance of maintaining the safety culture.
- Cirrus pilot discussed the instructor/student relationship in regards to interaction in and outside the aircraft.
- Cirrus pilot reviewed his/her personal minimums with the instructor conducting the training.

### Course Briefing / Overview

- Cirrus pilot discussed the FITS concept of student-led training.
- Cirrus pilot described the requirements for the completion of the course.

### Review of Pre-Training Material

- Cirrus pilot discussed how the POH relates to the safe operation of the aircraft.
- Cirrus pilot has completed the pre-training material as outlined in the pre-training checklist in the front of this document.

### Review of Instrument Procedures

- Cirrus pilot discussed and reviewed current IFR regulations and procedures with instructor.
- Cirrus pilot identified his/her areas of weakness relating to IFR regulations and procedures.

## Introduction to Avionics Using a Cockpit Procedures Trainer

- Cirrus pilot accomplished normal checklist procedures of the Cirrus Aircraft.
- Cirrus pilot described the general avionics symbology and functionality.
- Cirrus pilot practiced using functions of the avionics system.
  - Started up and initialized the PFD/MFD.
  - Identified information and customized the presentation on the PFD and MFD.
  - Navigated through pages and menus of avionics.
  - Switched sources of navigation on the HSI presentation and identified which source was currently being used.
  - Tuned and activated Nav and Com frequencies.
  - Programmed and activated Direct-to navigation.
  - Created and modified flight plans (using Victor airways if applicable).
  - Found destination airport information using the avionics.
  - Found the nearest airport/VOR/center frequency/FSS frequency using the avionics.
  - Used vertical navigation functions of the GPS/FMS.
  - Used electronic checklists.
  - Used electronic approach charts if available.
  - Used various modes of the autopilot and demonstrated when to use each mode.
  - Set autopilot bugs for heading, course, altitude, and vertical speed.
  - Entered transponder codes and used the ident function.
  - Used timers that were available in the aircraft.
  - Used lean assist to aid in leaning the engine mixture.
  - Demonstrated TAWS system if available.
  - Demonstrated traffic avoidance system and how to use it effectively if available.
- Cirrus pilot practiced the proper procedures to safely operate the Cirrus Aircraft Parachute System (CAPS).

## Preflight Briefing

### Lesson Objectives

- Cirrus pilot reviewed the objectives of the lesson and the desired outcomes required to meet completion standards.
- Cirrus pilot discussed how lesson objectives relate to overall course completion standards.

**Flight Overview**

- Cirrus pilot discussed the lesson content including scenarios that will be presented while in flight.
- Cirrus pilot discussed the importance of a positive exchange of the flight controls.
- Cirrus pilot discussed the relationship of the student and instructor.
- Cirrus pilot discussed circumstances in which the flight will be continued or discontinued.

**Risk Management**

**Manage Risk Using the 5P Checklist**

- Cirrus pilot used this risk management tool to aid in sound judgment, resource management, and risk management.
- Cirrus pilot used the 5P Checklist at the following intervals: flight planning, before takeoff, enroute, and top of descent.

The 5P Checklist	
Plan	<ul style="list-style-type: none"> <li>➤ Weather</li> <li>➤ Route</li> <li>➤ Publications</li> <li>➤ ATC Delays</li> <li>➤ Fuel Remaining</li> </ul>
Plane	<ul style="list-style-type: none"> <li>➤ Mechanical Status</li> <li>➤ Automation Status</li> <li>➤ Database Currency</li> <li>➤ Circuit Breakers</li> <li>➤ Backup Systems</li> </ul>
Pilot	<ul style="list-style-type: none"> <li>➤ "I"llness</li> <li>➤ "M"edications</li> <li>➤ "S"tress</li> <li>➤ "A"lcohol</li> <li>➤ "F"atigue</li> <li>➤ "E"motion</li> </ul>
Passengers	<ul style="list-style-type: none"> <li>➤ Pilots or non-pilots</li> <li>➤ Nervous or quiet</li> <li>➤ Experienced or new</li> <li>➤ Helpful or a handful</li> <li>➤ Urgent or optional</li> <li>➤ Business or pleasure</li> </ul>
Programming	<p><i>Preprogram the:</i></p> <ul style="list-style-type: none"> <li>➤ Autopilot</li> <li>➤ GPS</li> <li>➤ MFD/PFD</li> </ul> <p><i>Anticipate:</i></p> <ul style="list-style-type: none"> <li>➤ Likely reroutes and clearances</li> <li>➤ Crunch points</li> <li>➤ Manual backup</li> <li>➤ High terrain encounters</li> </ul>

**Single Pilot Resource Management**

**Task Management**

- Cirrus pilot prioritized and selected the appropriate tasks (or series of tasks) to ensure successful completion of the training scenario.
- Cirrus pilot managed the resources (both on-board the aircraft and from outside sources) available (prior to and during flight) to ensure that the successful outcome of the flight was never in doubt.

**Automation Management**

- Cirrus pilot programmed and utilized the appropriate modes of cockpit automation to ensure successful completion of the scenario.
- Cirrus pilot described appropriate times to use automation and recognized when to revert to lower levels of automation or hand-flying.

**Risk Management and Aeronautical Decision-Making (ADM)**

- Cirrus pilot made informed decisions in a timely manner.
- During low and high work loads the Cirrus pilot evaluated his/her course of action and identified resources he/she could use to reduce risk.
- During the scenarios the Cirrus pilot identified planned and unplanned situations as they occurred.
- During the scenarios the Cirrus pilot effectively assessed alternatives and implemented the appropriate course of action while using the 5P checklist.
- During the scenarios, the Cirrus pilot continued to evaluate his/her decisions and identify additional risk using the 5P checklist.

**Situational Awareness**

- Cirrus pilot was aware of traffic, weather, fuel state, aircraft mechanical condition, pilot fatigue level, and the related impact on the successful completion of the training scenario.

**Controlled Flight into Terrain (CFIT) Awareness**

- Cirrus pilot described and applied techniques to avoid CFIT during inadvertent encounters with IMC during VFR and IFR flight.

## Overall Flight

### Radio Communication

- During the flight, the Cirrus pilot obtained clearances from ATC and demonstrated an appropriate response to ATC when those clearances were unclear.
- Cirrus pilot established and maintained proper communication with ATC, tower or UNICOM.
- Cirrus pilot acquired communication and navigation frequencies using appropriate avionics.

### Avionics Usage

- Cirrus pilot used the electronic checklists and other available information on MFD during the appropriate phase of flight.
- Cirrus pilot used the airport diagram to reduce the risk of runway incursions.
- Cirrus pilot entered the route of flight into the flight plan.
- Cirrus pilot utilized the autopilot or flight director (FD) as appropriate for climbs, descents, altitude hold, and course guidance.
- Cirrus pilot used and interpreted available weather information on the MFD to aid in good decision-making and to ensure safe outcome of the flight while applying the 5P checklist.

## Pre-Takeoff

### Preflight Preparation

- Cirrus pilot properly acquired, interpreted, and briefed the instructor on the current weather information for the route of flight.
- Cirrus pilot determined that he/she has enough fuel to safely make the flight.
- Cirrus pilot is familiar with the CG limits of the aircraft and has determined the CG is within aircraft limitations.
- Cirrus pilot is familiar with the performance limitations of the aircraft and discussed how density altitude will affect the performance of the aircraft during critical phases of flight.
- Cirrus pilot identified the risks of this flight and related his/her personal minimums to weather conditions encountered.
- Cirrus pilot used the I.M.S.A.F.E checklist and practiced identifying any associated risks that may affect a go/no-go decision.

- Cirrus pilot identified the risk elements appropriate to the differences training scenario and would be able to categorize the risks of the flight into the 5P checklist.
- Cirrus pilot completed the preflight inspection in accordance with the POH.

### Engine Start

- Cirrus pilot identified the best start procedure.
- Cirrus pilot used proper clearing procedures prior to engine start.
- Cirrus pilot monitored engine indications after engine start.

### Before Taxi

- Cirrus pilot completed the before taxi checklist.

### Taxi

- Cirrus pilot taxied aircraft while maintaining directional control with minimal use of brakes.
- Cirrus pilot used airport diagram presentation on MFD to aid in situational awareness and to avoid runway incursions (if available).
- Cirrus pilot completed the taxi checklist.

### Before Takeoff

- Cirrus pilot completed the before takeoff checklist.
- Cirrus pilot determined the best type of takeoff and configuration to conduct for each scenario.
- Cirrus pilot used proper clearing procedures when taxiing onto the active runway.
- Cirrus pilot configured the avionics prior to taxiing onto the runway.
- Cirrus pilot conducted a takeoff briefing on information pertaining to the safety of the flight.

## Takeoff and Climb

### Normal/Crosswind Takeoff

- Cirrus pilot chose to reduce risk by ensuring a minimum of 2.5 times the runway distance required for takeoff was available.
- Cirrus pilot demonstrated the appropriate techniques to perform a normal/crosswind takeoff.
- Cirrus pilot maintained centerline on takeoff as the power was increased.
- Cirrus pilot monitored engine instruments for abnormalities during the takeoff roll.
- Cirrus pilot aborted the takeoff if any abnormalities were observed.

**Short-field Takeoff**

- Cirrus pilot described the associated conditions related to conducting a short-field takeoff.
- Cirrus pilot demonstrated the appropriate techniques to perform a short-field takeoff.
- Cirrus pilot anticipated the increased left-turning forces on the airplane and maintained centerline.
- Cirrus pilot monitored engine instruments for abnormalities during the takeoff roll.
- Cirrus pilot aborted the takeoff if any abnormalities were observed.
- Cirrus pilot maintained the best angle of climb ( $V_x$ ) airspeed until any obstacles were cleared.

**Soft-field Takeoff**

- Cirrus pilot described the associated conditions related to conducting a soft-field takeoff.
- Cirrus pilot considered the recent weather conditions (or simulated) prior to using a soft field for takeoff.
- Cirrus pilot demonstrated the appropriate techniques to perform a soft-field takeoff.
- Cirrus pilot monitored engine instruments for abnormalities during the takeoff roll.
- Cirrus pilot aborted the takeoff if any abnormalities were observed.

**Climb**

- Cirrus pilot used the autopilot to assist in climb-out if appropriate.
- Cirrus pilot retracted the flaps at the appropriate time.
- Cirrus pilot selected the appropriate altitude to turn onto course.
- Cirrus pilot used the traffic system to aid in visually acquiring other aircraft while using proper scanning techniques for collision avoidance.
- Cirrus pilot completed the climb checklist.
- Cirrus pilot established the proper power and mixture settings on climb out.
- Cirrus pilot transitioned to an en-route climb and utilized engine monitoring to maintain proper engine cooling.
- Cirrus pilot used the oxygen system if applicable and donned the mask/cannula prior to reaching an altitude where oxygen is required.

**Cruise****Initial Cruise**

- Cirrus pilot followed the proper leaning procedure as outlined in the POH.
- Cirrus pilot completed the cruise checklist.

**Enroute Cruise**

- Cirrus pilot maintained situational awareness using available resources.
- Cirrus pilot used the appropriate modes of the autopilot for cruise flight.
- Cirrus pilot continued to use oxygen at altitudes where it is required or needed.
- Cirrus pilot assessed possible alternatives for final destination airports and selected the appropriate destination using available resources including weather information available in the cockpit.

**Descent and Landing****Descent and Arrival Procedures**

- Cirrus pilot used the correct arrival and approach procedure needed to safely transition from en route to arrival.
- Cirrus pilot used the satellite weather to aid in determining the active runway and/or traffic pattern entry.
- Cirrus pilot conducted descent planning to avoid unnecessary high rates of descent which could lead to passenger discomfort or excessive engine cooling.
- Cirrus pilot chose a safe, alternate course of action for approach and arrival for the given the conditions.
- Cirrus pilot established a stabilized descent and arrival.
- Cirrus pilot can identify the primary hazards of partial power while operating the autopilot.
- Cirrus pilot chose a safe course of action to transition from arrival to a safe landing.
- Cirrus pilot properly adjusted airspeed for arrival at the airport.
- Cirrus pilot used available internal and external resources to choose a safe runway for landing and properly entered the airport area of the arrival airport.

**Traffic Pattern**

- Cirrus pilot maintained the appropriate altitude and airspeed during traffic pattern operations.
- Cirrus pilot configured aircraft correctly for the landing being conducted.
- Cirrus pilot completed the before landing checklist prior to entering the traffic pattern.
- Cirrus pilot disconnected the autopilot prior to entering the traffic pattern.

**Normal/Crosswind Landing**

- Cirrus pilot demonstrated the appropriate techniques to perform a normal/crosswind landing.
- Cirrus pilot established appropriate approach, landing configuration, and airspeed in accordance with the SOP's.
- Cirrus pilot conducted a stabilized approach which included:
  - Proper airspeed
  - Correct flight path
  - Correct landing configuration
  - Power setting appropriate for aircraft configuration
  - Sink rate not abnormal
  - Checklists complete
- Cirrus pilot made smooth, timely, and correct control application during roundout and touchdown.
- Cirrus pilot executed a go-around when a stabilized approach could not be obtained and maintained by 500 ft. AGL.
- Cirrus pilot maintained directional control and centerline throughout approach and landing sequence.

**Short-field Landing**

- Cirrus pilot demonstrated the appropriate techniques to perform a short-field landing.
- Cirrus pilot conducted a stabilized approach which included:
  - Proper airspeed
  - Correct flight path
  - Correct landing configuration
  - Power setting appropriate for aircraft configuration
  - Sink rate not abnormal
  - Checklists complete
- Cirrus pilot identified touchdown and go-around points prior to performing landings.
- Cirrus pilot executed a go-around when a stabilized approach could not be obtained by 500 ft AGL.
- Cirrus pilot maintained directional control and centerline throughout approach and landing sequence.

**Soft-field Landing**

- Cirrus pilot demonstrated the appropriate techniques to perform a soft-field landing.
- Cirrus pilot adequately surveyed the runway environment prior to landing on a soft-field runway.
- Cirrus pilot considered the recent weather conditions when deciding the safety of landing on the soft-field runway.
- Cirrus pilot used the appropriate resources to ensure the runway was suitable to land on.
- Cirrus pilot made smooth, timely, and correct control application during roundout and touchdown.
- Cirrus pilot executed a go-around when a stabilized approach could not be obtained and maintained by 500 ft. AGL.
- Cirrus pilot maintained directional control and centerline throughout approach and landing sequence.

**50% Flap Landing**

- Cirrus pilot described a scenario in which a 50% flap landing may be required.
- Cirrus pilot demonstrated the appropriate techniques to perform a 50% flap landing.
- Cirrus pilot identified risks associated with 50% flap landing.
- Cirrus pilot made smooth, timely, and correct control application during roundout and touchdown.
- Cirrus pilot executed a go-around when a stabilized approach could not be obtained and maintained by 500 ft. AGL.
- Cirrus pilot maintained directional control and centerline throughout approach and landing sequence.

**Zero Flap Landing**

- Cirrus pilot explained a scenario in which a zero flap landing may be required.
- Cirrus pilot demonstrated the appropriate techniques to perform a zero flap landing.
- Cirrus pilot maintained recommended airspeeds while performing a zero flap landing.
- Cirrus pilot identified risks associated with a zero flap landing.
- Cirrus pilot made smooth, timely, and correct control application during roundout and touchdown.
- Cirrus pilot executed a go-around when a stabilized approach could not be obtained and maintained by 500 ft. AGL.
- Cirrus pilot maintained directional control and centerline throughout approach and landing sequence.

**Power-off Landing**

- Cirrus pilot demonstrated the appropriate techniques to perform a power-off landing.
- Cirrus pilot described the dangers of performing a power-off landing with zero flaps. (Not authorized per Flight Operations Manual).
- Cirrus pilot described when to add flaps and correct control applications during the power-off approach.

**Go-Around**

- Cirrus pilot recognized situations in which a go-around is the best course of action.
- Cirrus pilot executed a go-around when a stabilized approach could not be obtained by 500 ft AGL.
- Cirrus pilot demonstrated the appropriate techniques to perform a go-around.
- Cirrus pilot retracted the flaps at the appropriate time during the go-around.
- Cirrus pilot maintained directional control during the go-around.
- Cirrus pilot completed the appropriate checklist.

**After Landing**

- Cirrus pilot conducted the after-landing checklists when clear of the active runway.
- Cirrus pilot used the airport diagram on the MFD to aid in situational awareness while taxiing.

**Shutdown**

- Cirrus pilot completed the shutdown checklist.
- Cirrus pilot secured the aircraft properly with chocks and/or the parking brake.

**Post Flight Briefing****Post Flight Discussion and Critique**

- Cirrus pilot discussed the decisions made and related them to an analysis of factual information, the aircraft capabilities, pilot experience and skill.
- Cirrus pilot discussed the process used to make good decisions.
- Cirrus pilot identified performance deficiencies encountered during the flight.
- Cirrus pilot discussed possible methods and alternatives for improvement on outcomes of the scenarios.

**Instrument Procedures****Basic Attitude Instrument Flying**

- Cirrus pilot controlled the aircraft solely by reference to the flight instruments during straight-and-level flight, climbs, turns, and descents.
- Cirrus pilot used a proper instrument crosscheck and interpretation while applying the appropriate pitch, bank, power, and trim corrections when applicable.
- Cirrus pilot can perform basic attitude instrument flying within the standards set forth by the current edition of the Instrument Rating Practical Test Standards.

**Instrument Approach Procedures**

- PT loaded and activated the approach using the GPS/FMS and navigated vertically and horizontally using the automation available.
- PT confirms the operational status of the navigation equipment to be used for the approach procedure. (Identify navaid, verify appropriate GPS approach mode)
- PT executed the approach using the appropriate automation for the type of approach flown.
- PT made a stabilized transition from simulated/actual IMC conditions to visual conditions at the decision altitude on the approach.
- PT executed a missed approach upon reaching the MDA or DA with no runway environment in sight or when allowing a three-quarter scale deflection on the course guidance indicators.
- Cirrus pilot maintained altitude, heading, speed, and course guidance within the standards set forth in the current edition of the Instrument Rating Practical Test Standards.

**Missed Approach Procedures**

- Cirrus pilot initiated a missed approach when necessary by promptly disconnecting the autopilot, applying power, establishing a climb attitude, retracting the flaps at the appropriate time, and navigating via the missed approach procedure.
- Cirrus pilot used the GPS to follow the missed approach procedure by changing the CDI to "GPS" if applicable and by deselecting "suspend" at the appropriate time.
- Cirrus pilot advised ATC of beginning the missed approach procedure.
- Cirrus pilot completed the appropriate checklist once the aircraft was stabilized in a climb and on course.

- Cirrus pilot maintained altitude, heading, speed, and course guidance within the standards set forth in the current edition of the Instrument Rating Practical Test Standards.

### Holding Procedures

- Cirrus pilot slowed to the recommended holding airspeed when 3 minutes or less from, but prior to reaching the holding fix.
- Cirrus pilot uses the correct entry for the holding pattern.
- Cirrus pilot recognized arrival at the holding fix and initiates the holding pattern.
- Cirrus pilot uses proper timing criteria or distances for the hold where applicable.
- Cirrus pilot used proper wind correction procedures to maintain the desired pattern and to arrive over the fix as close as possible to the specified time.
- Cirrus pilot maintained altitude, heading, speed, and course guidance within the standards set forth in the current edition of the Instrument Rating Practical Test Standards.

### Departure Procedures

- Cirrus pilot explains and complies with the assigned departure procedure.
- Cirrus pilot complies in a timely manner with all ATC instructions and airspace restrictions.
- Cirrus pilot intercepts in a timely manner all courses, radials, and bearings appropriate to the departure procedure.

### Circling Approach

- Cirrus pilot recognized the need to do a circling approach.
- Cirrus pilot selected and complied with the appropriate circling approach procedure considering turbulence and wind shear and considered the maneuvering capabilities of the aircraft.
- Cirrus pilot confirms the direction of the traffic and adheres to all restrictions and instructions issued by ATC.
- Cirrus pilot does not exceed the visibility criteria or descend below the appropriate circling altitude until in a position from which a descent to a normal landing can be made.
- Cirrus pilot maintained altitude, heading, speed, and course guidance within the standards set forth in the current edition of the Instrument Rating Practical Test Standards.

### Partial Panel Approach

- Cirrus pilot recognized if primary flight instruments were inaccurate or inoperative and advised ATC.

- Cirrus pilot advised ATC anytime that the aircraft was unable to comply with a clearance.
- Cirrus pilot demonstrated an instrument approach without the use of the primary flight instruments using the criteria set forth in the Instrument Approach Procedures assessment item and in the current edition of the Instrument Rating Practical Test Standards.

### Maneuvers

#### Recovery from Unusual Attitudes

- Cirrus pilot demonstrated knowledge of flight situations that could lead to unusual attitudes.
- Cirrus pilot recovered from an unusual attitude properly and used the autopilot as appropriate to keep the aircraft stabilized.
- Cirrus pilot identified the possible alternative of using the CAPS with regards to an unusual attitude.

### Abnormal / Emergency Procedures

#### PFD Failure

- Cirrus pilot determined reason for PFD failure.
- Upon detecting a PFD failure, Cirrus pilot took appropriate action to maintain aircraft control.
- Cirrus pilot used available resources to reduce additional workload.
- Cirrus pilot described autopilot operation as it related to the PFD failure.
- Cirrus pilot took appropriate action for the given situation.

#### AHRS Failure

- Cirrus pilot determined alternatives for an instrument approach with invalid attitude and heading information on the PFD.
- Cirrus pilot described how other equipment is affected with invalid attitude and heading information on the PFD.
- Cirrus pilot used available resources to reduce additional workload.

#### Air Data Computer Failure

- Cirrus pilot determined that an air data malfunction had occurred.
- Cirrus pilot described how other equipment is affected with invalid air data information.
- Cirrus pilot used available resources to reduce additional workload.



**MFD Failure**

- Cirrus pilot determined how the loss of the MFD affects the operation of the aircraft and his/her personal minimums.
- Cirrus pilot used available resources to reduce additional workload.

**GPS Failure**

- Cirrus pilot determined how the loss of the GPS affects the operation of the aircraft and his/her personal minimums.
- Cirrus pilot described how other equipment is affected with the loss of GPS data.
- Cirrus pilot used available resources to reduce additional workload.

**Autopilot Failure**

- Cirrus pilot identified the risks associated with an autopilot failure.
- Cirrus pilot identified how an autopilot failure affects his/her personal minimums.
- Cirrus pilot used the checklist to appropriately troubleshoot the autopilot while dividing attention and controlling the aircraft manually.

**Alternator Failure**

- Cirrus pilot identified indications of an alternator failure.
- Cirrus pilot identified equipment that will be affected with an alternator failure.
- Cirrus pilot described which systems were malfunctioning, properly troubleshoot, and took appropriate action to reduce risk to an acceptable level.
- Cirrus pilot followed proper checklist procedures.
- Cirrus pilot shed electrical loads as necessary for the given situation.
- Cirrus pilot used available resources to reduce additional workload.

**Engine Malfunction**

- Cirrus pilot can explain situations that may cause engine malfunctions.
- Cirrus pilot used checklists when time permitted.
- Cirrus pilot decided on the best course of action for the situation.
- Cirrus pilot recognized the need to divert and chose a suitable location, if the situation warranted.
- Cirrus pilot considered CAPS as an alternative solution to each potentially life threatening emergency.

**Flap Malfunction**

- Cirrus pilot recognized the flap malfunction.
- Cirrus pilot described how a flap malfunction will affect landing distance and why a diversion may be necessary.

**Open Door**

- Cirrus pilot identified an open door and reacted accordingly.
- Cirrus pilot divided his/her attention between the open door and controlling the airplane.

**Cabin Fire**

- Cirrus pilot described why an electrical fire can happen.
- Cirrus pilot responded to the urgency of the electrical scenario.
- Cirrus pilot conducted the proper checklist items for the flight situation.
- Cirrus pilot took necessary action to simulate eliminating fumes and smoke from the cockpit.
- Cirrus pilot made a decision to divert in a timely manner.

**TAWS Escape**

- Cirrus pilot performed scenarios that simulated TAWS warnings.
- Cirrus pilot identified audible warnings associated with the TAWS system.
- Cirrus pilot conducted appropriate maneuvers when a TAWS warning was simulated.

**Inadvertent Ice Encounter**

- Cirrus pilot discussed conditions that could contribute to the formation of ice.
- Cirrus pilot exited the simulated icing encounter in a manner that is consistent with FAA regulations and the POH.
- Cirrus pilot followed the proper checklist procedure as outlined in the POH and ice protection supplement.

**Turbo System Malfunction**

- Cirrus pilot promptly recognized loss of manifold pressure.
- Cirrus pilot completed the emergency checklist for an unexplained loss of manifold pressure.
- Cirrus pilot used available resources to reduce workload.
- Cirrus pilot discussed the difficulties of trying to distinguish between an induction system leak and an exhaust system leak.
- Cirrus pilot discussed the need to expedite the descent and land at the nearest airport.

### Oxygen System Malfunction

- Cirrus pilot identified which systems were malfunctioning, properly troubleshoot, and took action to reduce risk to an acceptable level.
- Cirrus pilot used available resources to reduce additional workload.
- Cirrus pilot discussed symptoms associated with hypoxia. Cirrus pilot also demonstrated the use of the pulse oximeter (if available) and discussed how this device can provide enhanced safety when operating at higher altitudes.
- Cirrus pilot followed proper procedures for an oxygen system malfunction.
- Cirrus pilot recognized oxygen was not flowing to the masks and initiated an emergency descent to a safe altitude. (Below 10,000 ft)
- Cirrus pilot discussed the risks associated with hypoxia and the need to get to a safe altitude.

### Weather Diversion

- Cirrus pilot identified weather conditions that had not been forecasted.
- Cirrus pilot used all available resources to make a determination of whether to divert and took appropriate action to do so.
- Cirrus pilot used the autopilot to aid in reducing the additional workload.

### Emergency Approach and Landing

- Cirrus pilot identified a proper landing location and the risks involved.
- Cirrus pilot effectively utilized the glide characteristics of the aircraft.
- Cirrus pilot considered CAPS as one alternative solution if no suitable landing area can be utilized.

### Inadvertent IMC Encounter

- Cirrus pilot has identified methods to help prevent inadvertent flight into IMC conditions.
- Cirrus pilot acted appropriately to exit IMC conditions or get an IFR clearance.
- Cirrus pilot used the autopilot to aid in reducing the additional workload and to prevent a loss of control.

## Ground Lesson 1

### *Introduction to Cirrus Perspective*

Approximate time: .....3.0 Hours

### **Lesson Objectives**

- Establish instructor-student relationship and develop the safety culture expected throughout the training.
- Review course content, objectives, and completion standards.
- Review and evaluate pre-training material.
- Review IFR procedures and regulations to aid in determining pilot's current level of instrument proficiency.
- Define personal capabilities and weather minimums and how they will change when using a new avionics system.
- Practice using risk management tools and techniques to reduce the overall risk associated with flying.
- Gain proficiency with the avionics of Cirrus aircraft using a cockpit procedures trainer, hot bench, or an aircraft on ground power.

### **Lesson Content**

The instructor will begin the training by developing the instructor/learner relationship. The instructor should conduct a brief interview with the Cirrus pilot in order to determine prior flight experience, learning styles, and any additional goals of training beyond course objectives. The first meeting will create the safety culture expected throughout the training. This includes an assessment done by the Cirrus pilot to determine personal readiness to safely begin training. An overview of the course content will also be discussed at this time.

The Cirrus pilot should be given an opportunity to ask any questions regarding the pre-training material and from this, a discussion should develop to solidify and evaluate the Cirrus pilot's knowledge of Cirrus aircraft.

A review of IFR procedures and regulations should be conducted during this ground briefing to aid in determining the pilot's proficiency with instrument procedures. If the Cirrus pilot has completed the FAA's

IPC Review Guide, the instructor should clarify information from that course and relate this information to Cirrus aircraft operations.

The instructor should spend an adequate amount of time with the Cirrus pilot in a cockpit procedures trainer, hot bench, or an aircraft on ground power to ensure the Cirrus pilot has a foundation in the functions of the avionics that are installed in the aircraft. The time spent on the ground with the avionics will greatly improve the ability of the Cirrus pilot to concentrate on flying the aircraft and correlate avionics functions into scenarios that he or she will face while flying.

**Task Checklist**

Within the context of the training event, the instructor should reference the “List of Assessment Items” section to determine if the Cirrus pilot has met the required desired outcome for each task in the lesson.

Task	Desired Outcome	
	Describe	Explain
Instructor-Student Relationship	<input type="checkbox"/>	<input type="checkbox"/>
Course Briefing / Overview	<input type="checkbox"/>	<input type="checkbox"/>
Review of Pre-Training Material	<input type="checkbox"/>	<input type="checkbox"/>
Review of Instrument Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Introduction to Avionics Using a Cockpit Procedures Trainer	<input type="checkbox"/>	<input type="checkbox"/>

**Lesson Completion Standards**

This lesson will be complete when the Cirrus pilot satisfactorily demonstrates ADM and critical thinking skills by completing the required tasks using the assessment criteria within this course.

**Flight Lesson 2**

*Introduction to Cirrus Perspective IFR Procedures*

Equipment: .....Aircraft or FTD

Approximate Pre and Post Briefing:.....1.5 Hours

Approximate Flight Time: .....2.0 Hours

Cross Country Legs Required: .....4

Takeoffs/Landings Required: .....4

Instrument Approaches Required: .....4

**Lesson Objectives**

- Introduce and practice normal operations for all phases of an IFR cross country flight while exploring new modes of automation.
- Practice new functions of the avionics such as tuning frequencies, creating and modifying flight plans, scanning and interpreting the PFD and the MFD, and using the autopilot.
- Gain proficiency controlling the aircraft solely by reference to instruments.
- Practice properly recovering the aircraft from unusual attitudes.
- Introduce Cirrus pilot to instrument approach procedures in the Cirrus aircraft.

**Scenario**

The purpose of this lesson will be to introduce the Cirrus pilot to normal operations in a Cirrus aircraft equipped with Cirrus Perspective avionics while conducting an IFR cross country flight. The cross country will consist of 4 legs with a preferred length of 30 – 45 minutes per leg. This should provide for enough time for the Cirrus pilot to conduct normal operations such as checklists, enroute, and arrival procedures while having enough time to explore the equipment installed in the aircraft. The Cirrus pilot should use the autopilot for most of this lesson to gain proficiency in learning and applying its new modes and procedures. The Cirrus pilot will also be introduced to Basic Attitude Instrument Flying (BAIF) while using the PFD and standby instruments.

*Leg 1* – The Cirrus pilot should be introduced to the normal procedures of the Cirrus Perspective avionics with focus on setting up avionics properly for a cross country flight. Before takeoff, emphasis should be placed on frequency tuning, flight plan creation, and transponder

operation using the GCU, use of the electronic airport diagram for taxi, and setup of the autopilot/flight director bugs. During the flight, the instructor should guide the Cirrus pilot through normal procedures during climb, cruise, and descent while emphasizing recommended operating practices for setup of the avionics, use of the various autopilot modes, and use of the Synthetic Vision System (SVS). The instructor should also ask questions that will allow the Cirrus pilot to gain proficiency in scanning and interpreting information on the PFD and MFD such as, “What is our ground speed?”, “How soon will we reach our destination?”, or “Will we have enough fuel to reach our destination safely?”. These questions will highlight differences of the Cirrus Perspective avionics vs. the Avidyne avionics. The leg should terminate with a full procedure GPS approach using the autopilot.

*Leg 2* – The Cirrus pilot should continue to gain proficiency in normal operations. The instructor should introduce more complex functions of the FMS and autopilot such as inserting Victor airways and using vertical navigation. The Cirrus pilot should practice analyzing weather information on the MFD if it is installed and practice viewing electronic instrument approach charts. The Cirrus pilot should conduct an ILS approach using the autopilot at the destination airport. Plan to do the published missed approach and do a few turns in holding. The instructor should highlight the difference in procedures in doing a missed approach with Cirrus Perspective vs. with Avidyne avionics. From the hold, the instructor should give another approach clearance to the airport.

*Leg 3* – The Cirrus pilot should continue to gain proficiency in normal operations while hand flying the aircraft and using all functions of the FMS. The instructor should introduce BAIF during this leg to prepare the Cirrus pilot for advanced instrument flight. Recovery from unusual attitudes and proper use of the “LVL” button should also be practiced during this leg. The leg should terminate with a full procedure, stand-alone GPS approach using the autopilot. The leg should terminate with a full procedure VOR approach to gain proficiency using ground-based navigation aids for the approach phase of flight.

*Leg 4* – The Cirrus pilot should continue to gain proficiency in normal operations while using various modes of the autopilot and all functions of the FMS. During the en-route portion of the flight, the instructor should command a hold along an airway at either an intersection or a DME fix. The Cirrus pilot should practice this random hold to gain proficiency in holding without the aid of WAAS. Once the Cirrus pilot has demonstrated proficiency in holding, he/she should continue to the destination airport. The type of approach will be at the instructor’s and the Cirrus pilot’s

discretion, but the Cirrus pilot should conduct holding at the Initial Approach Fix (IAF).

At the completion of each leg, the Cirrus pilot will conduct a brief review of the decisions made on that leg and possible alternative solutions that could have been used to operate more effectively, efficiently and safely. During the lesson, the Cirrus pilot shall demonstrate the ability to control the aircraft manually and demonstrate automation management.

### Scenario Summary

#### Leg 1 – Autopilot

- Basic functions of avionics
  - Scanning and interpreting PFD and MFD
  - MFD navigation
  - Frequency tuning
  - Flight plan creation
- Basic functions of autopilot
  - Heading/Nav select
  - Altitude select
- Instrument Approach Procedures
  - GPS Approach – Full Procedure

#### Leg 2 – Autopilot

- Advanced functions of avionics
  - SVS usage
  - Flight plan modification
  - Victor airways
  - Weather information analysis
  - Electronic approach chart usage
- Advanced functions of autopilot
  - Vertical Navigation
  - Other Pitch and Roll modes
- Instrument Approach Procedures
  - ILS Approach – Vectors
  - Missed Approach, Hold

#### Leg 3 – Hand Fly

- All functions of FMS
- Basic Attitude Instrument Flying
- Recovery from Unusual Attitudes
- Instrument Approach Procedures

- VOR Approach – Full Procedure

**Leg 4 – Autopilot**

- All functions of FMS
- All functions of Autopilot
- Random Waypoint Holding
  
- Instrument Approach Procedures
  - As Required
  - Hold at IAF

**Task Checklist**

Within the context of the training event, the instructor should reference the “List of Assessment Items” to determine if the Cirrus pilot has met the required Desired Outcome for each task in the lesson.

Preflight Briefing

Task	Desired Outcome	
	Describe	Explain
Lesson Objectives	<input type="checkbox"/>	<input type="checkbox"/>
Flight Overview	<input type="checkbox"/>	<input type="checkbox"/>

Risk Management

Task	Desired Outcome	
	Practice	Manage/Decide
Manage Risk Before the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>
Manage Risk During the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>

Single Pilot Resource Management

Task	Desired Outcome	
	Practice	Manage/Decide
Task Management	<input type="checkbox"/>	<input type="checkbox"/>
Automation Management	<input type="checkbox"/>	<input type="checkbox"/>
Risk Management and ADM	<input type="checkbox"/>	<input type="checkbox"/>
Situational Awareness	<input type="checkbox"/>	<input type="checkbox"/>
CFIT Awareness	<input type="checkbox"/>	<input type="checkbox"/>

Overall Flight

Task	Desired Outcome	
	Practice	Manage/Decide
Radio Communication	<input type="checkbox"/>	<input type="checkbox"/>
Avionics Usage	<input type="checkbox"/>	<input type="checkbox"/>

Pre-Takeoff

Task	Desired Outcome	
	Practice	Perform
Preflight Preparation	<input type="checkbox"/>	<input type="checkbox"/>
Engine Start	<input type="checkbox"/>	<input type="checkbox"/>
Before Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff	<input type="checkbox"/>	<input type="checkbox"/>

Takeoff and Climb

Task	Desired Outcome	
	Practice	Perform
Appropriate Takeoff	<input type="checkbox"/>	<input type="checkbox"/>
Climb	<input type="checkbox"/>	<input type="checkbox"/>

Cruise

Task	Desired Outcome	
	Practice	Perform
Initial Cruise	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Cruise	<input type="checkbox"/>	<input type="checkbox"/>

Maneuvers

Task	Desired Outcome	
	Practice	Perform
Basic Attitude Instrument Flying	<input type="checkbox"/>	<input type="checkbox"/>
Recovery From Unusual Attitudes	<input type="checkbox"/>	<input type="checkbox"/>

Descent and Landing

Task	Desired Outcome	
	Practice	Perform
Descent and Arrival Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Traffic pattern	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate Landing	<input type="checkbox"/>	<input type="checkbox"/>
Go-around	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (ILS – Vectors)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (GPS – Full Procedure)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (VOR – Full Procedure)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (As Required)	<input type="checkbox"/>	<input type="checkbox"/>
Missed Approach Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Holding Procedures	<input type="checkbox"/>	<input type="checkbox"/>
After Landing	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown	<input type="checkbox"/>	<input type="checkbox"/>

Post Flight Briefing

Task	Desired Outcome	
	Describe	Explain
Post Flight Discussion and Critique	<input type="checkbox"/>	<input type="checkbox"/>

**Lesson Completion Standards**

This flight lesson will be complete when the Cirrus pilot satisfactorily demonstrates ADM and critical thinking skills by completing the required tasks using the assessment criteria within this course.

**Flight Lesson 3**

*Systems Malfunctions*

Equipment: .....Aircraft or FTD (FTD Preferred)  
 Approximate Pre and Post Briefing:.....1.0 Hours  
 Approximate Flight Time: .....1.5 Hours  
 Cross Country Legs Required: .....3  
 Takeoffs/Landings Required: .....2  
 Instrument Approaches Required: .....2

**Lesson Objectives**

- Gain proficiency flying departure procedures using the Cirrus Perspective avionics.
- Gain proficiency resolving scenarios involving malfunctions of systems of the aircraft.
- Use the Cirrus Airframe Parachute System (CAPS) when presented with an applicable scenario and it is appropriate.
- Practice using the Synthetic Vision System (SVS) and the terrain alert system to avoid terrain when presented with an applicable scenario and it is appropriate.

**Scenario**

The purpose of this lesson is to begin to present abnormal and emergency scenarios to the Cirrus pilot while in simulated IMC conditions. The scenarios presented in this lesson mostly involve malfunctions of systems in the aircraft that have unique characteristics or procedures in the Cirrus. The tasks of this lesson are best accomplished in a Flight Training Device (FTD) to achieve the greatest amount of learning, but the lesson can also be conducted in an aircraft. The Cirrus pilot will practice a combination of autopilot usage and hand flying to gain proficiency in both operations.

*Leg 1* – This leg should be initiated at an airport that uses an obstacle departure procedure if practical. The Cirrus pilot should use this procedure to transition to the enroute portion of the flight. During cruise flight, the instructor should introduce an electrical malfunction. The Cirrus pilot should take the appropriate action and make a determination of whether to continue the flight or divert to another airport. The instructor should present the weather for the scenario in a way that forces the Cirrus pilot to fly an instrument approach at the end of the leg. The Cirrus

pilot and the instructor should discuss how the electrical system in Cirrus Perspective aircraft differs from Avidyne equipped aircraft and how this will influence decision making. At the instructor’s discretion, a missed approach may be flown depending on the simulated conditions at the destination airport. The pilot should hand fly this leg to gain proficiency controlling the aircraft manually with an increased workload.

*Leg 2* – During vectors to a non-precision approach in simulated mountainous terrain, the instructor should simulate a loss of communication. The Cirrus pilot should take the appropriate action per the Federal Aviation Regulations (FAR’s) and the Aeronautical Information Manual (AIM). If action is not taken to avoid terrain, the instructor should simulate a TAWS alert. The Cirrus pilot should take appropriate evasive action using the SVS system to avoid terrain and then either begin the approach again or divert to the alternate airport.

*Leg 3* – The Cirrus pilot should hand fly during this leg. During cruise flight either in or above IMC, the instructor should simulate an engine malfunction. This should lead to an emergency landing or a CAPS deployment if no suitable landing area is available.

At the completion of each leg, the Cirrus pilot will conduct a brief review of the decisions made on that leg and possible alternative solutions that could have been used to operate more effectively, efficiently and safely. During the lesson, the Cirrus pilot shall demonstrate the ability to control the aircraft manually and demonstrate automation management.

**Scenario Summary**

*Leg 1 – Hand Fly*

- Obstacle Departure Procedure
- Electrical Malfunction
  
- Instrument Approach Procedures
  - ILS

*Leg 2 – Autopilot*

- Loss of Communication
- TAWS Escape Maneuver
  
- Instrument Approach Procedures
  - Non-precision – Vectors

*Leg 3 – Hand Fly*

- Engine Malfunction

**Task Checklist**

Within the context of the training event, the instructor should reference the “*List of Assessment Items*” to determine if the Cirrus pilot has met the required Desired Outcome for each task in the lesson.

Preflight Briefing

Task	Desired Outcome	
	Describe	Explain
Lesson Objectives	<input type="checkbox"/>	<input type="checkbox"/>
Flight Overview	<input type="checkbox"/>	<input type="checkbox"/>

Risk Management

Task	Desired Outcome	
	Practice	Manage/Decide
Manage Risk Before the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>
Manage Risk During the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>

Single Pilot Resource Management

Task	Desired Outcome	
	Practice	Manage/Decide
Task Management	<input type="checkbox"/>	<input type="checkbox"/>
Automation Management	<input type="checkbox"/>	<input type="checkbox"/>
Risk Management and ADM	<input type="checkbox"/>	<input type="checkbox"/>
Situational Awareness	<input type="checkbox"/>	<input type="checkbox"/>
CFIT Awareness	<input type="checkbox"/>	<input type="checkbox"/>

Overall Flight

Task	Desired Outcome	
	Practice	Manage/Decide
Radio Communication	<input type="checkbox"/>	<input type="checkbox"/>
Avionics Usage	<input type="checkbox"/>	<input type="checkbox"/>

Pre-Takeoff

Task	Desired Outcome	
	Practice	Perform
Preflight Preparation	<input type="checkbox"/>	<input type="checkbox"/>
Engine Start	<input type="checkbox"/>	<input type="checkbox"/>
Before Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff	<input type="checkbox"/>	<input type="checkbox"/>

Takeoff and Climb

Task	Desired Outcome	
	Practice	Perform
Appropriate Takeoff	<input type="checkbox"/>	<input type="checkbox"/>
Climb	<input type="checkbox"/>	<input type="checkbox"/>

Cruise

Task	Desired Outcome	
	Practice	Perform
Initial Cruise	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Cruise	<input type="checkbox"/>	<input type="checkbox"/>
Departure Procedure	<input type="checkbox"/>	<input type="checkbox"/>

Abnormal / Emergency Procedures

Task	Desired Outcome	
	Practice	Manage/Decide
Electrical Malfunction	<input type="checkbox"/>	<input type="checkbox"/>
Engine Malfunction	<input type="checkbox"/>	<input type="checkbox"/>
TAWS Escape	<input type="checkbox"/>	<input type="checkbox"/>
Weather Diversion	<input type="checkbox"/>	<input type="checkbox"/>

Descent and Landing

Task	Desired Outcome	
	Practice	Perform
Descent and Arrival Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Traffic pattern	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (ILS)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (Non Precision – Vectors)	<input type="checkbox"/>	<input type="checkbox"/>
Missed Approach Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Holding Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate Landing	<input type="checkbox"/>	<input type="checkbox"/>
Power-off Landing	<input type="checkbox"/>	<input type="checkbox"/>
After Landing	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown	<input type="checkbox"/>	<input type="checkbox"/>

Post Flight Briefing

Task	Desired Outcome	
	Describe	Explain
Post Flight Discussion and Critique	<input type="checkbox"/>	<input type="checkbox"/>

**Lesson Completion Standards**

This flight lesson will be complete when the Cirrus pilot satisfactorily demonstrates ADM and critical thinking skills by completing the required tasks using the assessment criteria within this course.



## Flight Lesson 4

### Avionics Malfunctions

Equipment: .....Aircraft or FTD  
 Approximate Pre and Post Briefing:.....1.0 Hours  
 Approximate Flight Time: .....2.5 Hours  
 Cross Country Legs Required: .....3  
 Takeoffs/Landings Required: .....3  
 Instrument Approaches Required: .....3

### Lesson Objectives

- Practice managing malfunctions of the avionics installed in the aircraft while hand flying and using automation.

### Scenario

This lesson will focus on malfunctions of the avionics installed in the aircraft such as the PFD, MFD, and the autopilot. The lesson will be in a 3-leg cross country format with enough time on each leg for the Cirrus pilot to conduct normal procedures and to manage any scenario presented by the instructor. The Cirrus pilot will practice a combination of hand flying and using the autopilot to gain proficiency in both operations.

*Leg 1* – While in cruise flight, the instructor should introduce an autopilot failure. The Cirrus pilot should now hand fly the aircraft and decide whether to continue to the destination or to divert, taking into account personal minimums, pilot capability, and workload. Once this determination is made, the instructor should introduce an AHRS failure. The Cirrus pilot should take the appropriate corrective action and make the determination of whether to continue the flight or divert to another airport. The leg should terminate with the Cirrus pilot conducting a partial panel, overlay GPS approach with a circle to land maneuver.

*Leg 2* – During cruise flight the instructor should fail the PFD. The Cirrus pilot should carry out the appropriate action for this failure. The instructor and the Cirrus pilot should discuss how the failure of the PFD in a Cirrus Perspective aircraft affects equipment and procedures very differently than in an Avidyne equipped aircraft. Emphasis should be placed on using the autopilot to ease workload. The Cirrus pilot should conduct a partial panel ILS approach at the destination airport and hold at the IAF.

*Leg 3* – The Cirrus pilot should start this leg using the autopilot. During cruise flight, the instructor should simulate a failure of the Air Data Computer which would affect the pitot/static instruments. The Cirrus pilot should take the appropriate corrective action and make the determination

of whether to continue the flight or divert to a nearby airport. The Cirrus pilot and the instructor should discuss how the autopilot and SVS is affected by this failure and the Cirrus pilot should decide whether to continue to use the autopilot or to hand fly. The leg should terminate with a partial panel GPS approach that is hand flown. At the instructor's discretion, a missed approach may be flown depending on the simulated conditions at the destination airport.

At the completion of each leg, the Cirrus pilot will conduct a brief review of the decisions made on that leg and possible alternative solutions that could have been used to operate more effectively, efficiently and safely. During the lesson, the Cirrus pilot shall demonstrate the ability to control the aircraft manually and demonstrate automation management.

### Scenario Summary

#### Leg 1 – Hand Fly

- Autopilot Failure
- AHRS Failure
- Instrument Approach Procedures
  - Partial Panel GPS
  - Circle to land

#### Leg 2 – Autopilot

- PFD Failure
- Instrument Approach Procedures
  - Partial Panel ILS
  - Hold at IAF

#### Leg 3 – Autopilot / Hand Fly

- Air Data Failure
- Instrument Approach Procedures
  - GPS Partial Panel – Full Procedure

**Task Checklist**

Within the context of the training event, the instructor should reference the “List of Assessment Items” to determine if the Cirrus pilot has met the required Desired Outcome for each task in the lesson.

Preflight Briefing

Task	Desired Outcome	
	Describe	Explain
Lesson Objectives	<input type="checkbox"/>	<input type="checkbox"/>
Flight Overview	<input type="checkbox"/>	<input type="checkbox"/>

Risk Management

Task	Desired Outcome	
	Practice	Manage/Decide
Manage Risk Before the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>
Manage Risk During the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>

Single Pilot Resource Management

Task	Desired Outcome	
	Practice	Manage/Decide
Task Management	<input type="checkbox"/>	<input type="checkbox"/>
Automation Management	<input type="checkbox"/>	<input type="checkbox"/>
Risk Management and ADM	<input type="checkbox"/>	<input type="checkbox"/>
Situational Awareness	<input type="checkbox"/>	<input type="checkbox"/>
CFIT Awareness	<input type="checkbox"/>	<input type="checkbox"/>

Overall Flight

Task	Desired Outcome	
	Practice	Manage/Decide
Radio Communication	<input type="checkbox"/>	<input type="checkbox"/>
Avionics Usage	<input type="checkbox"/>	<input type="checkbox"/>

Pre-Takeoff

Task	Desired Outcome	
	Practice	Perform
Preflight Preparation	<input type="checkbox"/>	<input type="checkbox"/>
Engine Start	<input type="checkbox"/>	<input type="checkbox"/>
Before Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff	<input type="checkbox"/>	<input type="checkbox"/>

Takeoff and Climb

Task	Desired Outcome	
	Practice	Perform
Appropriate Takeoff	<input type="checkbox"/>	<input type="checkbox"/>
Climb	<input type="checkbox"/>	<input type="checkbox"/>
Departure Procedure	<input type="checkbox"/>	<input type="checkbox"/>

Cruise

Task	Desired Outcome	
	Practice	Perform
Initial Cruise	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Cruise	<input type="checkbox"/>	<input type="checkbox"/>

Abnormal / Emergency Procedures

Task	Desired Outcome	
	Practice	Manage/Decide
PFD Failure	<input type="checkbox"/>	<input type="checkbox"/>
AHRS Failure	<input type="checkbox"/>	<input type="checkbox"/>
Air Data Failure	<input type="checkbox"/>	<input type="checkbox"/>
Autopilot Failure	<input type="checkbox"/>	<input type="checkbox"/>

Descent and Landing

Task	Desired Outcome	
	Practice	Perform
Descent and Arrival Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Traffic pattern	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (GPS – Partial Panel)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (GPS – Partial Panel)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (ILS – Partial Panel)	<input type="checkbox"/>	<input type="checkbox"/>
Partial Panel Approach	<input type="checkbox"/>	<input type="checkbox"/>
Circling Approach	<input type="checkbox"/>	<input type="checkbox"/>
Missed Approach Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Holding Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate Landing	<input type="checkbox"/>	<input type="checkbox"/>
After Landing	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown	<input type="checkbox"/>	<input type="checkbox"/>

Post Flight Briefing

Task	Desired Outcome	
	Describe	Explain
Post Flight Discussion and Critique	<input type="checkbox"/>	<input type="checkbox"/>

**Lesson Completion Standards**

This flight lesson will be complete when the Cirrus pilot satisfactorily demonstrates ADM and critical thinking skills by completing the required tasks using the assessment criteria within this course.

**Flight Lesson 5***LOFT Scenario and Review*

Equipment: .....Aircraft or FTD (FTD Preferred)

Approximate Pre and Post Briefing:.....1.0 Hours

Approximate Flight Time: .....2.5 Hours

Cross Country Legs Required: .....2

Takeoffs/Landings Required: .....2

Instrument Approaches Required: .....2

**Lesson Objectives**

- Cirrus pilot will further refine his/her skills and proficiency by experiencing a realistic IFR scenario.
- Review weak procedures as determined by the Cirrus pilot and/or the instructor in preparation for the evaluation and IPC.

**Scenario**

The purpose of this lesson is to enhance the Cirrus pilot's skills through the use of a realistic IFR scenario. The lesson can also serve as a review of any maneuvers or procedures that the instructor and the Cirrus pilot want to review in order to prepare for the evaluation and the IPC.

Guidance on conducting effective scenarios and scenario ideas can be found in the instructor guide or on the eZ LMS website. Instructors should tailor the scenario to the type of flying that the Cirrus pilot will typically encounter or situations that he/she is not familiar with. The use of a Flight Training Device (FTD) will allow the instructor to greatly customize the scenario for the strongest possible learning experience.

At the completion of each leg, the Cirrus pilot will conduct a brief review of the decisions made on that leg and possible alternative solutions that could have been used to operate more effectively, efficiently and safely. During the lesson, the Cirrus pilot shall demonstrate the ability to control the aircraft manually and demonstrate automation management.

**Scenario Summary**

*Leg 1* – As designated by instructor

*Leg 2* – As designated by instructor

**Task Checklist**

Within the context of the training event, the instructor should reference the “List of Assessment Items” to determine if the Cirrus pilot has met the required Desired Outcome for each task in the lesson.

Preflight Briefing

Task	Desired Outcome	
	Describe	Explain
Lesson Objectives	<input type="checkbox"/>	<input type="checkbox"/>
Flight Overview	<input type="checkbox"/>	<input type="checkbox"/>

Risk Management

Task	Desired Outcome	
	Practice	Manage/Decide
Manage Risk Before the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>
Manage Risk During the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>

Single Pilot Resource Management

Task	Desired Outcome	
	Practice	Manage/Decide
Task Management	<input type="checkbox"/>	<input type="checkbox"/>
Automation Management	<input type="checkbox"/>	<input type="checkbox"/>
Risk Management and ADM	<input type="checkbox"/>	<input type="checkbox"/>
Situational Awareness	<input type="checkbox"/>	<input type="checkbox"/>
CFIT Awareness	<input type="checkbox"/>	<input type="checkbox"/>

Overall Flight

Task	Desired Outcome	
	Practice	Manage/Decide
Radio Communication	<input type="checkbox"/>	<input type="checkbox"/>
Avionics Usage	<input type="checkbox"/>	<input type="checkbox"/>

Pre-Takeoff

Task	Desired Outcome	
	Practice	Perform
Preflight Preparation	<input type="checkbox"/>	<input type="checkbox"/>
Engine Start	<input type="checkbox"/>	<input type="checkbox"/>
Before Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff	<input type="checkbox"/>	<input type="checkbox"/>

Takeoff and Climb

Task	Desired Outcome	
	Practice	Perform
Appropriate Takeoff	<input type="checkbox"/>	<input type="checkbox"/>
Climb	<input type="checkbox"/>	<input type="checkbox"/>
Departure Procedure	<input type="checkbox"/>	<input type="checkbox"/>

Cruise

Task	Desired Outcome	
	Practice	Perform
Initial Cruise	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Cruise	<input type="checkbox"/>	<input type="checkbox"/>

Abnormal / Emergency Procedures

Task	Desired Outcome	
	Practice	Manage/Decide
PFD Failure	<input type="checkbox"/>	<input type="checkbox"/>
AHRS Failure	<input type="checkbox"/>	<input type="checkbox"/>
Air Data Computer Failure	<input type="checkbox"/>	<input type="checkbox"/>
MFD Failure	<input type="checkbox"/>	<input type="checkbox"/>
GPS Failure	<input type="checkbox"/>	<input type="checkbox"/>
Autopilot Failure	<input type="checkbox"/>	<input type="checkbox"/>
Alternator Failure	<input type="checkbox"/>	<input type="checkbox"/>
Engine Malfunction	<input type="checkbox"/>	<input type="checkbox"/>
Flap Malfunction	<input type="checkbox"/>	<input type="checkbox"/>
Open Door	<input type="checkbox"/>	<input type="checkbox"/>
Cabin Fire	<input type="checkbox"/>	<input type="checkbox"/>
TAWS Escape	<input type="checkbox"/>	<input type="checkbox"/>
Weather Diversion	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Approach and Landing	<input type="checkbox"/>	<input type="checkbox"/>
Inadvertent IMC Encounter	<input type="checkbox"/>	<input type="checkbox"/>
Inadvertent Ice Encounter	<input type="checkbox"/>	<input type="checkbox"/>
Turbo System Malfunction (T)	<input type="checkbox"/>	<input type="checkbox"/>
Oxygen System Malfunction	<input type="checkbox"/>	<input type="checkbox"/>

Descent and Landing

Task	Desired Outcome	
	Practice	Perform
Descent and Arrival Procedures	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic pattern	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (As Required)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Circling Approach	<input type="checkbox"/>	<input type="checkbox"/>
Partial Panel Approach	<input type="checkbox"/>	<input type="checkbox"/>
Missed Approach Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Holding Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate Landing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
After Landing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shutdown	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Post Flight Briefing

Task	Desired Outcome	
	Describe	Explain
Post Flight Discussion and Critique	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Lesson Completion Standards**

This flight lesson will be complete when the Cirrus pilot satisfactorily demonstrates ADM and critical thinking skills by completing the required tasks using the assessment criteria within this course.

**Flight Lesson 6**

*Final Evaluation*

Equipment: .....Aircraft  
 Approximate Pre and Post Briefing:.....1.0 Hours  
 Approximate Flight Time: .....2.0 Hours  
 Cross Country Legs Required: .....3  
 Takeoffs/Landings Required: .....3  
 Instrument Approaches Required: .....3

**Lesson Objectives**

- Demonstrate a manage/decide level of competency for the entire flight.
- Demonstrate judgment, aeronautical decision making, and single pilot resource management skills necessary to effectively, efficiently, and safely operate the Cirrus aircraft under IFR flight rules
- Demonstrate the skill required to complete the tasks of an Instrument Proficiency Check (IPC) as required by the current edition of the Instrument Rating Practical Test Standards.

**Scenario**

This lesson is the final evaluation flight for the course to determine whether the Cirrus pilot can safely operate the aircraft in single pilot operations while IFR and complete the tasks of an IPC. The lesson will be in a 3-leg cross country format with enough time on each leg for the Cirrus pilot to conduct normal procedures and to manage any scenario presented by the instructor. The Cirrus pilot will practice a combination of hand flying and using the autopilot to demonstrate proficiency in both operations.

*Leg 1* – During initial cruise flight the Cirrus pilot should demonstrate competency recovering from unusual attitudes. The Cirrus pilot should then continue to the first destination. This leg should terminate with a full procedure VOR approach. The instructor should present a weather scenario in which a missed approach may be necessary. A missed approach should be conducted and the Cirrus pilot should make 2 turns in holding. The Cirrus pilot should use the autopilot during this leg to demonstrate proficiency.

*Leg 2* – The Cirrus pilot should proceed to the alternate and hand fly from now on. The instructor should present an electrical malfunction during cruise flight. The Cirrus pilot should take the appropriate action to resolve the situation and conduct an ILS approach to a full stop landing.

*Leg 3* – The Cirrus pilot should continue to hand fly during this leg. During cruise flight, the instructor should fail the PFD. The Cirrus pilot should take the appropriate action to resolve the situation and conduct a full procedure, stand-alone GPS approach while partial panel. The approach should terminate with a circle to land.

At the completion of each leg, the Cirrus pilot will conduct a brief review of the decisions made on that leg and possible alternative solutions that could have been used to operate more effectively, efficiently and safely. During the lesson, the Cirrus pilot shall demonstrate the ability to control the aircraft manually and demonstrate automation management.

**Scenario Summary**

*Leg 1 – Autopilot Usage*

- Weather Diversion
- Instrument Approach Procedures
  - VOR Approach – Full Procedure

*Leg 2 – Hand Fly*

- Electrical Malfunction
- Instrument Approach Procedures
  - ILS Approach – Vectors

*Leg 3 – Hand Fly*

- PFD Malfunction
- Instrument Approach Procedures
  - Partial Panel GPS Approach – Full Procedure

**Task Checklist**

Within the context of the training event, the instructor should reference the “*List of Assessment Items*” to determine if the Cirrus pilot has met the required Desired Outcome for each task in the lesson.

Preflight Briefing

Task	Desired Outcome	
	Describe	Explain
Lesson Objectives	<input type="checkbox"/>	<input type="checkbox"/>
Flight Overview	<input type="checkbox"/>	<input type="checkbox"/>

Risk Management

Task	Desired Outcome	
	Practice	Manage/Decide
Manage Risk Before the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>
Manage Risk During the Flight Using the 5P Checklist	<input type="checkbox"/>	<input type="checkbox"/>

Single Pilot Resource Management

Task	Desired Outcome	
	Practice	Manage/Decide
Task Management	<input type="checkbox"/>	<input type="checkbox"/>
Automation Management	<input type="checkbox"/>	<input type="checkbox"/>
Risk Management and ADM	<input type="checkbox"/>	<input type="checkbox"/>
Situational Awareness	<input type="checkbox"/>	<input type="checkbox"/>
CFIT Awareness	<input type="checkbox"/>	<input type="checkbox"/>

Overall Flight

Task	Desired Outcome	
	Practice	Manage/Decide
Radio Communication	<input type="checkbox"/>	<input type="checkbox"/>
Avionics Usage	<input type="checkbox"/>	<input type="checkbox"/>

Pre-Takeoff

Task	Desired Outcome	
	Practice	Perform
Preflight Preparation	<input type="checkbox"/>	<input type="checkbox"/>
Engine Start	<input type="checkbox"/>	<input type="checkbox"/>
Before Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Taxi	<input type="checkbox"/>	<input type="checkbox"/>
Before Takeoff	<input type="checkbox"/>	<input type="checkbox"/>

Takeoff and Climb

Task	Desired Outcome	
	Practice	Perform
Normal/Crosswind Takeoff	<input type="checkbox"/>	<input type="checkbox"/>
Short-field Takeoff	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field Takeoff	<input type="checkbox"/>	<input type="checkbox"/>
Climb	<input type="checkbox"/>	<input type="checkbox"/>

Cruise

Task	Desired Outcome	
	Practice	Perform
Initial Cruise	<input type="checkbox"/>	<input type="checkbox"/>
Enroute Cruise	<input type="checkbox"/>	<input type="checkbox"/>

Abnormal / Emergency Procedures

Task	Desired Outcome	
	Practice	Manage/Decide
PFD Failure	<input type="checkbox"/>	<input type="checkbox"/>
Alternator Failure	<input type="checkbox"/>	<input type="checkbox"/>
Weather Diversion	<input type="checkbox"/>	<input type="checkbox"/>

Descent and Landing

Task	Desired Outcome	
	Practice	Perform
Descent and Arrival Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Traffic pattern	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (VOR – Full Procedure)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (ILS – Vectors)	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Approach Procedures (GPS – Partial Panel)	<input type="checkbox"/>	<input type="checkbox"/>
Circling Approach	<input type="checkbox"/>	<input type="checkbox"/>
Partial Panel Approach	<input type="checkbox"/>	<input type="checkbox"/>
Missed Approach Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Holding Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Normal/Crosswind Landing	<input type="checkbox"/>	<input type="checkbox"/>
Short-field Landing	<input type="checkbox"/>	<input type="checkbox"/>
Soft-field Landing	<input type="checkbox"/>	<input type="checkbox"/>
50% Flap Landing	<input type="checkbox"/>	<input type="checkbox"/>
Zero Flap Landing	<input type="checkbox"/>	<input type="checkbox"/>
Power-off Landing	<input type="checkbox"/>	<input type="checkbox"/>
Go-around	<input type="checkbox"/>	<input type="checkbox"/>
After Landing	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown	<input type="checkbox"/>	<input type="checkbox"/>

Post Flight Briefing

Task	Desired Outcome	
	Describe	Explain
Post Flight Discussion and Critique	<input type="checkbox"/>	<input type="checkbox"/>

**Lesson Completion Standards**

This flight lesson will be complete when the Cirrus pilot satisfactorily demonstrates ADM and critical thinking skills by completing the required tasks using the assessment criteria within this course and completes the items required for an Instrument Proficiency Check as required by the current edition of the Instrument Rating Practical Test Standards.

### Biennial Flight Review

*Optional*

Equipment: Aircraft

Approximate Time: 4.0 Hours

#### Lesson Objectives

- Complete items required by FAR 61.56 to satisfy requirements of a Biennial Flight Review

*Note:* A Biennial Flight Review is not a part of the differences training, but is a requirement of the Federal Aviation Regulations which should be accomplished in accordance with the guidelines set forth by FAR 61.56 and the supporting advisory circular (AC 61-98A).

*Note:* BFR training can only be conducted after satisfactory completion of the differences course. An additional half-day of training may be required to cover information required by the regulations.

#### Task Checklist

Ground Items Required by FAR 61.56 and Advisory Circular

Task	Desired Outcome	
	Describe	Explain
BFR Ground Segment	<input type="checkbox"/>	<input type="checkbox"/>

Flight Items Required by FAR 61.56 and Advisory Circular

Task	Desired Outcome	
	Practice	Perform
BFR Flight Segment	<input type="checkbox"/>	<input type="checkbox"/>

#### Completion Standards

The Biennial Flight Review will be complete when the Cirrus pilot has satisfactorily demonstrated to a Perform level those maneuvers and procedures that, at the discretion of the person giving the review, are necessary for the Cirrus pilot to safely exercise the privileges of the pilot certificate he/she holds and has been given the appropriate logbook endorsement.

### Course Summary: IFR Cirrus Perspective Differences

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

**Aircraft Type:** \_\_\_\_\_

**Aircraft Registration:** \_\_\_\_\_

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

Flight Time Summary	Ground Time	FTD/Flight Time	Ground Time	Landings

**Course Summary**  
*Note:* "C" indicates items is complete  
 "I" indicates item is incomplete or not attempted

**C I**  
  Completion Certificate Awarded  
 IPC Logbook Endorsement  
 If Incomplete, please provide explanation:  
 \_\_\_\_\_

---

High Performance Logbook Endorsement  
  Biennial Flight Review  
 Logbook Endorsed

---

Because the dangers of flight at higher altitudes it is recommended you complete the high altitude chamber training if flying a turbo Cirrus aircraft.

Please initial one of the following boxes:  
 I will be participating the high altitude chamber training immediately after aircraft training  
 I will not be participating in the high altitude chamber training at this time.

---

I understand the following training is provided as differences training for the Cirrus aircraft with Cirrus Perspective avionics and I (pilot) must continue to comply with FAR's, exercise sound judgment and maintain a high level of flying proficiency in order to minimize the risk associated with flight.

---

I have reviewed and accept the course summary and agree with the above statements.

\_\_\_\_\_

Customer Signature                      Instructor Signature                      Date



### Acknowledgments for Course Development

This training guide has been developed through a collaborative effort between Cirrus Design, University of North Dakota Aerospace Foundation (UNDAF), and the FAA/Industry Training Standards (FITS) research team.



Flying within the Envelope of Safety will not guarantee a safe flight. Pilots must comply with FARs, exercise sound judgment and maintain a high level of flying proficiency in order to minimize the risks associated with flight.

QUALIFICATION	DAY		NIGHT		MAX WIND, T-O&LND	
	NON-INSTRUMENT RATED -OR- INSTRUMENT RATED (NON-PROFICIENT)	INSTRUMENT RATED (PROFICIENT)	NON-INSTRUMENT RATED -OR- INSTRUMENT RATED (NON-PROFICIENT)	INSTRUMENT RATED (PROFICIENT)	NIGHT	DAY
INSTRUMENT RATED (PROFICIENT) Note: File IFR anytime the weather is below 3000'/5 SM	Less than 100 hours in Type Operate at or Above 1000' Ceilings 3 SM Visibility	Greater than 100 hours in Type Operate at or Above 500' Ceilings 1 SM Visibility	Less than 100 hours in Type Operate at or Above 1000' Ceilings 3 SM Visibility	Greater than 100 hours in Type Operate at or Above 600' Ceilings 2 SM Visibility	NIGHT 25 knots total sustained 15 knot crosswind	DAY 30 knots total sustained 15 knot crosswind
INSTRUMENT RATED (PROFICIENT WITH DEMONSTRATED ABILITY TO CAT 1 MINIMUMS WITHIN 60 DAYS) Note: File IFR anytime the weather is below 3000'/5 SM	Less than 100 hours in Type Operate at or Above 500' Ceilings 1 SM Visibility	Greater than 100 hours in Type Operate at or Above 200' Ceilings 1/2 SM Visibility	Less than 100 hours in Type Operate at or Above 500' Ceilings 1 SM Visibility	Greater than 100 hours in Type Operate at or Above 200' Ceilings 1/2 SM Visibility	NIGHT 35 knots total sustained 20 knot crosswind or max demonstrated	DAY 35 knots total sustained 20 knot crosswind or max demonstrated

www.cirrusdesign.com

For more information e-mail: pilotsworld@cirrusdesign.com

**ICING CONDITIONS: Flight into known icing conditions is prohibited.**