SUNRISE AVIATION
ALL LOCATIONS
INSTRUMENT PILOT CERTIFICATION COURSE - ASEL

PAGES	CHANGES
TCO Intro pg 1	re-paginate
TCO Intro pg 8	Remove 2949 Airside Center Dr, Add new location address
TCO Intro pgs 11-13	Add Lecture room 1 classroom description & technical specification, airport facilities reference, instructor requirements, and WEBOPSS spelling, revised Redbird description and instructor requirements.
Rest of TCO & Syllabus	Change footer to Rev 9
Flight Stage 1pgs 1,7,8	Deleted references to NDB
Flight Syllabus Intro pg 3	Added graduation requirements language

SUNRISE AVIATION, INC.

PILOT SCHOOL CERTIFICATE #FPQS990D

TRAINING COURSE OUTLINE

ORMOND BEACH

JACKSONVILLE SATELLITE

LAKELAND SATELLITE

INSTRUMENT RATING COURSE
AIRPLANE

OCTOBER 2024

REVISION 9

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LOG OF REVISIONS

Rev. #	DATE	SECTION & PAGE NUMBERS	INITIALS
1	02/23/12	TCO Intro. Pages 5, 6, & 11. Added Piper Warrior.	PWM
2	06/25/12	TCO Intro. Pages 5-13; Grd Pages 3, 18 & 32; Flt Intro. Pages 4-5; Flt Stage I Pages 2-15, Flt Stage II Pages 2-8 & Flt Stage III Pages 2-7.	PWM
3	05/29/14	TCO pgs. 5-8 & 13; Flt Stage I Pages 14-15; Flt Stage III Pages 4-7.	PWM
4	12/01/16	Cover pgs; TCO Intro pgs 5-8, 9-11, 13; Grd pg 35; Flt Intro pgs 1 & 2; Flt Stage II pgs 1, 8; Flt Stage III pgs 1, 5, 6, 7	WKW
5	06/15/17	Cover pgs; TCO Intro pgs 5-7; Flt Stage I pgs 14-15	WKW
6	12/01/18	TCO Intro pgs 5, 6, 13	WKW
7	2/01/20	All pages	WKW
8	06/06/24	TCO pgs 11 & 12	RE
9	10/20/24	TCO Intro pgs 1, 8, 11-13; Flt Intro pg 3; Flt Stage I pgs 1, 7, 8	RE/WD

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SUNRISE AVIATION, INC.

1. Sunrise Aviation, Inc., is located at the Ormond Beach Municipal Airport, Ormond Beach, Florida, and holds Air Agency Certificate FPQS990D. Sunrise Aviation is owned and operated as:

   Sunrise Aviation, Inc.
   740 Airport Road
   Ormond Beach, Florida 32174

   a. Sunrise Aviation, Inc. operates from 2 additional satellite airports located at:

      i. Cecil Field (KVQQ): 13450 Lake Fretwell St., Jacksonville, FL 32221

      ii. Lakeland (KLAL): 3131 Flightline Dr, Lakeland, FL 33811

2. **Course Title:** Instrument Rating Course - Airplane

3. This Training Course Outline meets all the curriculum requirements for the Instrument Rating – Airplane Course (Airplane Single-Engine Land) contained in Appendix C of Part 141 of the Federal Aviation Regulations.

4. The training syllabus included with this outline contains a separate ground training section and a flight training section which may be taught concurrently or separately.

5. **Course Objective:** The course objective is to provide the student with the knowledge, skill, and aeronautical experience necessary to meet the requirements for adding an Instrument Airplane Rating to an existing Private or Commercial Pilot Certificate with an Airplane Category Rating and Single-Engine Land Class Rating.

6. **Course Completion Standards:** To meet the course completion standards, the student must demonstrate through ground and flight tests and show through appropriate records that he/she meets the knowledge, skill, and experience requirements necessary to obtain an Instrument Airplane Rating.

7. **Ground Instructional Facilities:** Ground instructional facilities are located at all 3 Florida locations:

Ormond Beach (KOMN):

a) **Lecture Room #1.**
This classroom is 14' x 16'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room and is equipped with a projector mounted overhead and an instructor computer console. The maximum number of students that may be trained in this room at any one time is 12 to 20 students depending on the room configuration.

b) **Lecture Room #2.**
This classroom is 12' x 19'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room and is equipped with a projector mounted overhead and an instructor computer console. The maximum number of students that may be trained in this room at any one time is 12 to 20 students depending on the room configuration.

c) **Lecture Room #3.**
This classroom is 15' x 12'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room and is equipped with a projector mounted overhead and an instructor computer console. The maximum number of students that may be trained in this room at any one time is 10 to 15 students depending on the room configuration.

d) The training rooms are well-lighted and the temperature is thermostatically controlled. Each room is well-ventilated and conforms to local building, sanitation, and health codes. The rooms are designed and located so that students will not be distracted by the instruction conducted in other rooms, or by flight and maintenance operations on the airport.

e) **Ground Training Aids** include computers, projectors, charts, model airplanes, and DVDs appropriate for a Private Pilot Ground School Course.

Cecil Field (KVQQ)

These facilities consist of the following rooms in FSCJ Buildings J & K.

a) Classroom #K-145.
This classroom is 36' x 39'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 40.

b) Classroom #K-143.
This classroom is 24' x 40'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 20.

c) Classroom #K-141.
This classroom is 29' x 40'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 36.

d) Classroom #K-135
This classroom is 35' x 40'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 50.

e) Classroom #K-133.
This classroom is 32' x 30'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 24.

f) Classroom #K-131.
This classroom is 32' x 30'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 24.

g) Classroom #J-118.
This classroom is 24' x 32'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. It may be equipped with PCATDs to enhance instruction. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 20.

h) Classroom #J-117.
This classroom is 20' x 38'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 20.

i) Classroom #J-115.
This classroom is 20' x 33'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room. This classroom has a multimedia computer instructor station. The maximum number of students that may be trained in this room at any one time is 16.

j) Other classrooms at FSCJ's Cecil Center South may be utilized as necessary as long as sufficient tables and chairs are provided. Small group presentations may be conducted in individual offices, library, classrooms, simulator rooms, or other similar facilities as long as that space meets all Part 141 and local requirements.

k) The training rooms at FSCJ are well-lighted and the temperature is thermostatically controlled. Each room is well-ventilated and conforms to local building, sanitation, and health codes. The rooms are designed and located so that students will not be distracted by the instruction conducted in other rooms, or by flight and maintenance operations on the airport.

l) **Ground Training Aids** include computer, projector, charts, model airplanes, and DVDs appropriate for an Instrument Rating Course.

Lakeland (KLAL):

a) **Lecture Room #1.**
This classroom is 14' x 16'. It is equipped with sufficient tables and chairs for each class conducted there. This classroom has a white board at the instructor's end of the room and is equipped with a projector and an instructor computer console. The maximum number of students that may be trained in this room at any one time is 4.

b) The training room at Lakeland Flightline Drive is well-lighted and the temperature is thermostatically controlled. The lecture room is well-ventilated and conforms to local building, sanitation, and health codes. The room is designed and located so that students will not be distracted by the instruction conducted in other rooms, or by flight and maintenance operations on the airport.

c) **Ground Training Aids** include computer, projector, charts & model airplanes.

8. **Airport:** Ormond Beach airport (KOMN) is the main operations base for training in this course. Flight training operations, including the dispatching of flights, will also be conducted at Cecil Field Satellite (KVQQ) and Lakeland Satellite (KLAL). All three airports have hard-surface runways and meets the requirements of 14 CFR 141.38 for day and night flight operations. Fuel service is available 0800 to 1700 each day. Scheduled maintenance will be conducted at Ormond Beach Municipal Airport. Line Maintenance will be conducted as necessary at all three locations.

9. **Airport Facilities:** Each airport is equipped with **pilot briefing and flight planning areas**. These are permanent structures located at: Building 1 & 2 in Ormond Beach (KOMN), Building J at Cecil Field (KVQQ), and Flightline Drive in Lakeland (KLAL). These areas are equipped with computers and telephones for filing flight plans and receiving pilot weather briefings.

10. **Aircraft:** Airplanes to be used for flight training in this course are the Cessna 152, Cessna 172, Piper Cadet & Piper Warrior. These aircraft will meet the requirements of 14 CFR 141.39. Radio equipment will consist of at least one VHF transmitter and receiver and at least one VOR navigational receiver, and one transponder. In addition, each airplane is equipped for day or night VFR flying as specified in 14 CFR 91.205 when required.

11. **Flight Training Devices:** Sunrise Aviation utilizes the following types of FAA approved training devices:

    a. Redbird LD Advanced Aviation Training Device (AATD). These devices may be set to emulate a variety of aircraft appropriate for instrument flight training including the Cessna Skyhawk (C172). This device includes a wrap-around visual system that covers more than 200 degrees. Credit for training in a flight training device that meets the requirements of 14 CFR Part 141.41(b) cannot exceed 40 percent of the total flight training hour requirements of the course. When a flight training device is utilized in this course at least 21 hours of instrument flight time must be logged in the airplane.

12. **Chief Flight Instructor:** The Chief Flight Instructor designated for this course must meet or exceed the requirements for Chief Flight Instructor as listed in 14 CFR 141.35(a)(1 thru 5), and (c)(1 thru 3).

13. **Assistant Chief Flight Instructor:** The Assistant Chief Flight Instructor assigned to this course must meet or exceed the requirements for Assistant Chief Flight Instructor as listed in 14 CFR 141.36(a)(1 thru 5) and (c)(1 thru 3).

14. **Flight Instructor:** Each Flight Instructor assigned to this course must hold at least a commercial pilot certificate with an instrument rating and a flight instructor certificate with an instrument rating and meet the requirements of 14 CFR 141.33(a)(3). Also, each Flight Instructor must hold a current FAA medical certificate or meet the requirements under BasicMed.

15. **Chief Ground Instructor:** The Chief Ground Instructor designated for this course must meet or exceed the requirements for Chief Ground Instructor as listed in 14 CFR 141.35(e).

16. **Assistant Chief Ground Instructor:** The Assistant Chief Ground Instructor assigned to this course must meet or exceed the requirements as listed in 14 CFR 141.36(e).

17. **Ground Instructor:** Each Ground Instructor assigned to this course must hold an instrument ground instructor certificate or a flight instructor certificate with an instrument rating and must meet or exceed the requirements of 14 CFR 141.33(a)(3).

PERSONNEL FOR ALL LOCATIONS

Chief Flight Instructor:	**As designated in WEBOPSS**
Asst Chief Flight Instructor:	**As designated in WEBOPSS**
Chief Ground Instructor:	**As designated in WEBOPSS**
Asst Chief Ground Instructor:	**As designated in WEBOPSS**

SUNRISE AVIATION, INC.

PILOT SCHOOL CERTIFICATE #FPQS990D

GROUND SCHOOL COURSE:
INSTRUMENT RATING AIRPLANE

GROUND TRAINING SYLLABUS

ORMOND BEACH

JACKSONVILLE SATELLITE

LAKELAND SATELLITE

OCTOBER 2024

REVISION 9

INTRODUCTION

This ground training syllabus meets the requirements of 14 CFR Part 141 Appendix L and Appendix B 3 (a)(1) and (b)(1) through (10).

This syllabus is divided into two (3) stages with twenty-seven (27) separate ground lessons plus three (3) briefings. Each ground training lesson has stated objectives and completion standards that must be satisfied in order for the lesson to be complete. Adequate knowledge of the specified study material is necessary for satisfactory progress in the individual lessons and for overall progress in the course. The individual lesson times are not mandatory. The hours in each lesson are primarily for instructor and student guidance. However, total specified training hours at course completion must be met. The lessons in each stage may be presented in any order as long as training objectives are not compromised. However, the Stage Checks or End-of-Course Exam (Lessons 9, 19, and 26 and 27), should be presented as the last lesson in each stage.

Every lesson contains a training outline and a detailed list of items that the student must successfully complete. Normally, a lesson is completed in this allotted time. If a student is unable to master the lesson in the specified time, it will be necessary to repeat all or a portion of the lesson until completion standards are met.

The course completion check at the end of this course assures that the student acquired the aeronautical knowledge required to satisfactorily complete the FAA Instrument Rating Airplane Knowledge Test. The course completion exam questions in appropriate subject matter areas will be extracted from the current FAA Instrument Rating Airplane Knowledge Test Book or a reasonable facsimile.

A record of the ground training received will be formally documented on a chronological log of student attendance. The names and grades of any tests taken will also be recorded. An example of such a log is presented on the next page. The Ground Instructor may utilize the attached log or create another as long as it meets the record-keeping requirements of 14 CFR 141.101.

GROUND TRAINING LOG

Student Name: _____

Lesson Number	Lesson Time (h:min)	Actual Time Comp.	Date Completed	Grade	Instructor Signature
Ground Training Stage I					
1	1:00				
2	1:00				
3	1:00				
4	1:00				
5	1:00				
6	1:00				
7	1:00				
8	1:00				
9 ◆	1:00				
Total Stage I	**9:00**				

◆ Denotes Stage Check or Course Completion Examination.

Lesson Number	Lesson Time (h:min)	Actual Time Comp.	Date Completed	Grade	Instructor Signature
Ground Training Stage II					
10	1:00				
11	1:30				
12	1:00				
13	1:00				
14	1:30				
15	1:00				
16	1:00				
Briefing 1	:30				
17	1:00				
18	1:00				
19◆	1:00				
Total Stage II	**11:30**				
Total Stage I-II	**20:30**				

Lesson Number	Lesson Time (h:min)	Actual Time Comp.	Date Completed	Grade	Instructor Signature
Ground Training Stage III					
20	1:00				
21	1:00				
Briefing 2	0:30				
22	1:00				
23	1:00				
24	1:00				
25	1:00				
Briefing 3	1:00				
26◆	1:00				
27◆	1:00				
Total Stage II	**9:30**				
Total Stage I, II&III	**30:00**				

TRAINING SYLLABUS

I. ENROLLMENT PREREQUISITES:
There are no specific requirements for enrolling in this pilot ground course.
.

II. GRADING CRITERIA:

A. The overall performance grade is based on the knowledge, preparation and attitude of the student for each lesson completed.

B. Grading criteria is to be based upon the building block method of instruction. A lesson is not completed unless the instructor is satisfied with the student's performance in all areas, and awards the student a grade of Satisfactory (S) on the entire lesson. The above criteria should be used as a guideline for this assessment. Students will demonstrate satisfactory knowledge of lesson content and achievement of lesson objectives by active participation in class discussion and by correctly answering the instructor's verbal and written questions. Minimum passing score on the final test is 80%. Incorrect responses will be corrected to reinforce and ensure student understanding.

II. REQUIREMENTS FOR GRADUATION: To obtain a graduation certificate for the Ground School Course-Instrument Rating Airplane, the applicant must complete all ground training requirements satisfactorily.

Ground Training Objective
Stage I

During this stage, the student will learn the principles of instrument flight including the operation, use, and limitations of flight instruments and instrument navigation systems. The student will also learn how the air traffic control system functions and the use of instrument flight charts for IFR planning and flight. Emphasis will be placed on advanced human factors and physiological factors directly related to instrument flight. In addition, the student will become familiar with the FARs applicable to instrument flight operations.

Ground Training Completion Standards
Stage I

This stage is complete when the student has satisfactorily completed all of the ground lessons and passed the Stage Examination. Minimum passing score is 80% on the Stage Examination. Incorrect test responses will be corrected to ensure student understanding.

STAGE I

GROUND LESSON 1 – Course Overview and Human Factors Concepts

Time: 1.0

Lesson Objectives:

- Review knowledge of private pilot privileges.
- Become familiar with advanced pilot training and opportunities.
- Gain an understanding of the advanced human factors concepts related to aviation.

Academic Content:

Course Overview

- Course Elements
- Course Materials
- Exams and Tests
- Policies and Procedures
- Student/Instructor Expectations
- Review Private Pilot Privileges and Limitations

Section A – Instrument Training

- Instrument Flight
- Instrument Training
- Additional Certificates and Ratings

Section B – Advanced Human Factors Concepts

- Aeronautical Decision Making
- Crew Resource Management
- The Decision-Making Process
- Pilot-in-Command Responsibilities
- Communication
- Resource Use
- Workload Management
- Situational Awareness

Aviation Physiology

- Spatial Disorientation
- Vestibular Disorientation
- Motion Sickness
- Hypoxia
- Prevention of Hypoxia
- Decompression Sickness
- Hyperventilation
- Stress
- Fatigue
- Alcohol and Drugs
- Fitness for Flight

Completion Standards:

The student will indicate, through oral quizzing, familiarity with instrument training, opportunities in aviation, human factors, and understanding of private pilot privileges. In addition, the instructor will make sure the student has a basic understanding of policies and procedures applicable to Sunrise Aviation's Pilot Training Programs.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 2, Section A – Flight Instrument Systems

STAGE I

GROUND LESSION 2 – Flight Instrument Systems

Time: 1.0

Lesson Objectives:

- Gain a working knowledge of the function and use of the flight instrument components and systems.
- Become familiar with the limitations and common errors of the flight instrument systems and components.

Academic Content:

Section A – Flight Instrument Systems

- FAA Instrument Requirements
- Pilot's Operating Handbook (POH)

Gyroscopic Flight Instruments
- System Operation
- System Errors
- Instrument Check

Magnetic Compass
- System Operation
- System Errors
- Instrument Check

Pitot-Static System
- System Operation
- System Errors
- Instrument Check
- V-Speeds and Color Codes

Completion Standards:

Demonstrate understanding of IFR instrument requirements as well as instrument flight systems, instrument operations, and instrument errors during oral quizzing by instructor at completion of lesson. Student completes Chapter 2 questions for Section A with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 3.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 2, Section B – Attitude Instrument Flying

STAGE I

GROUND LESSON 3 – Attitude Instrument Flying

Time: 1.0

Lesson Objectives:

- Review the basic principles of attitude instrument flying, including the fundamental procedures related to instrument cross-check, instrument interpretation, and aircraft control.
- Gain a working knowledge of the instrument cockpit check.
- Become familiar with instrument system failures and partial panel flight procedures.

Academic Content:

Section B – Attitude Instrument Flying

Fundamental Skills
- Instrument Cross-Check
- Instrument Interpretation
- Aircraft Control
- Primary/Secondary Concept
- Control and Performance Concept

Basic Flight Maneuvers
- Straight and Level Flight
- Standard Rate Turns
- Steep Turns
- Constant Airspeed Climbs
- Constant Rate Climbs
- Constant Airspeed Descents
- Constant Rate Descents
- Level-off from Climbs and Descents
- Climbing and Descending Turns
- Stalls

Coping with Instrument Failure
- Identifying an Instrument Failure
- Attitude Indicator Failure
- Heading Indicator Failure
- Partial Panel Flying
- Magnetic Compass Turns
- Timed Turns
- Pitot-Static Instrument Failures

Unusual Attitude Recovery
- Nose-High Attitude
- Nose-Low Attitude
- Partial Panel Unusual Attitude Recovery

Completion Standards:

Demonstrate understanding of basic attitude instrument flight during oral quizzing by instructor at completion of lesson. Exhibit knowledge of partial panel instrument flight procedures. Student completes Chapter 2 questions for Section B with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete student understanding before the student progresses to Ground Lesson 4.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 2, Section C – Instrument Navigation

STAGE I

GROUND LESSON 4 – Instrument Navigation

Time: 1.0

Lesson Objectives:

- Learn the function, use, and limitations of VOR, DME, and ADF radio equipment navigation aids (navaids).
- Become familiar with other types of instrument navigation, including RNAV and VNAV.

Academic Content:

Section C – Instrument Navigation

VOR Navigation
- Horizontal Situation Indicator
- Intercepting a Radial
- Tracking
- Determining Your Progress
- Time and Distance to a Station
- Station Passage
- VOR Limitations
- Distance Measuring Equipment
- DME Arcs

ADF Navigation
- Automatic Direction Finder
- Radio Magnetic Indicator
- Intercepting a Bearing
- Tracking
- Time and Distance to a Station
- Station Passage

Operations Considerations
- Ground Facilities
- VOR Checks
- Identifications

Area Navigation
- VORTAC-Based Area Navigation
- Flight Management Systems (FMS)
- Inertial Navigation System (INS)
- Global Positioning System (GPS)
- GNSS Landing System (GLS)
- Global Navigation Satellite System (GNSS)
- Long Range Navigation (LORAN)

Completion Standards:

Demonstrate understanding of the use and limitations of navigation systems during oral quizzing by instructor at completion of lesson. Student completes Chapter 2 questions for Section C with a minimum passing score of 80%, and the instructor will review each incorrect response to ensure complete understanding before the student progresses to Ground Lesson 5.

Study Assignment:

FAR/AIM – Instrument FAR's

STAGE I

GROUND LESSON 5 – Instrument Federal Aviation Regulations (FARs)

Time: 1.0

Lesson Objectives:

- Become familiar with the Federal Aviation Regulations related to instrument flight.
- Understand the information and requirements of NTSB Part 830.

Academic Content:

- FAR Part 1
- FAR Part 61
- FAR Part 91
- NTSB Part 830

Completion Standards:

Student demonstrates understanding of the resources and regulations related to instrument flight during oral quizzing by instructor. The student will complete the Instrument Rating (Airplane) Exercises in the FAR/AIM with a minimum passing score of 80%, and the instructor will review each incorrect response to ensure complete understanding before the student progresses to Ground Lesson 6.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 3, Section A – Airports, Airspace, and Flight Information

STAGE 1

GROUND LESSON 6 – Airports, Airspace, and Flight Information

Time: 1.0

Lesson Objectives:

- Study and become familiar with the airport environment, including collision avoidance, and runway incursion avoidance.
- Gain specific knowledge of the National Airspace System.
- Gain a basic understanding of the sources of flight information, particularly the Aeronautical Information Manual and FAA Advisory Circulars dealing with IFR flight.

Academic Content:

Section A – Airports, Airspace, and Flight Information

Airport Environment

- Runway Markings
- Taxiway Markings
- Airport Signs
- Runway Incursion Avoidance
- Land and Hold Short Operations (LAHSO)
- Approach Light System
- Visual Glide Slope Indicators
- Runway Lighting
- Airport Beacons and Obstruction Lights

Airspace

- Controlled Airspace
- Class A, B, C, D, and E Airspace
- Special VFR
- Class G (Uncontrolled)
- Aircraft Speed Limits
- Special Use Airspace
- Other Airspace Areas
- ADIZ

Flight Information

- Aeronautical Information Manual
- Airport/Facilities Directory
- Notices to Airmen (NOTAMs)
- Flight Data Center
- International Flight Information Manual
- Advisory Circulars
- Jeppesen Information Services
- Electronic Flight Publications
- Government Printing Office

Completion Standards:

Demonstrate understanding of the airport environment and lighting, as well as airspace usage and sources of flight information during oral quizzing by instructor at completion of lesson. Student completes Chapter 3 questions for Section A with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 7.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 3, Section B – Air Traffic Control System

STAGE I

GROUND LESSON 7 – Air Traffic Control System

Time: 1.0

Lesson Objectives:

- Learn the types of services provided by the air traffic control system.
- Become familiar with the various enroute and terminal facilities and their use for flight under IFR.

Academic Content:

Section B – Air Traffic Control System

- Air Route Traffic Control Center (ARTCC)
- ARTCC Traffic Separation
- Processing the IFR Flight Plan
- Weather Information
- Safety Alerts
- Emergency Assistance
- Terminal Facilities
- ATIS
- Clearance Delivery
- Control Tower
- Approach and Departure Control
- Radar Service for VFR Aircraft
- Flight Service Stations

Completion Standards:

Demonstrate understanding of enroute and terminal ATC services during oral quizzing by instructor at completion of lesson. Student completes Chapter 3 questions for Section B with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete student understanding before the student progresses to Ground Lesson 8.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 3, Section C – ATC Clearances

STAGE I

GROUND LESSON 8 – ATC Clearances

Time: 1.0

Lesson Objectives:

- Become familiar with ATC clearance procedures.
- Learn and gain experience using clearance shorthand.

Academic Content:

Section C – ATC Clearances

- Pilot Responsibilities
- IFR Flight Plan and ATC Clearance
- Elements of an IFR Clearance
- Abbreviated IFR Departure Clearance
- VFR on Top
- Approach Clearances
- VFR Restrictions to an IFR Clearance
- Composite Flight Plan
- Tower Enroute Control Clearance
- Departure Restrictions
- Clearance Readback
- Clearance Shorthand

Completion Standards:

Demonstrate understanding of pilot responsibilities and clearance procedures during oral quizzing by instructor at completion of lesson. Student completes Chapter 3 questions for Section C with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before student progresses to the Stage I Exam in Ground Lesson 9.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Review Chapters 1, 2, and 3 in preparation for Stage I Exam

STAGE I

GROUND LESSON 9 – Stage I Exam

Time: 1.0

Lesson Objectives:

- Administer the stage exam covering the first three chapters of the *Jeppesen Instrument/Commercial Manual,* the applicable FARs, and NTSB Part 830 rules.

Academic Content:

Stage 1 Exam

- Advanced Human Factors Concepts
- Flight Instruments Systems
- Attitude Instrument Flying
- Instrument Navigation
- Airports, Airspace, and Flight Information
- Air Traffic Control System
- FAR/AIM and NTSB Part 830
- Air Traffic Control Clearances

Completion Standards:

The lesson and stage are complete when the student has completed the Stage I Exam with a minimum passing score of 80%, and the instructor has reviewed each incorrect response to ensure complete understanding before the student progresses to Stage II.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 4, Section A – Departure Charts and Departure Procedures

Ground Training Objective
Stage II

During this stage, the student will learn the procedures used to execute the various IFR approaches as well as the procedures for IFR departure, enroute, and arrival operations.

Ground Training Completion Standards
Stage II

This stage is complete when the student has satisfactorily completed all of the ground lessons and passed the Stage Examination. Minimum passing score is 80% on the Stage Examination. Incorrect test responses will be corrected to ensure student understanding.

STAGE II

GROUND LESSON 10 – Departure

Time: 1.0

Lesson Objectives:

- Learn the format and symbology used to present information on departure charts.
- Gain a working knowledge of departure procedures.

Academic Content:

Section A – Departure Charts

- Obtaining Charts
- Departure Standards
- Instrument Departure Procedures (DPs)
- Obstacle Departure Procedures (ODPs)
- Standard Instrument Departures (SIDs)
- Pilot Nav DP
- Vector DP
- Chart Format and Symbology

Section B – Departure Procedures

- Takeoff Minimums
- Departure Options
- Graphic Departure Procedures
- Textual Departure Procedures
- Radar Departures
- VFR Departures
- Selecting a Departure Method

Completion Standards:

Demonstrate understanding of instrument departure procedures and related considerations during oral quizzing by instructor at completion of lesson. Student completes Chapter 4 questions for Section A and B with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete student understanding before the student progresses to Ground Lesson 11.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 5, Section A – Enroute and Area Charts, and Section B – Enroute Procedures

STAGE II

GROUND LESSON 11 – Enroute and Area Charts/Enroute Procedures

Time: 1.5

Lesson Objectives:

- Gain a working knowledge of enroute and area charts.
- Learn the symbology used to present information and the applicable procedures for IFR enroute operations.

Academic Content:

Section A – Enroute and Area Charts

- Enroute Charts
- Front Panel
- Navigation Aids
- Victor Airways
- Communication
- Airports
- Airspace
- Area Charts

Section B – Enroute Procedures

- Enroute Radar Procedures
- Communication
- Reporting Procedures
- Enroute Navigation Using GPS
- Air Traffic Service Routes
- Enroute RNP
- Special Use Airspace
- Temporary Flight Restrictions
- IFR Cruising and Minimum Altitudes
- Descending from the Enroute Segment
- Reduced Vertical Separation Minimum

Completion Standards:

Demonstrate understanding of enroute charts as well as enroute navigation and communication procedures during oral quizzing by instructor at completion of lesson. Student completes Chapter 5 questions for Sections A and B with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 12.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 5, Section C – Holding Procedures

STAGE II

GROUND LESSON 12 – Holding Procedures

Time: 1.0

Lesson Objectives:

- Gain a working knowledge of holding patterns including entry, timing, and communication.

Academic Content:

Section C – Holding Procedures

- Standard and Non-Standard Pattern
- Outbound and Inbound Timing
- Cross-Wind Correction and Ground Track
- Maximum Holding Speed
- Direct Entry
- Teardrop Entry
- Parallel Entry
- Visualizing Entry Procedures
- ATC Holding Instructions
- VOR Holding
- NDB Holding

Completion Standards:

Demonstrate understanding of holding entry and procedures during oral quizzing by instructor at completion of lesson. Student completes Chapter 5 questions for Section C with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 13.

Study Assignments:

Jeppesen Instrument/Commercial Manual – Chapter 6 – Arrival

STAGE II

GROUND LESSON 13 – Arrival Charts and Procedures

Time: 1.0

Lesson Objectives:

- Gain a working knowledge of arrival charts.
- Gain a working knowledge of arrival procedures and methods.

Academic Content:

Section A – Arrival Charts

- Standard Terminal Arrival Route (STAR)
- Interpreting the STAR
- Vertical Navigation Planning

Section B – Arrival Procedures

- Preparing for the Arrival
- Reviewing the Approach
- Altitude
- Airspeed

Completion Standards:

Demonstrate understanding of arrival charts and procedures during oral quizzing by instructor at completion of lesson. Student completes Chapter 6 questions for Sections A and B with a passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 14.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 7, Section A – Approach Charts

STAGE II
GROUND LESSON 14 – Approach Charts

Time: 1.5

Lesson Objectives:

- The student will begin to learn how to interpret and use information published on instrument approach charts.

Academic Content:

Section A – Approach Charts

Approach Segments
- Initial Approach Segment
- Intermediate Approach Segment
- Final Approach Segment
- Missed Approach Segment

Chart Layout
- Heading Section
- Briefing Section
- Minimum Safe Altitude (MSA)
- Plan View
- Feeder Routes
- Profile View
- Step Down Fix and VDP
- Missed Approach Icons
- Conversion Table
- Landing Minimums
- Aircraft Approach Categories
- Minimum Descent Requirements
- Visibility Requirements
- Inoperative Components

Airport Chart
- Heading and Communications Section
- Plan View and Additional Runway Information
- Takeoff and Alternative Minimums

Approach Chart Format Changes

Completion Standards:

Demonstrate understanding of instrument approach charts during oral quizzing by instructor at completion of lesson. Student completes Chapter 7 questions for Section A with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 15.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 7, Section B – Approach Procedures

STAGE II

GROUND LESSON 15 – Approach Procedures

Time: 1.0

Lesson Objectives:

- Learn the procedures used to transition from the enroute segment to the approach segment.
- Increase understanding and knowledge of approach procedures.

Academic Content:

Section B – Approach Procedures

- Preparing for the Approach
- Approach Chart Review
- Approach Clearance
- Executing the Approach
- Straight-In Approaches
- Use of ATC Radar for Approaches
- Approaches which require a Course Reversal
- Timed Approaches from a Holding Fix
- Final Approach
- Circling Approaches
- Sidestep Maneuver
- Missed Approach Procedures
- Visual and Contact Approaches

Completion Standards:

Demonstrate understanding of approach operations and procedures during oral quizzing by instructor at completion of lesson. Student completes Chapter 7 questions for Section B with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 16.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 8, Section A – VOR and NDB Approaches

STAGE II

GROUND LESSON 16 – VOR and NDB Approaches

Time: 1.0

Lesson Objectives:

- Learn procedures and methods necessary to perform VOR and NDB approaches.

Academic Content:

Section A – VOR and NDB Approaches

- VOR Approach Procedure
- Off-Airport Facility
- On-Airport Facility
- VOR/DME Approach Procedures
- NDB Approach Procedure
- Radar Vectors to the Approach
- VOR Missed Approach Procedure
- NDB Missed Approach Procedure

Completion Standards:

Demonstrate understanding of VOR and NDB approach procedures during oral quizzing by instructor at completion of lesson. Student completes Chapter 8 questions for Section A with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 17.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 8, Section B – ILS Approaches

STAGE II

Briefing 1

Time: 0.5

Lesson Objectives:

- Become familiar with local instrument approaches and approach charts

Completion Standards:

This briefing is complete when the student has been introduced to a selection of local instrument approaches and approach charts.

STAGE II

GROUND LESSON 17 – ILS Approaches

Time: 1.0

Lesson Objectives:

- Gain knowledge of ILS components and approach procedures.

Academic Content:

Section B – ILS Approaches

- ILS Categories and Minimums
- ILS Components
- Inoperative Components
- Flying the ILS
- Straight-In (No PT) ILS Approach
- ILS Approach with a Course Reversal
- ILS/DME Approach
- Radar Vectors to ILS Final and Non-Radar ILS Procedures
- ILS Approaches to Parallel Runways
- Simultaneous Converging Instrument Approach
- Localizer Approach
- Localizer Back Course Approach
- LDA, SDF, and MLS Approaches
- Localizer
- Glideslope
- ILS Marker Beacon
- Compass Locators
- ILS Visual Aids
- NDB Transition
- Transition Via DME Arc

Completion Standards:

Demonstrate understanding of the various methods of conducting an ILS approach during oral quizzing by instructor at completion of lesson. Student completes Chapter 8 questions for Section B with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 18.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 8, Section C – RNAV Approaches

STAGE II

GROUND LESSON 18 – RNAV Approaches

Time: 1.0

Lesson Objectives:

- Become familiar with RNAV instrument approach systems and procedures.

Academic Content:

Section C – RNAV Approaches

- Approach Design
- Terminal Arrival Area
- Waypoints
- Required Navigation Performance
- GPS Approaches
- Lateral Navigation/Vertical Navigation
- VNAV Descent Profile Approach with Vertical Guidance (APV)
- Precision Approaches
- GPS Equipment Requirements
- Receiver Autonomous Integrity Monitoring
- The Navigation Database
- GPS Navigation Considerations
- GPS Overlay Approach
- GPS Stand-Alone RNAV (GPS) Approach
- Radar Vectors to GPS Approach

VOR/DME RNAV

- Operating Principles
- VOR DME RNAV Approaches

Completion Standards:

Demonstrate understanding of RNAV approach procedures and limitations during oral quizzing by instructor at completion of lesson. Student completes Chapter 8 questions for Section C with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 19.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Review Chapters 4 through 8 in preparation for the Stage II Exam.

STAGE II
GROUND LESSON 19 – Stage II Exam

Time: 1.0

Lesson Objectives:

- Administer the Stage II Exam to evaluate the student's comprehension of enroute and terminal chart information, as well as the applicable procedures covered in the *Jeppesen Instrument/Commercial Manual*, Chapters 4, 5, 6, 7, and 8.

Academic Content:

Stage II Exam

- Departure Charts and Procedures
- Enroute Charts and Procedures
- Holding Procedures
- Arrival Charts and Procedures
- Approach Charts and Procedures
- VOR and NDB Instrument Approaches
- ILS Approaches
- RNAV Approaches

Completion Standards:

The lesson and stage are complete when the student has completed the Stage II Exam with a minimum passing score of 80%, and the instructor has reviewed each incorrect response to ensure complete understanding before the student progresses to Stage III.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 9, Section A – Weather Factors and Section B – Weather Hazards

Ground Training Objective
Stage III

During this stage, the student will learn to analyze weather information, conditions, and trends while on the ground and in flight. In addition, the student will learn IFR flight planning and emergency procedures and develop a greater understanding of the decision-making process.

Ground Training Completion Standards
Stage III

This stage is complete when the student has satisfactorily completed all of the ground lessons and passed the Stage Examination. Minimum passing score is 80% on the Stage Examination. Incorrect test responses will be corrected to ensure student understanding. In addition, the student must take and pass the Instrument Rating End-of-Course Exam with a minimum passing score of 80% and the instructor must review all incorrect responses to ensure complete student understanding.

Stage III

Ground Lesson 20 – Weather Factors and Weather Hazards

Time: 1.0

Lesson Objectives:

- Become familiar with the factors affecting weather patterns and hazards related to flight operations.

Academic Content:

Section A – Weather Factors

- The Atmosphere
- Atmospheric Circulation
- Pressure and Wind Patterns
- Moisture, Precipitation, and Stability
- Types of Clouds
- Airmass
- Fronts
- High Altitude Weather

Section B – Weather Hazards

- Recognition of Critical Weather Situations
- Thunderstorms
- Thunderstorm Avoidance
- Low Level Turbulence
- Turbulence
- Wake Turbulence
- Clear Air Turbulence
- Mountain Wave Turbulence
- Reporting Turbulence
- Wind Shear
- Low Visibility
- Volcanic Ash
- Icing
- Hydroplaning
- Cold Weather Operations

Completion Standards:

Demonstrate understanding of weather factors and weather hazards during oral quizzing by instructor at completion of lesson. Student completes Chapter 9 questions for Sections A and B with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 21.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 9, Section C – Printed Reports and Forecasts

Stage III

Ground Lesson 21 – Printed Reports and Forecasts

Time: 1.0

Lesson Objectives:

- Learn to retrieve and interpret printed weather reports and forecasts.

Academic Content:

Section C – Printed Reports and Forecasts

- Aviation Routine Weather Report (METAR)
- Radar Weather Reports
- Pilot Weather Reports
- Terminal Aerodrome Forecast (TAF)
- Aviation Area Forecast
- Winds and Temperatures Aloft Forecast
- Severe Weather Reports and Forecasts

Completion Standards:

Demonstrate understanding of information contained in printed reports and forecasts during oral quizzing by instructor at completion of lesson. Student completes Chapter 9 questions for Section C with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 22.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 9, Section D – Graphic Weather Products

STAGE III

Briefing 2

Time: 0.5

Lesson Objectives:

- Practice planning an instrument cross-country flight
- Safe and efficient operation of aircraft under instrument flight rules and conditions

Completion Standards:

This briefing is complete when the student has developed a flight plan for a practice instrument cross-country flight and understands the factors affecting the safe and efficient operation of aircraft under instrument flight rules and conditions.

Stage III

Ground Lesson 22 – Graphic Weather Products

Time: 1.0

Lesson Objectives:

- Understand the information displayed on graphic weather products and how to use each product.

Academic Content:

Section D – Graphic Weather Products

Graphic Reports

- Surface Analysis Chart
- Weather Depiction Chart
- Radar Summary Chart
- Satellite Weather Pictures
- Composite Moisture Stability Chart
- Constant Pressure Analysis Chart
- Observed Winds and Temperatures Aloft Chart

Graphic Forecasts

- Low-Level Significant Weather Prog
- High-Level Significant Weather Prog
- Convective Outlook Chart
- Forecast Winds and Temperatures Aloft Chart
- National Convective Weather Forecast
- Volcanic Ash Forecast Transport and Dispersion Chart

Completion Standards:

Demonstrate ability to interpret and integrate information presented in graphic weather products during oral quizzing by instructor at completion of lesson. Student completes Chapter 9 questions for Section D with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 23.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 9, Section E – Sources of Weather Information

Stage III

Ground Lesson 23 – Sources of Weather Information

Time: 1.0

Lesson Objectives:

- Learn how to access preflight and in-flight sources of weather information.
- Learn how to interpret and use weather information for planning and in-flight purposes.

Academic Content:

Section E – Sources of Weather Information

Pre-Flight Weather Information

- Flight Service Station (FSS)
- Preflight Weather Briefing
- Telephone Information Briefing Service
- Direct User Access Terminal System (DUATS)
- Private Industry Sources
- The World Wide Web

In-Flight Weather Sources

- Airmets and Sigmets
- Convective Sigmets
- Enroute Flight Advisory Service
- Flight Service Stations
- Center Weather Advisories
- Hazardous In-Flight Weather Advisory Service
- Transcribed Weather Broadcasts
- Weather Radar Services
- Automated Surface Observing System
- Automated Weather Observing System

Airborne Weather Equipment

- Weather Radar
- Lightening Detection Systems

Completion Standards:

Demonstrate understanding of preflight and in-flight weather sources and their uses during oral quizzing by instructor at completion of lesson. Student completes Chapter 9 questions for Section E with a minimum passing score of 80%, and the instructor reviews all incorrect responses to ensure complete understanding before student progresses to Ground Lesson 24.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 10, Section A – IFR Emergencies

Stage III

Ground Lesson 24 – IFR Emergencies

Time: 1.0

Lesson Objectives:

- Learn to recognize emergency situations and perform the correct emergency procedures.

Academic Content:

Section A – IFR Emergencies

- Declaring an Emergency
- Minimum Fuel
- Gyroscopic Instrument Failure
- Communications Failure
- Emergency Approach Procedures
- Malfunction Reports

Completion Standards:

Demonstrate ability to recognize and respond appropriately to emergency situations during oral quizzing by instructor at completion of lesson. Student completes Chapter 10 questions for Section A with a minimum passing score of 80%, and the instructor reviews all incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 25.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapter 10, Section B – IFR Decision Making and Section C – IFR Flight Planning

Stage III

Ground Lesson 25 – Decision Making and IFR Flight Planning

Time: 1.0

Lesson Objectives:

- Obtain the knowledge necessary to successfully plan an IFR flight and recognize the factors related to effective decision making.

Academic Content:

Section B – IFR Decision Making

- Decision-Making Process
- IFR Accidents
- Poor Judgment Chain
- Assessing Risk
- Pilot-In-Command Responsibilities
- Hazardous Attitudes
- Crew Relationships
- Communication
- Resource Use
- Workload Management
- Situational Awareness
- Controlled Flight Into Terrain

Section C – IFR Flight Planning

- Route Selection
- Flight Information Publications
- Weather Considerations
- Altitude Selection
- Completing the Navigation Log
- Filing the Flight Plan
- Closing the IFR Flight Plan

Completion Standards:

Demonstrate understanding of IFR Flight planning and factors affecting the decision making process during oral quizzing by instructor at completion of lesson. Student completes Chapter 10 questions for Section B and C with a minimum passing score of 80%, and the instructor reviews incorrect responses to ensure complete understanding before the student progresses to Ground Lesson 26.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Review Chapters 9 and 10 in preparation for Stage III Exam.

STAGE III

Briefing 3

Time: 1.0

Lesson Objectives:

- Review the Instrument Rating Airman Certification Standards (ACS).

Completion Standards:

This briefing is complete when the student has reviewed the Instrument Rating Airman Certification Standards (ACS).

Stage III

Ground Lesson 26 – Stage III Exam

Time: 1.0

Lesson Objectives:

- Administer the stage exam to evaluate the student's comprehension of the information in Chapters 9 and 10 covering weather factors, weather hazards, and sources of weather information, as well as decision making, IFR flight planning, and emergency procedures.

Academic Content:

Stage III Exam

- Meteorology
- IFR Flight Considerations

Completion Standards:

The lesson and stage are complete when the student has completed the Stage III Exam with a minimum passing score of 80%, and the instructor has reviewed all incorrect responses to ensure complete student understanding before the student progresses to the end-of-course exam.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Review Chapters 1 – 10 in preparation for the End-of-Course Exam

Stage III

Ground Lesson 27 – End-of-Course Exam

Time: 1.0

Lesson Objectives:

- Administer and evaluate the student's comprehension of academic material presented in Chapters 1 through 10 in preparation for the FAA instrument rating airmen knowledge test.

Academic Content:

- Principles of Instrument Flight
- The Flight Environment
- Meteorology
- Departure Charts and Procedures
- Enroute Charts and Procedures
- Arrival Charts and Procedures
- Approach Charts and Procedures

Completion Standards:

The lesson and stage are complete when the student has completed the Instrument Rating End-of-Course Exam with a minimum passing score of 80%, and the instructor has reviewed each incorrect response to ensure complete understanding before the student progresses to the FAA Instrument Rating Airmen Knowledge Test.

Study Assignment:

Jeppesen Instrument/Commercial Manual – Chapters 1 – 10 in preparation for the FAA instrument rating airmen knowledge test.

SUNRISE AVIATION, INC.
PILOT SCHOOL CERTIFICATE #FPQS990D

INSTRUMENT RATING
AIRPLANE

FLIGHT TRAINING SYLLABUS

ORMOND BEACH

JACKSONVILLE SATELLITE

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OCTOBER 2024

REVISION 9

INTRODUCTION

This Instrument Rating Course –Airplane Flight Training Syllabus meets or exceed the requirements of 14 CFR Part 141, Appendix C 4 (a), (b), and (c) (1). This syllabus is designed to allow a student with an FAA Private Pilot Certificate – Airplane Category Rating (see enrollment requirements, page 3) to acquire the proficiency and experience needed to meet certificate requirements for an instrument rating in an airplane. The performance criteria specified in the syllabus are based on the current FAA Instrument Rating - Airplane Airman Certification Standards (ACS). All graduates must meet or exceed those standards.

This flight training syllabus contains three (3) stages and twenty seven (27) separate flight lessons. Each lesson includes an "Objective". "Completion Standards" must be met prior to completion of the lesson. The individual lesson and stage times are not mandatory. The hours in each lesson and stage are primarily for instructor and student guidance. However, a student must meet or exceed the minimum training hours specified in this syllabus prior to graduation. Those minimum flight times for graduation are listed on page 7 of this introduction. Within each stage, lesson sequence may be adjusted due to scheduling or other problems as long as training objectives are not compromised.

Stage I of this flight training syllabus is designed to be conducted in either an appropriate Flight Training Device (FTD) or Advanced Aviation Training Device (AATD). If a appropriate device is not available, the lessons in Stage I main be conducted in a suitable aircraft. Due to the efficiency of doing the training in a FTD or AATD, lessons in Stage I conducted in an airplane will likely exceed the recommended time listed for the lessons.

Stages II and III are designed to be conducted in an airplane. However, whenever instructional challenges are observed in the airplane, instructors and students are encouraged to return to the FTD or AATD to review those problem areas prior to completing the lesson in the airplane. Flight lesson completion in Stages II and III must always be accomplished in the airplane.

The instructor will assign a grade (S, U, or I) to each element within a flight lesson and an overall grade to the lesson (S, U, or I) determined by the student's flying ability and knowledge of the assigned material. Training standards for each task and each lesson are relative and should be based on the actual current lesson in the syllabus. Only during the End of Course Exam should actual PTS standards be used unless otherwise indicated in the Completion Standards for the lesson.

Below are the guidelines for assigning these grades:

- **S= Satisfactory.** Student meets the minimum requirements for the task or flight lesson.
- **U=Unsatisfactory.** Student fails to meet one or more of the minimum requirements for the task or lesson. Any lesson with a unsatisfactory task must receive an overall grade of unsatisfactory.
- **I=Incomplete.** The task could not be completed for any reason other than performance. Any lesson with an incomplete task must also be graded incomplete until all tasks are graded as S.

Flight lessons are preceded and followed by Preflight and Post Flight discussions and briefings. Although 14 CFR Part 141 does not specify a minimum number of hours for these briefings, the amount of briefing accomplished must be sufficient to ensure training objectives are met.

Every lesson contains a training outline and a detailed sequence of tasks that the student must successfully complete. Normally, a lesson is completed in the allotted time. If a student is unable to master the lesson

in the specified time, it will be necessary to repeat those elements graded unsatisfactory or incomplete until all completion standards are met. Instructors are encouraged to read each lesson in advance and develop a plan of action for that lesson. The sequence in every lesson starts with briefing items, then new tasks (*Introduce*) and then review of previous introduced tasks (*Review*). However, the actual plan of action should be presented to maximize efficiency in the lesson.

Each stage has an oral examination and flight test as a check of the student's progress, which must be satisfactorily completed before continuing to the next stage of training. The course completion check at the conclusion of the course ensures that the student has acquired the aeronautical knowledge and flight skills required by the current FAA Instrument Rating - Airplane Airman Certification Standards (ACS).

A chronological log of the training must be kept as per 14 CFR Part 141.101 (a) (2). This syllabus includes a log that may be used for that record-keeping. To ensure that the required amount of flight time has been received in each category for which training is necessary by the end of the course, a running total should be kept on each lesson. When lessons within a stage are rearranged due to weather, availability or other issues, the log of each flight lesson should be arranged to preserve the chronological order rather than the numerical order of the lessons.

TRAINING SYLLABUS

I. ENROLLMENT PREREQUISITES: The applicant must hold a private pilot certificate with an airplane category and appropriate class rating prior to starting the flight portion this course. The applicant must hold a valid FAA 1st, 2nd or 3rd class medical or meet the requirements under BasicMed prior to starting Stage 2. There are no prerequisites for beginning the ground training portion of this course.

II. GROUND TRAINING REQUIREMENTS: The applicant must successfully complete all the required ground training lessons including the Final Stage/Course Completion Check.

III. FLIGHT TRAINING REQUIREMENTS: The applicant must successfully complete all flight training lessons, stage checks, and end of course tests.

IV. REQUIREMENTS FOR GRADUATION: To obtain a graduation certificate for the 14 CFR Part 141 Instrument Rating – Airplane Course, the applicant must:

A. Hold at least a private pilot certificate with and airplane category rating and appropriate class rating;
B. Be able to read, speak, write, and understand the English language;
C. Complete all ground training requirements and have passed the FAA Instrument Rating – Airplane Knowledge Test within the preceding 24 calendar months. Completion of an approved ground training course provided by an institution of higher education under a training agreement may substitute for the ground training requirements if a graduation certificate is presented to Sunrise Aviation;
D. Complete all flight training requirements; and
E. Hold a valid FAA medical certificate or meet the requirements under BasicMed.

FLIGHT TRAINING TABLE								
LSN #	**DATE**	**FINAL GRADE**	**DUAL**	**XC**	**FTD**	**IR**	**REC TTL**	**FLT STG √**
INSTRUMENT RATING AIRPLANE STAGE I								
1			**1.0**		**1.0**	**1.0**	**1.0**	
2			**1.0**		**1.0**	**1.0**	**1.0**	
3			**1.0**		**1.0**	**1.0**	**1.0**	
4			**1.0**		**1.0**	**1.0**	**1.0**	
5			**1.0**		**1.0**	**1.0**	**1.0**	
6			**1.0**		**1.0**	**1.0**	**1.0**	
7			**1.0**		**1.0**	**1.0**	**1.0**	
8			**1.0**		**1.0**	**1.0**	**1.0**	
9			**1.0**		**1.0**	**1.0**	**1.0**	
10			**1.0**		**1.0**	**1.0**	**1.0**	
11			**1.0**		**1.0**	**1.0**	**1.0**	
12			**1.0**		**1.0**	**1.0**	**1.0**	
13			**1.0**		**1.0**	**1.0**	**1.0**	
14√			**1.0**		**1.0**	**1.0**	**1.0**	**1.0**
STAGE I TOTAL			**14.0**		**14.0**	**14.0**	**14.0**	**1.0**

INSTRUMENT RATING AIRPLANE STAGE II								
15			**2.0**			**1.8**	**2.0**	
16			**2.0**			**2.0**	**2.0**	
17			**1.5**			**1.3**	**1.5**	
18			**1.5**			**1.3**	**1.5**	
19			**2.0**			**1.8**	**2.0**	
20			**1.5**			**1.3**	**1.5**	
21√			**1.5**			**1.3**	**1.5**	**1.5**
STAGE II TOTAL			**12.0**			**10.6**	**12.0**	**1.5**
STAGE I+II TOTAL			**26.0**		**14.0**	**24.6**	**26.0**	**2.5**

FLIGHT TRAINING TABLE								
LSN #	**DATE**	**FINAL GRADE**	**DUAL**	**XC**	**FTD**	**IR**	**REC TTL**	**FLT STG √**
INSTRUMENT RATING AIRPLANE STAGE III								
22			**1.7**			**1.5**	**1.7**	
23			**2.0**	**2.0**		**1.8**	**2.0**	
24			**3.0**	**3.0**		**2.7**	**3.0**	
25			**2.0**			**1.8**	**2.0**	
26√			**1.5**			**1.3**	**1.5**	**1.5**
27√√			**1.5**			**1.3**	**1.5**	**1.5**
STAGE III TOTAL			**11.7**	**5.0**		**10.4**	**11.7**	**3.0**
TOTAL ALL STAGES			**37.7**	**5.0**	**14.0**	**35.0**	**37.7**	**5.5**

√ = Stage Check
√√ = End of Course Check

FLIGHT TRAINING TABLE MINIMUM TIME INSTRUMENT RATING AIRPLANE		
Dual	**IR**	**TOTAL**
35.0	**35.0**	**35.0**

ADDITIONAL PART 141 REQUIREMENT

- One cross-country flight in a single-engine airplane under IFR that is a distance of at least 250 nautical miles along airways or ATC-directed routing with one segment of the flight consisting of at least a straight-line distance of 100 nautical miles between airports; involves an instrument approach at each airport; and involves three different kinds of approaches with the use of navigation systems.

Limitations:

- Credit for training in a flight training device that meets the requirements of 14 CFR Part 141.41(b) cannot exceed 40 percent of the total flight training hour requirements of the course. When a flight training device is utilized in this course at least 21 hours of instrument flight time must be logged in the airplane. Lessons 1 through 14 may be flown in the flight training device. Whenever the student's performance in any flight lesson indicates remedial instruction is needed, the FTD may be used for that remedial instruction. Lessons 15 through 27 require the eventual completion of all tasks in the airplane even if the FTD is used for remedial instruction.

STAGE I

Stage Objective

Stage I provides an introduction to attitude instrument flight. Emphasis will be placed on learning precise aircraft control by sole reference to the flight instruments. The student will learn the concept of control and performance, and the fundamental skills of instrument cross check, instrument interpretation, and aircraft control. The student will learn instrument flight both with fully functioning flight instruments and when some of those instruments are malfunctioning (partial panel). Instrument navigation will be introduced including the use of VOR, LOC, DME, and GPS navigation aids (if installed). After successfully demonstrating ability in attitude control and navigation, the student will be introduced to holding patterns and instrument approaches. Normally, all flight lessons in Stage I will be conducted in a suitable FTD or AATD but may be accomplished in the airplane.

Stage Completion Standards

At the completion of this stage, the student will demonstrate proficiency in basic instrument flight maneuvers. In addition, the student will demonstrate the ability to navigate accurately with all the navigation aids. Finally, the student will demonstrate knowledge of holding pattern procedures and instrument approaches. The student must demonstrate sufficient knowledge and skill in basic attitude flight, instrument navigation, holding pattern procedures, and instrument approaches to transition to the real-world instrument environment in Stage II.

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 1**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**1.0**		**1.0**	**1.0**	**1.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to basic attitude instrument flying using the control and performance concept, primary and supporting instruments method, and the fundamental skills of instrument flying.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		***Post Flight Discussion***	
Airworthiness requirements			
Aircraft systems related to IFR operations			
Aircraft flight instruments and navigation equipment			
Control and performance concept			
Primary and supporting instruments			
Instrument cockpit check			
Introduce			
Checklist usage			
Cockpit management			
FULL PANEL INSTRUMENT			
Straight-and-level flight			
Constant rate climbs			
Climbing turns			
Standard rate turns			
Constant rate descents			
Descending turns			
Change of airspeed			

COMPLETION STANDARDS:

The student should demonstrate an understanding of the aircraft systems elated to IFR operations. The student should demonstrate an understanding of aircraft control solely by reference to the flight instruments. The student should maintain altitude while straight and level and during level standard rate turns ±250 ft, heading ±20°, and airspeed ±20 kts.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 2**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**2.0**		**2.0**	**2.0**	**2.0**

LESSON OBJECTIVE: During this lesson, the student will review basic instrument flight maneuvers including steep turns, slow flight, and stalls. Recovery from unusual flight attitudes will be introduced. Finally, instrument flight with loss of primary flight instrument indicators (partial panel) will be introduced.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		***Review***	
Systems and equipment malfunctions		Checklist usage	
- Electrical system failure		Cockpit management	
- Vacuum pump failure		**FULL PANEL INSTRUMENT**	
- Gyroscopic instrument failure		Straight-and-level flight	
Introduce		Constant rate climbs	
FULL PANEL INSTRUMENT		Climbing turns	
Steep turns		Standard rate turns	
Recovery from unusual flight attitudes		Constant rate descents	
Maneuvering during slow flight		Descending turns	
Power-off stalls		Change of airspeed	
Power-on stalls		***Post Flight Discussion***	
PARTIAL PANEL INSTRUMENT			
Straight-and-level flight			
Standard rate turns			
Timed turns to magnetic compass headings			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate proper recovery techniques for both nose high and nose low unusual attitude recoveries. During partial panel flight, the student should maintain altitude while straight and level and during level standard rate turns ±250 ft, heading ±20°, and airspeed ±20 kts.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 3**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**3.0**		**3.0**	**3.0**	**3.0**

LESSON OBJECTIVE: During this lesson, the student will review basic attitude flying both with normal instrument references and by partial panel (loss of primary flight instrument indicators).

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Timed turns to magnetic compass headings	
Systems and equipment malfunctions		**FULL PANEL INSTRUMENT**	
Introduce		Straight-and-level flight	
PARTIAL PANEL INSTRUMENT		Constant rate climbs	
Constant rate climbs		Climbing turns	
Climbing turns		Standard rate turns	
Constant rate descents		Constant rate descents	
Descending turns		Descending turns	
Change of airspeed		Change of airspeed	
Recovery from unusual flight attitudes		Steep turns	
Maneuvering during slow flight		Recovery from unusual flight attitudes	
Power-off stalls		Maneuvering during slow flight	
Power-on stalls		Power-off stalls	
		Power-on stalls	
Review		***Post Flight Discussion***	
PARTIAL PANEL INSTRUMENT			
Straight-and-level flight			
Standard rate turns			

COMPLETION STANDARDS: The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate proper procedures while conducting all maneuvers and proper recovery techniques for both nose high and nose low unusual attitude recoveries. During both full and partial panel flight, the student should maintain altitude while straight and level and during level standard rate turns ±200 ft, heading ±15°, and airspeed ±15 kts.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 4**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**4.0**		**4.0**	**4.0**	**4.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to VOR navigation and DME arcs. The student will continue to practice basic attitude instrument flight.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
VOR navigation			
DME arc navigation			
Introduce			
VOR accuracy Test			
FULL PANEL INSTRUMENT			
VOR orientation			
VOR radial interception and tracking			
Intercepting and tracking DME arcs (if equipped)			
Review			
Straight-and-level flight			
Constant rate climbs			
Climbing turns			
Standard rate turns			
Constant rate descents			
Descending turns			
Change of airspeed			
Post Flight Discussion			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate an understanding of VOR navigation and DME arcs.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 5**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**5.0**		**5.0**	**5.0**	**5.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to Localizer navigation and continue to review VOR navigation and use of DME arcs. Additional partial panel practice will be conducted.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
Localizer navigation			
Introduce			
FULL PANEL INSTRUMENT			
Localizer intercepting and tracking			
Localizer back course intercepting and tracking			
Review			
FULL PANEL INSTRUMENT			
VOR orientation			
VOR radial interception and tracking			
Intercepting and tracking DME arcs (if equipped)			
PARTIAL PANEL INSTRUMENT			
VOR orientation			
VOR radial interception and tracking			
Intercepting and tracking DME arcs (if equipped)			
Post Flight Discussion			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate an understanding of Localizer navigation.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 6**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**6.0**		**6.0**	**6.0**	**6.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to GPS navigation (if installed). If GPS is not installed, the instructor may continue to review previously introduced forms of instrument navigation.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		***Post Flight Discussion***	
GPS navigation			
Introduce			
FULL PANEL INSTRUMENT			
GPS navigation (if installed)			
Review			
FULL PANEL INSTRUMENT			
Localizer intercepting and tracking			
Localizer back course intercepting and tracking			
VOR orientation			
VOR radial interception and tracking			
Intercepting and tracking DME arcs (if equipped)			
PARTIAL PANEL INSTRUMENT			
Localizer intercepting and tracking			
Localizer back course intercepting and tracking			
VOR orientation			
VOR radial interception and tracking			
Intercepting and tracking DME arcs (if equipped)			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate a basic understanding of GPS navigation (if installed).

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 7**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**7.0**		**7.0**	**7.0**	**7.0**

LESSON OBJECTIVE: During this lesson, the student will continue to practice GPS navigation (if installed). If GPS is not installed, the instructor may continue to review previously introduced forms of instrument navigation.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Introduce			
PARTIAL PANEL INSTRUMENT			
GPS navigation (if installed)			
Review			
FULL PANEL INSTRUMENT			
GPS navigation (if installed)			
Localizer intercepting and tracking			
Localizer back course intercepting and tracking			
VOR orientation			
VOR radial interception and tracking			
Intercepting and tracking DME arcs (if equipped)			
PARTIAL PANEL INSTRUMENT			
Localizer intercepting and tracking			
Localizer back course intercepting and tracking			
VOR orientation			
VOR radial interception and tracking			
Intercepting and tracking DME arcs (if equipped)			
Post Flight Discussion			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate proper procedures while navigating by the use of all instrument navigation aids. During both full and partial panel flight, the student should maintain altitude while straight and level and during level standard rate turns ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times and within 2 miles while tracking a DME arc.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 8**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**8.0**		**8.0**	**8.0**	**8.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to holding patterns using VOR and Localizer navigation Aids. Intersection holding patterns will also be introduced.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
Holding procedures			
Holding pattern entries			
Holding pattern clearances and ATC reporting			
Holding pattern speed restrictions			
Introduce			
VOR holding			
Localizer holding			
Intersection holding			
Standard and nonstandard holding patterns			
Post Flight Discussion			

COMPLETION STANDARDS: At the conclusion of this lesson, the student should demonstrate a basic understanding of holding patterns and procedures. The student should maintain altitude while straight and level and during level standard rate turns ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 9**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**9.0**		**9.0**	**9.0**	**9.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to holding patterns using GPS, if installed. If GPS is not available, then the student will continue to practice holding patterns using VOR and Localizer navigation aids. Conducting holding patterns while using partial panel will be introduced. Missed approaches will be introduced including the use of holding patterns in missed approaches.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Standard and nonstandard holding patterns	
Use of GPS for holding pattern		***Post Flight Discussion***	
Missed approach procedure			
Introduce			
FULL PANEL INSTRUMENT			
GPS holding (if installed)			
Missed approach procedure			
PARTIAL PANEL INSTRUMENT			
GPS holding (if installed)			
VOR holding			
Localizer holding			
Intersection holding			
Standard and nonstandard holding patterns			
Review			
FULL PANEL INSTRUMENT			
VOR holding			
Localizer holding			
Intersection holding			

COMPLETION STANDARDS:

At the conclusion of this lesson, the student should demonstrate an increased understanding of holding patterns and procedures. The student should maintain altitude while straight and level and during level standard rate turns while under full and partial panel ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 10**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**10.0**		**10.0**	**10.0**	**10.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to nonprecision approaches including VOR and Localizer (front and back course) approaches. Holding patterns and missed approach procedures will continue to be reviewed.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
VOR approach			
Localizer (front course) approach			
Localizer (back course) approach			
Introduce			
FULL PANEL INSTRUMENT			
VOR approach			
Localizer (front course) approach			
Localizer (back course) approach			
Landing from straight-in approach			
Review			
FULL PANEL INSTRUMENT			
Missed approach procedure			
Holding pattern			
Post Flight Discussion			

COMPLETION STANDARDS:

At the conclusion of this lesson, the student should demonstrate an understanding of nonprecision approaches including VOR and Localizer approaches. The student should maintain altitude while straight and level and during level standard rate turns while under full and partial panel ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 11**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**11.0**		**11.0**	**11.0**	**11.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to nonprecision GPS approaches and landing from a a circling approach. If GPS is not available, a review of other nonprecision approaches will be conducted.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
Nonprecision GPS approach			
Landing from a circling approach			
Introduce			
FULL PANEL INSTRUMENT			
Nonprecision GPS approach (if installed)			
Landing from a circling approach			
PARTIAL PANEL INSTRUMENT			
Nonprecision GPS approach (if installed)			
Missed approach procedure			
Holding pattern			
Review			
VOR approach			
Localizer (front course) approach			
Landing from straight-in approach			
Post Flight Discussion			

COMPLETION STANDARDS:

At the conclusion of this lesson, the student should demonstrate a basic understanding of nonprecision GPS approaches. The student should maintain altitude while straight and level and during level standard rate turns while under full and partial panel ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times. The student shall recognize and safely fly a missed approach procedure including the holding pattern.

REMARKS: _____

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_____

_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 12**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**12.0**		**12.0**	**12.0**	**12.0**

LESSON OBJECTIVE: During this lesson, the student will be introduced to precision approaches including ILS and GPS WAAS. If GPS is not available, additional practice on the ILS approach may be conducted.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
Precision GPS (WAAS) approach			
Precision ILS approach			
Introduce			
FULL PANEL INSTRUMENT			
Precision GPS (WAAS) approach (if installed)			
Precision ILS approach			
PARTIAL PANEL INSTRUMENT			
Precision GPS (WAAS) approach (if installed)			
Precision ILS approach			
Review			
Landing from straight-in approach			
Landing from circling approach			
Missed approach procedure			
Post Flight Discussion			

COMPLETION STANDARDS:

At the conclusion of this lesson, the student should demonstrate a basic understanding of precision approaches. The student should maintain altitude while straight and level and during level standard rate turns while under full and partial panel ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times. The student shall recognize and safely fly a missed approach procedure.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 13**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**13.0**		**13.0**	**13.0**	**13.0**

LESSON OBJECTIVE: This lesson is the final lesson prior to the Stage I Stage Check. Additional lessons may be required to reach the completion standards.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Navigation systems	
Airman Certification Standards		- Intercepting and tracking navigational systems	
Aircraft systems related to IFR operations		- Intercepting and tracking DME arcs	
Aircraft flight instruments and navigation equipment		- Use of GPS (if installed)	
Air traffic control clearances		Instrument approach procedures	
Holding procedures		- Nonprecision VOR approach	
Instrument approach procedures		- Nonprecision LOC or LDA approach	
		- Nonprecision GPS approach	
Review		- Precision ILS approach	
Instrument Cockpit Check		- Precision GPS WAAS approach (if installed)	
Checklist usage		- Missed approach	
Cockpit management		- Circling approach	
Air Traffic Control clearances and procedures		Loss of primary flight instrument indicators	
- Holding procedures		- Nonprecision approach	
Flight by reference to instruments		***Post Flight Discussion***	
- Basic instrument flight maneuvers			
- Recovery from unusual flight attitudes			

COMPLETION STANDARDS:

The student shall demonstrate the ability to meet ACS standards on basic instrument flight maneuvers and recovery from unusual flight attitudes. The student should be close to meeting all other ACS standards in the tasks listed above. At least 3 approaches must be conducted to MDA or DH including one precision approach. At the conclusion of this lesson, the student shall demonstrate a thorough understanding of all the Areas of Operation listed. The student shall maintain altitude while straight and level and during level standard rate turns while under full and partial panel ±125 ft, heading ±15°, and airspeed ±10 kts. The student should maintain a course allowing less than full-scale defection at all times. The student shall recognize and safely fly a missed approach procedure.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 14**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.0**		**1.0**	**1.0**	**1.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**14.0**		**14.0**	**14.0**	**14.0**

LESSON OBJECTIVE: The objective of this stage check, conducted by a Chief Flight Instructor, Assistant Chief Flight Instructor, or designated Check Instructor, is to evaluate the student's preparation to move on to the next stage of training.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Navigation systems	
Airman Certification Standards		- Intercepting and tracking navigational systems	
Aircraft systems related to IFR operations		- Intercepting and tracking DME arcs	
Aircraft flight instruments and navigation equipment		- Use of GPS (if installed)	
Air traffic control clearances		Instrument approach procedures	
Holding procedures		- Nonprecision VOR approach	
Instrument approach procedures		- Nonprecision LOC or LDA approach	
		- Nonprecision GPS approach	
Review		- Precision ILS approach	
Instrument Cockpit Check		- Precision GPS WAAS approach (if installed)	
Checklist usage		- Missed approach	
Cockpit management		- Circling approach	
Air Traffic Control clearances and procedures		Loss of primary flight instrument indicators	
- Holding procedures		- Nonprecision approach	
Flight by reference to instruments		***Post Flight Discussion***	
- Basic instrument flight maneuvers			
- Recovery from unusual flight attitudes			

COMPLETION STANDARDS:

The student shall demonstrate the ability to meet ACS standards on basic instrument flight maneuvers and recovery from unusual flight attitudes. The student should be close to meeting all other ACS standards in the tasks listed above. At least 3 approaches must be conducted to MDA or DH including one precision approach. At the conclusion of this lesson, the student shall demonstrate a thorough understanding of all the Areas of Operation listed. The student shall maintain altitude while straight and level and during level standard rate turns while under full and partial panel ±125 ft, heading ±15°, and airspeed ±10 kts. The student should maintain a course allowing less than full-scale defection at all times. The student shall recognize and safely fly a missed approach procedure.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

STAGE II

Stage Objective

Stage II provides an introduction to attitude instrument flight in the airplane. Emphasis will continue to be placed on learning precise aircraft control by sole reference to the flight instruments. The student will practice instrument flight both with fully functioning flight instruments and when some of those instruments are malfunctioning (partial panel). Instrument navigation will be introduced in the airplane including the use of VOR, LOC, DME, and GPS navigation aids (if installed). The student will be introduced to holding patterns and instrument approaches in the airplane. All flight lessons in Stage II will be conducted in the airplane. However, whenever extra practice is required the student may return to a suitable FTD or AATD but the lesson must still be eventually completed successfully in the airplane.

Stage Completion Standards

At the completion of this stage, the student will demonstrate in the airplane proficiency in basic instrument flight maneuvers and recovery from unusual flight attitudes that meets or exceeds the current Instrument Rating Practical Test Standards. In addition, the student will demonstrate in the airplane the ability to navigate accurately with all the navigation aids. All basic navigation skills will meet ACS standards. Finally, the student will demonstrate the ability in the airplane to conduct holding patterns and instrument approaches at a standard that is close to meeting Airman Certification Standards. All VFR takeoffs and all landings must meet or exceed the standards in the Private Pilot ACS.

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 15**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**2.0**			**1.8**	**2.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**16.0**		**14.0**	**15.8**	**16.0**

LESSON OBJECTIVE: During this lesson, the student will be review in the airplane basic attitude instrument flying using the control and performance concept, primary and supporting instruments method, and the fundamental skills of instrument flying.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Recovery from unusual flight attitudes	
Weather information		VOR orientation	
Weight and balance and performance calculations		VOR radial interception and tracking	
Airworthiness requirements		Intercepting and tracking DME arcs (if equipped)	
Aircraft systems related to IFR operations		Localizer intercepting and tracking	
Aircraft flight instruments and navigation equipment		Localizer back course intercepting and tracking	
Control and performance concept		GPS navigation (if installed)	
Primary and supporting instruments		Non-precision approach	
Instrument cockpit check		**PARTIAL PANEL INSTRUMENT**	
Review		Basic instrument flight maneuvers	
Checklist usage		Stalls	
Cockpit management		Recovery from unusual flight attitudes	
Systems and equipment malfunctions		Timed turns to magnetic compass headings	
VOR accuracy Test		***Post Flight Discussion***	
FULL PANEL INSTRUMENT			
Basic instrument flight maneuvers			
Steep turns			
Stalls			

COMPLETION STANDARDS:

The student should demonstrate a thorough understanding of the aircraft systems related to IFR operations. The student should demonstrate an understanding of aircraft control solely by reference to the flight instruments. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 16**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**2.0**			**1.8**	**2.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**18.0**		**14.0**	**17.6**	**18.0**

LESSON OBJECTIVE: During this flight lesson, the student will review holding pattern procedures using VOR, LOC, intersection, and GPS holding patterns (if installed). Conducting holding patterns while using partial panel will also be reviewed.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		**PARTIAL PANEL INSTRUMENT**	
Weather information		Basic instrument flight maneuvers	
Weight and balance and performance calculations		Holding pattern procedures	
Systems and equipment malfunctions		***Post Flight Discussion***	
Holding pattern procedures			
Review			
Checklist usage			
Cockpit management			
FULL PANEL INSTRUMENT			
Instrument takeoff			
Basic instrument flight maneuvers			
VOR holding			
Localizer holding			
Intersection holding			
GPS holding (if installed)			
Standard and nonstandard holding patterns			
Holding as part of a missed approach procedure			
Precision instrument approach			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate a thorough understanding of holding pattern procedures. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns while using both full and partial panel ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 17**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.5**			**1.3**	**1.5**
Actual					
Previous Lesson					
New Total					
Rec. Total	**19.5**		**14.0**	**18.9**	**19.5**

LESSON OBJECTIVE: During this flight lesson in the airplane, the student will review nonprecision instrument approach procedures including VOR and LOC. Missed approach procedures will also be reviewed.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
Weather information			
Weight and balance and performance calculations			
Nonprecision instrument approach procedures			
Visual descent point			
Missed approach procedures			
Review			
Checklist usage			
Cockpit management			
FULL PANEL INSTRUMENT			
Instrument takeoff			
VOR approach			
Localizer approach			
Missed approach			
Landing from a straight-in approach			
Post Flight Discussion			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate a thorough understanding of VOR and localizer approach procedures. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times. The student should safely execute a missed approach. The student shall safely execute a landing from a straight-in approach without assistance from the flight instructor.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 18**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.5**			**1.3**	**1.5**
Actual					
Previous Lesson					
New Total					
Rec. Total	**21.0**		**14.0**	**20.2**	**21.0**

LESSON OBJECTIVE: During this lesson, the student will review nonprecision instrument approach procedures utilizing the GPS (if installed). If GPS is not available, a review of other nonprecision instrument approaches would be appropriate. Circling approach procedures will also be reviewed and practiced in the airplane.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
Weather information			
Weight and balance and performance calculations			
Nonprecision instrument approach procedures (GPS)			
Missed approach procedures			
Circling approach procedures			
Review			
Checklist usage			
Cockpit management			
FULL PANEL INSTRUMENT			
Instrument takeoff			
GPS instrument approaches (if installed)			
Missed approach			
Landing from a circling approach			
Post Flight Discussion			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate a thorough understanding of GPS approach procedures. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns ±150 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times. The student should safely execute a missed approach. The student shall safely execute a landing from a circling approach without assistance from the flight instructor.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 19**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**2.0**			**1.8**	**2.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**23.0**		**14.0**	**22.0**	**23.0**

LESSON OBJECTIVE: During this flight lesson in the airplane, the student will review precision approach procedures including ILS and GPS WAAS (if installed).

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion			
Weather information			
Weight and balance and performance calculations			
Precision instrument approach procedures (ILS)			
Precision instrument approach procedures (GPS)			
Review			
Checklist usage			
Cockpit management			
FULL PANEL INSTRUMENT			
Precision ILS approach			
Precision GPS approach (if installed)			
Missed approach			
Landing from a straight-in approach			
Post Flight Discussion			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate a thorough understanding of precision approach procedures. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns ±125 ft, heading ±10°, and airspeed ±10 kts. The student should maintain a course allowing less than full-scale defection at all times. The student should safely execute a missed approach. The student shall safely execute a landing from a straight in approach without assistance from the flight instructor.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 20**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.5**			**1.3**	**1.5**
Actual					
Previous Lesson					
New Total					
Rec. Total	**24.5**		**14.0**	**23.3**	**24.5**

LESSON OBJECTIVE: During this flight lesson in the airplane, the student will review partial panel instrument approaches in preparation for the second Stage Check.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		***Post Flight Discussion***	
Weather information			
Weight and balance and performance calculations			
Systems and equipment malfunctions			
Review			
Checklist usage			
Cockpit management			
PARTIAL PANEL INSTRUMENT			
Nonprecision approach			
Precision approach			
Missed approach			
Landing from a circling approach			
Post Flight Discussion			

COMPLETION STANDARDS:

The student should demonstrate an increased ability while flying solely by reference to the flight instruments. The student should demonstrate a thorough understanding of all approach procedures. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns ±125 ft, heading ±15°, and airspeed ±15 kts. The student should maintain a course allowing less than full-scale defection at all times. The student should safely execute a missed approach. The student shall safely execute a landing from a circling approach without assistance from the flight instructor.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 21**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.5**			**1.3**	**1.5**
Actual					
Previous Lesson					
New Total					
Rec. Total	**26.0**		**14.0**	**24.6**	**26.0**

LESSON OBJECTIVE: The objective of this stage check which will be flown in the airplane and conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or designated Check Instructor, is to evaluate the student's preparation to move on to the next and final stage of training.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Navigation systems	
Airman Certification Standards		- Intercepting and tracking navigational systems	
Aircraft systems related to IFR operations		- Intercepting and tracking DME arcs	
Aircraft flight instruments and navigation equipment		- Use of GPS (if installed)	
Air traffic control clearances		Instrument approach procedures	
Holding procedures		- Nonprecision approach	
Instrument approach procedures		- Nonprecision or Precision GPS app. (if installed)	
Weather information		- Precision ILS approach	
Weight and balance and performance calculations		- Missed approach	
Review		- Circling approach	
Instrument Cockpit Check		- Landing from a straight-in or circling approach	
Checklist usage		Loss of primary flight instrument indicators	
Cockpit management		- Nonprecision approach	
Air Traffic Control clearances and procedures		***Post Flight Discussion***	
- Holding procedures			
Flight by reference to instruments			
- Basic instrument flight maneuvers			
- Recovery from unusual flight attitudes			

COMPLETION STANDARDS: The student shall demonstrate the ability to meet ACS standards on basic instrument flight maneuvers and recovery from unusual flight attitudes. The student should be close to meeting all other ACS standards in the tasks listed above. At least 3 approaches must be conducted to MDA or DH including one precision approach and one partial panel. At the conclusion of this lesson, the student shall demonstrate a thorough understanding of all the Areas of Operation listed. The student shall maintain altitude while straight and level and during level standard rate turns while under full and partial panel ±125 ft, heading ±15°, and airspeed ±10 kts. The student should maintain a course allowing less than full-scale defection at all times. The student shall recognize and safely fly a missed approach procedure. All VFR operations must meet or exceed Private Pilot Airman Certification Standards.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

STAGE III

Stage Objective

Stage III introduces the student to IFR cross-country procedures. Experience will be gained in planning, filing, and flying IFR cross-country flights. The student will continue to practice a variety of nonprecision and precision instrument approaches. Additional practice in flying holding patterns and missed approaches in a real-world environment will be accomplished. Areas of deficiency noted may be practiced in the FTD or AATD before being completed in the airplane.

Stage Completion Standards

At the completion of this stage, the student shall demonstrate proficiency in the airplane that meets or exceeds the Airman Certification Standards for all required Areas of Operation and all Tasks in the current FAA Instrument Rating Airman Certification Standards for Airplane. The student will demonstrate the knowledge, skill, ability, and judgment to safely fly as a single-pilot in the IFR environment.

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 22**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.7**			**1.5**	**1.7**
Actual					
Previous Lesson					
New Total					
Rec. Total	**27.7**		**14.0**	**26.1**	**27.7**

LESSON OBJECTIVE: During this lesson, the student will be introduced to IFR cross-country procedures. Route planning should include flight by federal airways. Emphasis will be placed on the students maximum participation in all planning and flight activities including weather and route analysis, flight plan filing, clearances, communication, and enroute decision making. Emergency procedures will be reviewed. The flight should include at least one instrument approach at an airport other than the departure airport.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		**FULL PANEL INSTRUMENT**	
Weather information		Intercepting and tracking navigational systems	
Weight and balance and performance calculations		Precision approach	
Airworthiness requirements		Holding procedures	
Aircraft systems related to IFR operations		**PARTIAL PANEL INSTRUMENT**	
Aircraft flight instruments and navigation equipment		Nonprecision approach	
Cross-country flight planning		***Post Flight Discussion***	
ATC clearances and procedures			
Flight plan filing			
Positive exchange of flight controls			
Review			
Instrument cockpit check			
Checklist usage			
Cockpit management			
Systems and equipment malfunctions		**Short Cross-Country Flight (no min. distance)**	
VOR accuracy Test		Route Flown:	
ATC clearances and procedures		Approaches and Airports:	
Landing from a straight-in approach			

COMPLETION STANDARDS:

The student should demonstrate a basic understanding of IFR cross-country flight planning. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns ±125 ft, heading ±15°, and airspeed ±10 kts. The student should maintain a course allowing less than full-scale defection at all times. The student should safely fly all instrument approaches and procedures. The student should safely demonstrate the ability to land after a straight-in approach.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 23**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**2.0**	**2.0**		**1.8**	**2.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**29.7**	**2.0**	**14.0**	**27.9**	**29.7**

LESSON OBJECTIVE: During this flight lesson, the student will fly a short IFR cross-country flight. An instrument approach should be flown at each airport.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		**FULL PANEL INSTRUMENT**	
Weather information		Intercepting and tracking navigational systems	
Weight and balance and performance calculations		Precision approach (if available)	
Airworthiness requirements		Holding procedures	
Aircraft systems related to IFR operations		**PARTIAL PANEL INSTRUMENT**	
Aircraft flight instruments and navigation equipment		Nonprecision approach	
Cross-country flight planning		***Post Flight Discussion***	
ATC clearances and procedures			
Flight plan filing			
Review			
Instrument cockpit check			
Checklist usage			
Cockpit management			
Systems and equipment malfunctions			
VOR accuracy Test		**Short IFR Cross-Country Flight >50 nm total**	
ATC clearances and procedures		Route Flown:	
Landing from a circling approach		Approaches and Airports:	

COMPLETION STANDARDS:

The student should demonstrate a thorough understanding of IFR cross-country flight planning. The student should accurately track while using all navigational aids. The student should maintain altitude while straight and level and during level standard rate turns ±125 ft, heading ±15°, and airspeed ±10 kts. The student should maintain a course allowing less than full-scale defection at all times. The student should safely fly all instrument approaches and procedures. The student should safely demonstrate the ability to land after a straight-in approach.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 24**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**3.0**	**3.0**		**2.7**	**3.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**32.7**	**5.0**	**14.0**	**30.6**	**32.7**

LESSON OBJECTIVE: During this flight lesson, the student will complete the required long IFR cross-country flight. Three different types of approaches utilizing navigation systems will be conducted. The flight must be at least 250 miles on federal airways or as routed by ATC with one segment of the flight at least 100 nm in a straight line distance between airports.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		**FULL PANEL INSTRUMENT**	
Weather information		Intercepting and tracking navigational systems	
Weight and balance and performance calculations		Precision approach	
Airworthiness requirements		Non-precision approach	
Aircraft systems related to IFR operations		At least one approach using GPS (if installed)	
Aircraft flight instruments and navigation equipment		At least 3 total approaches using navigation systems	
Cross-country flight planning		***Post Flight Discussion***	
ATC clearances and procedures			
Flight plan filing			
Review			
Instrument cockpit check			
Checklist usage			
Cockpit management			
Systems and equipment malfunctions			
VOR accuracy Test		**Long IFR Cross-Country Flight ≥ 250 nm**	
ATC clearances and procedures		Route Flown:	
Landing from a straight-in or circling approach		Approaches and Airports:	

COMPLETION STANDARDS:

This cross-country flight must meet the requirements of CFR 14 Part 141 Appendix C 4. (c) (1). This cross-country flight must be (1) a distance of at least 250 nautical miles along airways or ATC-directed routing with one segment of the flight consisting of at least a straight-line distance of 100 nautical miles between airports; (2) involves an instrument approach at each airport; and (3) involves three different kinds of approaches with use of navigation systems.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 25**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**2.0**			**1.8**	**2.0**
Actual					
Previous Lesson					
New Total					
Rec. Total	**34.7**	**5.0**	**14.0**	**32.4**	**34.7**

LESSON OBJECTIVE: During this lesson, the student will review all Areas of Operation and all Tasks in preparation for the Stage III Stage Check and End of Course Check. A cross-country flight plan like the one needed for the Practical Test should be prepared and discussed even though the flight may remain in the local area. The flight should include at least one instrument approach at an airport other than the departure airport.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Flight by reference to instruments	
Airman Certification Standards		- Basic instrument flight maneuvers	
ACS Appendix review		- Recovery from unusual flight attitudes	
Pilot Qualifications		Navigation systems	
Weather information		- Intercepting and tracking navigational systems	
Cross-country flight planning		- Intercepting and tracking DME arcs	
Aircraft systems related to IFR operations		- Use of GPS (if installed)	
Aircraft flight instruments and navigation equipment		Instrument approach procedures	
Weight and balance and performance calculations		- Nonprecision approach	
Emergency Operations: Loss of Communications		- Nonprecision or Precision GPS app. (if installed)	
Stage Check		- Precision ILS approach	
Instrument Cockpit Check		- Missed approach	
Checklist usage & Cockpit Management		- Circling approach	
Aeronautical Decision Making & Risk Management		- Landing from a straight-in or circling approach	
Single Pilot Resource Management		Loss of primary flight instrument indicators	
Air Traffic Control clearances and procedures		- Nonprecision approach	
- ATC clearances		Postflight procedures – Checking instruments/equip.	
- Compliance with ATC procedures & clearances		***Post Flight Discussion***	
- Holding procedures			

COMPLETION STANDARDS:

At the completion of this flight the student should demonstrate proficiency that meets or exceeds the standards in the current FAA Instrument Rating (Airplane) Airman Certification Standards for all Areas of Operation and all appropriate tasks.

REMARKS: _____

_____

_____

_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 26**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.5**			**1.3**	**1.5**
Actual					
Previous Lesson					
New Total					
Rec. Total	**36.2**	**5.0**	**14.0**	**33.7**	**36.2**

LESSON OBJECTIVE: The objective of this Stage Check conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or designated Check Instructor, is to evaluate the student's preparation to move on to the End of Course Check.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Flight by reference to instruments	
Airman Certification Standards & Appendix review		- Basic instrument flight maneuvers	
Pilot Qualifications		- Recovery from unusual flight attitudes	
Weather information		Navigation systems	
Cross-country flight planning		- Intercepting and tracking navigational systems	
Aircraft systems related to IFR operations		- Intercepting and tracking DME arcs	
Aircraft flight instruments and navigation equipment		- Use of GPS (if installed)	
Weight and balance and performance calculations		Instrument approach procedures	
Emergency Operations: Loss of Communications		- Nonprecision approach (full approach)	
Practical Test documents and endorsements		- Nonprecision or Precision GPS app. (if installed)	
Stage Check		- Precision approach	
Instrument Cockpit Check		- Missed approach	
Checklist usage & Cockpit Management		- Circling approach	
Aeronautical Decision Making & Risk Management		- Landing from a straight-in or circling approach	
Single Pilot Resource Management		Loss of primary flight instrument indicators	
Air Traffic Control clearances and procedures		- Nonprecision approach	
- ATC clearances		Postflight procedures – Checking instruments/equip.	
- Compliance with ATC procedures & clearances		***Post Flight Discussion***	
- Holding procedures			

COMPLETION STANDARDS:

At the completion of this flight the student shall demonstrate proficiency that meets or exceeds the standards in the current FAA Instrument Rating (Airplane) Airman Certification Standards for all Areas of Operation and all appropriate tasks. At least 3 different approaches should be flown.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name

NAME: _____ / _____ **Date:** ___ / ___ / ___ **GRADE:** ____
(First) (Last) (U, S, or I)

AIRCRAFT (Circle one) C-152 C-172 PA28-161 FTD/AATD **N** _____

FLIGHT TIME					**FLIGHT LESSON # 27**
	DUAL	**XC**	**FTD**	**IR**	**TOTAL**
Recommended	**1.5**			**1.3**	**1.5**
Actual					
Previous Lesson					
New Total					
Rec. Total	**37.7**	**5.0**	**14.0**	**35.0**	**37.7**

LESSON OBJECTIVE:

The objective of this End of Course Stage Check conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or designated Check Instructor, is to determine whether the applicant is ready to safely fly as an instrument rated pilot. The Check Instructor will determine whether the applicant's knowledge, skill and proficiency meets or exceeds the current FAA Instrument Rating (Airplane) Airman Certification Standards.

LESSON CONTENT			
Subject	**Grade**	**Subject**	**Grade**
Preflight Discussion		Flight by reference to instruments	
Airman Certification Standards & Appendix review		- Basic instrument flight maneuvers	
Pilot Qualifications		- Recovery from unusual flight attitudes	
Weather information		Navigation systems	
Cross-country flight planning		- Intercepting and tracking navigational systems	
Aircraft systems related to IFR operations		- Intercepting and tracking DME arcs	
Aircraft flight instruments and navigation equipment		- Use of GPS (if installed)	
Weight and balance and performance calculations		Instrument approach procedures	
Emergency Operations: Loss of Communications		- Nonprecision approach (full approach)	
Practical Test documents and endorsements		- Nonprecision or Precision GPS app. (if installed)	
Stage Check		- Precision approach	
Instrument Cockpit Check		- Missed approach	
Checklist usage & Cockpit Management		- Circling approach	
Aeronautical Decision Making & Risk Management		- Landing from a straight-in or circling approach	
Single Pilot Resource Management		Loss of primary flight instrument indicators	
Air Traffic Control clearances and procedures		- Nonprecision approach	
- ATC clearances		Postflight procedures – Checking instruments/equip.	
- Compliance with ATC procedures & clearances		***Post Flight Discussion***	
- Holding procedures			

COMPLETION STANDARDS:

At the completion of this flight the student shall demonstrate proficiency that meets or exceeds the standards in the current FAA Instrument Rating (Airplane) Airman Certification Standards for all Areas of Operation and all appropriate tasks. At least 3 different approaches must be flown as per the ACS. If a GPS is installed, one approach must be conducted using the GPS.

REMARKS: _____

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_____ _____ / _____
Student Signature Instructor Signature Print Name