



TRAINING COURSE OUTLINE

PART 141

Pilot School Certificate Number: 6VFS045L

Instrument Rating **(Flight Training Only)**

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i	1.0	07/2019
ii	1.3	04/2021
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4	1.5	06/2023
5	1.5	06/2023
6	1.2	01/2021
7	1.1	07/2019

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Record of Changes

Superseded Page(s)	Section(s)	Date of Effective Change	Reason for Change
iii	LOEP	07/2020	Updated to reflect new revision number
iv	ROC	07/2020	Updated to reflect R1.1 changes
2	3.2	07/2020	Updated Authorized Ground Instructor to Instrument Ground Instructor
4	6.1	07/2020	Updated course hours from 52 to 50
4	7.1 b)	07/2020	Added provisions for non-US citizens to enroll in the course
4	7.2	07/2020	Added certificates required to be held to enroll in the course
5	7.3 b)	07/2020	Clarified timeline of enrollment certificate requirements
7	ATT 2	07/2020	Updated to Vermont Flight Academy Instrument Rating Flight Syllabus R1.1
iii	LOEP	12/2020	Updated to reflect new revision number
iv	ROC	12/2020	Updated to reflect R1.2 changes
1	2.1	12/2020	Updated to reflect the addition of briefing room four
6	ATT 1	12/2020	Updated to reflect the addition of briefing room four
3	3.4	01/2021	Updated to reflect change of Chief Flight Instructor
3	3.4	04/2021	Updated to reflect addition of Assistant Chief Flight Instructor
iii	LOEP	04/2021	Updated to reflect new revision numbers
iv	ROC	04/2021	Updated to reflect R1.3 changes
1-2	2.1-2.3, 2.5	04/2021	Updated to reflect contents of the specified room(s) and training aids
2	2.4	04/2021	Added new section 2.4 to specify the simulator room
2	2.5-2.7	04/2021	Updated section numbers to reflect addition of section 2.4
ii	ToC	04/2021	Updated table of contents to reflect section updates
iii	LOEP	04/2021	Updated to reflect new revision numbers
iv	RoC	04/2021	Updated to reflect R 1.3 Changes
1	2.1	12/2022	Updated to reflect Smartboards in briefing areas
1	2.2	12/2022	Updated to reflect availability of Mobile Computers in Conference Room
2	2.3	12/2022	Updated to reflect availability of Mobile Computers in Conference Room
3	3.4	12/2022	Updated to reflect change of Chief Flight Instructor

4	7.1 (b)	12/2022	Updated to reflect change from AFSP to FTSP
iii	LOEP	12/2022	Updated to reflect new revision numbers
iv,v	RoC	12/2022	Updated to reflect R 1.4 Changes
2,4,5	2.7, 6.1 b) 7.3 b), 8.1	06/2023	Updated to Reflect Vermont Technical College name change to Vermont State University
7	ATT 2	06/2023	Updated to Vermont Flight Academy Instrument Rating Flight Syllabus R1.2
iii	LOEP	06/2023	Updated to reflect new revision numbers
iv, v	RoC	06/2023	Updated to reflect R 1.5 Changes

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1. Training Base Location

1.1 Vermont Flight Academy

VFA main instructional facilities are located at 355 Valley Road, South Burlington, VT 05403. Directions to the location are listed on the VFA website, found at:

www.flyvfa.org

1.2 The Burlington Airport

All VFA flight training missions originate from the Vermont Flight Academy facility located at the 14 CFR Part 139 Burlington International Airport (KBTV), in South Burlington, Vermont.

1.3 Training Airports

All airports used for training operations meet the requirements of 14 CFR part 141.38. A list of suggested airports may be found in the *Vermont Flight Academy Standard Operating Procedures*.

2. Training Facilities

2.1 Flight Briefing Rooms

There are four total briefing rooms. Three briefing rooms that are approximately 10' x 10' each and can accommodate a maximum of five people each. One briefing room that is approximately 9' x 9' and can accommodate a maximum of three people. Briefing rooms include the following,

- a) Computer(s) including internet access; and
- b) Wall-mounted whiteboard(s) and/or Wall-mounted Smartboard(s).

2.2 Classroom

There is a classroom measuring approximately 19' x 32' and can accommodate a maximum number of 24 people. The classroom includes the following,

- a) When required, equipped with mobile computer(s) including internet access;
- b) Wall-mounted whiteboard;
- c) Ceiling mounted projector;
- d) Apple TV;
- e) Document Camera;
- f) Surround sound system;
- g) DVD player; and
- h) PFC CR12.

2.3 Conference Room

There is a conference room measuring approximately 16' x 9' and can accommodate a maximum number of 9 people. The conference room includes the following,

- a) When required, equipped with mobile computer(s) including internet access;
- b) Wall-mounted whiteboard; and
- c) Portable projector.

2.4 Sim Room 1

There is a simulator room measuring approximately 19' by 19' and can accommodate a maximum number of five people. The sim room includes the following,

- a) Redbird FMX full motion simulator; and
- b) Redbird TD.

2.5 Training Aids

Training aids consist of the following:

- a) Model airplanes;
- b) Various aircraft parts for training purposes only; and
- c) Aeronautical charts and publications for training purposes only.

2.6 Facility Diagrams

Facility diagrams are located in [Attachment 1](#).

2.7 Ground Training Course

Separate ground training courses are conducted either online through an FAA 141 Approved Online Ground Course or in person at the Vermont State University Williston Campus. Each course holds a separate 141 certificate.

3. Authorized Instructors

3.1 Flight Instruction

All flight instructors must possess a valid Flight Instructor Certificate with a Flight Instructor Instrument Rating.

3.2 Ground Instruction

Pre & Post and supplemental ground instruction may be conducted by either a flight instructor with a valid Flight Instructor Certificate with a Flight Instructor Instrument Rating or an authorized Instrument Ground Instructor.

3.3 All Instruction

All training, flight and ground, will be conducted only by those instructors who have been authorized by the Chief Flight Instructor or his designee.

3.4 Chief & Assistant Chief Flight Instructors

Instructor	Certificate Number
Noah Ranallo – Chief Flight Instructor	3765775CFI
Matthew Sawyer – Assistant Chief Flight Instructor	3827976CFI

4. Approved Aircraft

AIRCRAFT TYPE	SPECIAL EQUIPMENT
CESSNA 172G	Garmin IFR
CESSNA 172M	Garmin IFR
CESSNA 172N	Garmin IFR
CESSNA 172R	Garmin IFR
CESSNA 172S	Garmin IFR
PIPER PA28R-201 ARROW	Garmin IFR

5. Flight Training Devices

5.1 AATD

VFA uses two Advanced Aviation Training Devices (AATD). One Redbird FMX AATD. One Precision Flight Controls CR-12 AATD.

AATD	Maximum Hours Credit - Instrument
REDBIRD FMX	14 Hours
PRECISION FLIGHT CONTROLS CR-12	14 Hours

5.2 Maximum Training Time

A maximum of 14 hours between both simulators may be credited towards the instrument rating.

6. Minimum Training Time

6.1 Required Hours

Minimum hours required to complete the Flight Training Course for Instrument Rating Airplane Certification in accordance with 14 CFR Part 141:

- a) 50 hours of flight training time; and
- b) the FAA Approved 141 Instrument Rating Ground Course provided by Vermont State University; or
- c) an FAA Approved 141 Instrument Rating Online Ground Course.

7. Enrollment

7.1 Enrollment Documents

In order to enroll in the course, applicants must provide the following documentation:

- a) if a U.S. citizen, proof of U.S. citizenship;
 - 1) U.S. Passport or,
 - 2) Birth Certificate and government issued identification with a photograph (U.S. driver's license, military identification, other U.S. government identification with a photograph.
- b) if a Non-U.S. citizen, apply to and receive approval from the TSA in accordance with the Flight Training Security Program.

7.2 FAA documents

- a) FAA third class or higher medical certificate; and
- b) FAA Private Pilot Certificate or,
- c) FAA Commercial Pilot Certificate.

7.3 Enrollment Certificates

- a) A flight enrollment certificate will be issued upon enrolling in the 141 flight course (The Enrollment Certificate can be found in [Attachment 2](#)); and
- b) A ground enrollment certificate from an FAA approved 141 online ground course or from Vermont State University must be issued before flight course enrollment.

7.4 Enrollment Prerequisites

- a) An enrollment certificate must be provided from an FAA approved ground course.
- b) Further guidance on enrollment prerequisites may be found in the *Vermont Flight Academy Instrument Rating Flight Syllabus* ([Attachment 2](#)).

8. Graduation

8.1 Ground Training

A separate Ground Training Graduation Certificate will be issued & signed by either Vermont State University or an FAA 141 approved online ground course.

8.2 Completion

Upon successful completion of the Flight Training Course for Instrument Rating Airplane & the receipt of the Ground Training Graduation Certificate, a Flight Graduation Certificate will be issued (The Graduation Certificate can be found in [Attachment 2](#)).

8.3 Application for Pilot Certification

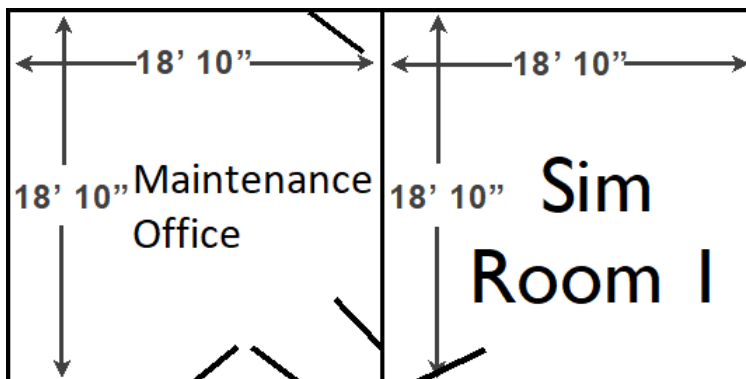
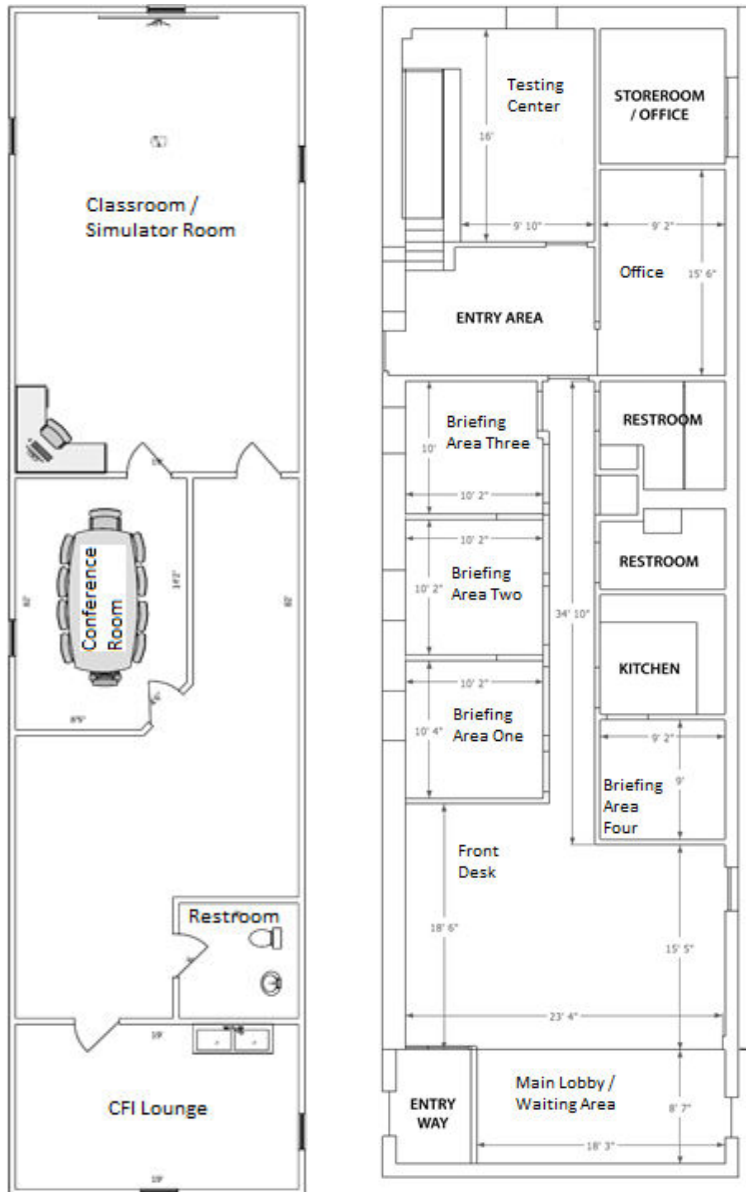
An FAA Application for Pilot Certification will be completed and affiliated to enable the applicant to take a Practical Test for the Instrument Rating with either a Designated Pilot Examiner or an FAA inspector.

9. Record Keeping

9.1 Flight Schedule Pro

Student flight training records will be kept in accordance with 14 CFR 141 and using VFA's approved electronic record keeping system, Flight Schedule Pro.

Attachment 1: Training Facility Diagrams



Attachment 2: *Instrument Rating Flight Syllabus*

The Vermont Flight Academy Instrument Rating Flight Syllabus R1.2



INSTRUMENT RATING FLIGHT SYLLABUS

Part 61/141

Version 1.2

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About This Syllabus

Course Objective:

This objective of this course is to give the student the necessary skill, knowledge, and experience required to obtain an Instrument Rating with an Airplane category and Single-Engine Land Class rating.

Prerequisites:

The student must hold at least a third-class medical certificate, a Private or Commercial Pilot certificate with an Airplane category and Single Engine Land class rating, must be able to read, speak, write, and understand the English language, and must be a US Citizen with valid proof of citizenship or an alien that has gone through the Alien Flight Student Program.

Experience Requirements

Part 141: 50 hours of Instrument Training

Part 61: 40 hours of Instrument Training (15 of which must be with an Instrument Instructor) and 50 Hours Cross Country PIC.

Instrument Rating Course

This syllabus is comprised of flight training only. It satisfies the need for aeronautical skills required to earn the instrument rating. This course is designed to meet all the flight requirements for an instrument rating part 141. If used for Part 61 flight training, a total of 50 hours cross country PIC is required in addition to this syllabus to meet 14CFR 61.65.

The syllabus is comprised of four stages. Each stage contains six modules, a stage check, and an optional review. Lessons should be conducted in the order they appear; however, it is permissible to conduct lessons inside the current stage outside of order. Lessons may be conducted out of the current stage with Chief Flight Instructor approval. Additionally, complex/TAA lessons can be integrated into each stage.

Aviation Training Devices (ATD)

Throughout the syllabus, certain lessons are marked as "Simulator Recommended." These lessons lend themselves to being completed in an ATD. However, an ATD is not required to be used for the lesson. Any lesson (full or partial), excluding the final stage check, may be completed in an ATD. The total time counted towards an instrument rating may not exceed 14 hours for Part 141 or 10 hours for Part 61.

ATD's are highly beneficial for teaching the basics of instrument flying and fine-tuning skills. It is recommended to complete as many of the allotted hours as possible in the ATD as the skills learned transfer over to the airplane. This transfer of learning will help to reduce the number of hours flown in the airplane.

Modules

Each module must be completed in full except for the optional reviews. In the case that a task may not be performed in an airplane (ex. NDB tracking and holding) the simulator may be used. In addition, the Chief Flight Instructor or his/her designee may deem items within a lesson as not required to be completed provided adequate reason is given.

Testing Procedures

At the end of each stage, a stage check must be accomplished. The stage check will be conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or a Check Instructor.

The stage check grading scale follows the maneuver grading scale, except the minimum passing grade for each stage check is progressively raised to ensure that learning progression has occurred. The maneuver grade scale and stage check grading scale can be found in this syllabus.

Training Standards

Training standards are based on the *Instrument Airmen Certification Standards*. Module completion standards become progressively harder throughout the syllabus to refine the student's skill, knowledge, and experience to meet ACS Standards.

Complex Aircraft/Technically Advanced Aircraft (TAA)

At instructor discretion, any module may be completed in a complex or TAA.

Not all tasks will be able to be completed in a Complex aircraft. Additionally, not all tasks will be able to be completed in a TAA.

Approaches

The type of approach specified on a module must be performed. If the type of approach required by a module is unavailable due to extenuating circumstances such as maintenance or favorable runway, a different approach type may be substituted without receiving permission. The newly selected approach must be of the same type of approach as the one it is substituting. Ex.) The VOR 01 is unavailable due to prevailing wind, another non-precision approach may be utilized, but a precision approach may not. If the required approach was a precision approach, an LPV approach with a Decision Height of 300' or less may be substituted.

Maneuver Grading Scale

NG – Not Graded

The task or maneuver was not graded because it was not performed.

1 – Describe/Explain

The student was able to partially describe the physical aspects of the maneuver or task. The student required instructor assistance to manipulate the aircraft controls in the proper manner.

2 - Develop (Lowest Passing Grade)

The student was able to successfully communicate the procedures of the task or maneuver as well as understand the concepts that apply. The student required instructor assistance to manipulate the aircraft controls in the proper manner.

3 - Improve

The student was able to improve their physical skills in the task or maneuver. The student required assistance verbally or physically from the flight instructor to successfully complete the maneuver.

4 - Practice

The student was able to practice the task or maneuver with only verbal assistance from the flight instructor.

5 - Perform

The student was able to execute the task or maneuver with no instructor assistance and within the module completion standard.

6 - At Standards

The student was able to execute the task or maneuver with no instructor assistance and met or exceeded the ACS standards.

NR - Not Required

The task or maneuver was not required to be completed in the lesson. This is only to be used with Chief Flight Instructor or his/her designee's approval or at the end of the course for optional review that were not necessary for the student to complete.

Stage Check Grading Scale

Students will receive a grade of satisfactory or unsatisfactory for each task. To pass the Stage Check, every task must be graded as satisfactory. The stage check instructor must write in the comments section the reason that each Unsatisfactory task was graded as such.

US – Unsatisfactory

The task was not completed to the standards set forth in the stage check standards for that stage.

S – Satisfactory

The task was completed to the standards set forth in the stage check standards for that stage.

Instrument Rating Minimum Course Hours

Page		Dual Flight	Instrument	Dual Instrument Cross Country	Completed
01	Stage 1				
02	Module 1	1.4			
03	Module 2	1.4			
04	Module 3	1.4			
05	Module 4	1.4			
06	Module 5	1.4			
07	Module 6	1.5			
08	Stage Check	1.5			
09	Review*	1.5*			
12	Stage 2				
13	Module 1	1.4			
14	Module 2	1.4			
15	Module 3	1.4			
16	Module 4	1.4			
17	Module 5	1.4			
18	Module 6	1.5			
19	Stage Check	1.5			
20	Review*	1.5*			
23	Stage 3				
24	Module 1	1.5			
25	Module 2	1.5			
26	Module 3	1.5			
27	Module 4	1.5			
28	Module 5	1.5			
29	Module 6	1.5			
30	Stage Check	1.5			
31	Review*	1.5*			
34	Stage 4				
35	Module 1	2.0		2.0	
36	Module 2	2.0		2.0	
37	Module 3	3.5		3.5	
38	Module 4	1.5			
39	Module 5	1.5			
40	Module 6	1.5			
41	Stage Check	1.5			
42	Review*	1.5*			
	Totals	44 (50*)		7.5	

Note: *Review flights are optional, however they may be necessary to meet the minimum course hours requirement of 50 hours of flight training time.

Part 141 Appendix C Compliance

List and location of aeronautical flight tasks required for Part 141 compliance.

Part 141 Appendix C – Flight Training		Location in Syllabus
1	35 hours of instrument training	Stages 1-4, All Modules
2	Dual instruction from an instrument instructor that includes one cross-country flight in airplane single-engine land	Stage 4 Modules 1, 2, and 3,
3	One dual cross-country at least 250 NM along airways or ATC-directed routing with one segment of the flight consisting of at least a straight-line distance of 100 NM between airports and includes (1) An instrument approach at each airport, (2) 3 different kinds of approaches with the use of navigation systems	Stage 4 Module 3

Training Certificates



Enrollment Certificate

This is to certify that Student Name is enrolled in 141 VFA Instrument Pilot - Flight Only Certification Course conducted by Vermont Flight Academy

Date of Enrollment:
6/28/2019

Chief Instructor:



Graduation Certificate

0000000

This is to certify that Student Name has satisfactorily completed all stages, tests, and course requirements and has graduated from 141 VFA Instrument Pilot - Flight Only Certification Course conducted by Vermont Flight Academy

The graduate has received 0 hours of cross-country training.

Date of Graduation:
6/28/2019

Chief Instructor:

Stage 1 – Flying the Instruments

Objective

The purpose of this stage is to allow the pilot to become acquainted with flights solely by reference to the instruments. The pilot will gain an understanding of a basic instrument scan, interpretation of instrument readout, and be introduced to maneuvers by instrument reference as well as instrument approaches.

Completion Standards

Stage One is complete when the pilot has successfully achieved the objectives of each module and can, at minimum, describe the procedures for each portion of flight covered.

Flight Training

- Checklist Usage
- Instrument Preflight Check
- Instrument Cockpit Check
- Radio Communications
- Constant Airspeed Climbs
- Level Off from Climb
- Straight-and-Level-Flight
- Standard Rate Turns
- Change of Airspeed in Level Flight
- Constant Airspeed Descents
- Timed Turns
- Partial Panel Flight
- Maneuvering during Slow Flight
- Recovery from Unusual Flight Attitudes
- Power-On Stall and Recovery
- Power-Off Stall and Recovery
- Approach Procedures Demonstrated and Instructor Assisted (Precision and Non-Precision)
- Postflight Procedures

Stage 1/ Module 1

Flight Training (1.4 Hours)**Module Objective:**

To introduce the student to the checks specific to IFR flight that must be performed prior to departure. The student will gain an understanding of how to control the airplane under simulated instrument conditions in climbs, descents, turns, and straight-and-level flight.

Content*Review*

- VFR Steep Turns
- VFR Slow Flight
- VFR Stalls (Power On and Off)

Teach

- Checklist Usage
- Instrument Preflight Check
- Instrument Cockpit Check
- Climbs
- Level Off from Climb
- Straight-and-Level-Flight
- Standard Rate Turns
- Change of Airspeed in Level Flight
- Descents
- Level-Off-From Descents
- Postflight Procedures

Completion Standards:

When the student shows an understanding of an Instrument Preflight and Cockpit Check as well as instrument scanning technique and demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 1/ Module 2

Flight Training (1.4 Hours)**Module Objective:**

To introduce the student to basic instrument approaches and continue to familiarize them with flight under simulated instrument conditions.

Content*Review*

- Checklist Usage
- Instrument Preflight
- Instrument Cockpit Check
- Normal Takeoff
- Level Off from Climb
- Straight-and-Level-Flight
- Standard Rate Turns
- Change of Airspeed in Level Flight
- Level-Off-From Descents
- Postflight Procedures

Teach

- Constant Airspeed Climbs and Descents
- Steep Turns
- Slow Flight
- Demonstrated VOR Approach

Completion Standards:

When the student demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 1/ Module 3

Flight Training (1.4 Hours)**Module Objective:**

To further develop the instrument skills required to confidently handle an airplane under IMC.

Content*Review*

- Checklist Usage
- Instrument Preflight and Cockpit Check
- Normal Takeoff
- Constant Airspeed Climbs and Descents
- Constant Rate Climb
- Standard Rate Turns
- Steep Turns
- Change of Airspeed in Level Flight
- Slow Flight
- Constant Rate Descent
- Climbing from a Descent at a Constant Speed
- Postflight Procedures

Teach

- Power-On and Off Stalls and Recoveries
- VOR Approach (Instructor Assisted)

Completion Standards:

When the student demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 1/ Module 4

Flight Training (1.4 Hours)**Module Objective:**

To introduce the student to precision approaches and provide recognition of unsafe conditions in flight and how they might occur.

Content*Review*

- Checklist Usage
- Instrument Preflight and Cockpit Check
- Normal Takeoff
- Power-On and Off Stalls and Recoveries
- Climbing from a Descent at a Constant Speed
- Postflight Procedures

Teach

- Constant Rate Climbs and Descents
- Recovery from Unusual Attitudes
- Demonstrated ILS Approach

Completion Standards:

When the student demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 1/ Module 5

Flight Training (1.4 Hours)**Module Objective:**

To allow the student to fly an instrument approach with help from the instructor and continue to build the skills that make up the foundation of instrument flight.

Content*Review*

- Checklist Usage
- Instrument Preflight and Cockpit Check
- Normal Takeoff
- Constant Airspeed Climbs and Descents
- Constant Rate Climbs and Descents
- Power-On and Off Stalls and Recoveries
- Constant Rate Descent
- Climbing from a Descent at a Constant Speed
- Postflight Procedures

Teach

- Recovery from Unusual Attitudes (Partial Panel)
- ILS Approach (Instructor Assisted)

Completion Standards:

When the student demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 1/ Module 6

Flight Training (1.5 Hours)**Module Objective:**

To improve recognition of unsafe flight conditions with one or more failed instruments and review all tasks in preparation for the Stage One Stage Check.

Content*Review*

- Checklist Usage
- Instrument Preflight and Cockpit Check
- Normal Takeoff
- Constant Airspeed Climbs and Descents
- Constant Rate Climbs and Descents
- Power-On and Off Stalls and Recoveries
- Climbing from a Descent at a Constant Speed
- Slow Flight
- Recovery from Unusual Attitudes (Normal and Partial Panel)
- VOR Approach
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 1/ Stage Check

*(1.0 Hours)***Flight Training (1.5 Hours)****Module Objective:**

For the student to perform Stage One tasks and meet the required flight criteria in the completion standards.

Content*Review*

- Checklist Usage
- Instrument Preflight and Cockpit Check
- Required Inspections and Instruments
- Normal Takeoff
- Straight and Level Flight
- Airspeed Changes in Level flight
- Power On/Off Stalls and Recoveries
- Constant Airspeed Climbs and Descents
- Constant Rate Climbs and Descents
- Steep Turns
- Standard Rate Turns
- Slow Flight
- Timed Turns
- Recovery from Unusual Attitudes (Normal and Partial Panel)
- Climbing from a Descent at a Constant Speed
- VOR Approach
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 1/ Optional Review

*Simulator Recommended**(1.0 Hours)***Flight Training (1.5 Hours)****Module Objective:**

For the student to review Stage One tasks as required and meet the required flight criteria in the completion standards.

Content:*Review*

- Checklist Usage
- Instrument Preflight and Cockpit Check
- Required Inspections and Instruments
- Normal Takeoff
- Straight and Level Flight
- Airspeed Changes in Level flight
- Power On/Off Stalls and Recoveries
- Constant Airspeed Climbs and Descents
- Constant Rate Climbs and Descents
- Steep Turns
- Standard Rate Turns
- Slow Flight
- Timed Turns
- Recovery from Unusual Attitudes (Normal and Partial Panel)
- Climbing from a Descent at a Constant Speed
- VOR Approach
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 200 feet, airspeed within 20 Knots, bank angle within 15 degrees and heading within 20 degrees, the module is considered complete.

Stage 2 Navigation and Holding Procedures

Objective

The purpose of this stage is to allow the pilot to become familiar with navigation and holding procedures.

Completion Standards

Stage Two is complete when the pilot has successfully achieved the objectives of each module and can, at minimum, describe the procedures for each portion of flight covered.

Flight Training

- Navigation Via GPS
- Navigation Via VOR
- Tracking Radials
- Holding Procedures
- Hold Entries
- Holding on VOR's
- Holding on Intersections
- Partial Panel Holds
- Compliance with Clearances
- Instrument Approaches (Precision and Non-Precision)

Stage 2/ Module 1

Simulator Recommended

Flight Training (1.4 Hours)

Module Objective:

For the student to become familiar with locating and flying to or from a VOR as well as gaining confidence with radar services.

Content

Review

- Preflight Inspection
- Postflight Procedures

Teach

- VOR Receiver Check
- IFR Clearance
- Determining a Radial from the VOR
- Tracking a Radial
- Identifying Station Passage
- RNAV Approach Demonstrated

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 15 degrees and heading within 15 degrees, the module is considered complete.

Stage 2/ Module 2

Simulator Recommended

Flight Training (1.4 Hours)

Module Objective:

For the student to become proficient with locating a location from a VOR and be introduced to standard holding patterns.

Content

Review

- Preflight Inspection
- IFR Clearance
- Determining a Radial from the VOR
- Tracking a Radial
- Postflight Procedures

Teach

- DME Hold from a VOR
- DME Arc (Suggested)
- Determining Hold Entries
- RNAV Approach (Instructor Assisted)

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 15 degrees and heading within 15 degrees, the module is considered complete.

Stage 2/ Module 3

Simulator Recommended

Flight Training (1.4 Hours)

Module Objective:

For the student to continue to familiarize themselves with holding entries and procedures.

Content

Review

- Preflight Inspection
- IFR Clearance
- Tracking a Radial
- DME Hold from a VOR
- DME Arc (Suggested)
- Determining Hold Entries
- Postflight Procedures

Teach

- VOR Approach (Partial Panel)
- Hold on a GPS Waypoint

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 15 degrees and heading within 15 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 2/ Module 4

Simulator Recommended

Flight Training (1.4 Hours)

Module Objective:

For the student to continue to familiarize themselves with holding entries and procedures

Content

Review

- Preflight Inspection
- Hold on a GPS Waypoint
- DME Hold on a VOR
- Determining Hold Entries
- Postflight Procedures

Teach

- Holding Procedures (Partial Panel)
- ILS Approach
- Missed Approach Procedures and Holding

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 15 degrees and heading within 15 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 2/ Module 5

*Simulator Recommended***Flight Training (1.4 Hours)****Module Objective:**

For the student to become proficient in holding procedures and gain an understanding of ILS and missed approach procedure as well as review GPS navigation.

Content*Review*

- Preflight Inspection
- GPS Navigation
- Hold on a GPS Waypoint
- Missed Approach Procedures and Holding
- Postflight Procedures

Teach

- Holding Procedures (Partial Panel)
- ILS Approach (Partial Panel)

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 15 degrees and heading within 15 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 2/ Module 6

*Simulator Recommended***Flight Training (1.4 Hours)****Module Objective:**

For the student to become proficient in holding procedures and to continue to develop their understanding of VOR and GPS navigation. For the student to also prepare for the Stage Two Stage Check.

Content*Review*

- Preflight Inspection
- GPS Navigation
- Hold on a GPS Waypoint
- VOR Tracking and Holding
- Determining Hold Entries
- Holding Procedures (Partial Panel)
- Missed Approach Procedures

Teach

- Hold on a VOR
- RNAV Approach (Partial Panel)

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 15 degrees and heading within 15 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 2/ Stage Check

(1.0 Hours)

Flight Training (1.5 Hours)

Module Objective:

For the student to perform Stage Two tasks and meet the required flight criteria in the completion standards.

Content

Review

- Preflight Inspection
- GPS Navigation
- Hold on a GPS Waypoint
- Hold on a VOR Radial
- VOR Tracking and Holding
- Determining Hold Entries
- Holding Procedures (Partial Panel)
- RNAV Approach (Partial Panel)
- Missed Approach Procedures
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 2/ Optional Review

Simulator Recommended

(1.0 Hours)

Flight Training (1.5 Hours)

Module Objective:

For the student to review Stage Two tasks as required and meet the required flight criteria in the completion standards.

Content

Review

- Preflight Inspection
- GPS Navigation
- Hold on a GPS Waypoint
- Hold on a VOR Radial
- VOR Tracking and Holding
- Determining Hold Entries
- Holding Procedures (Partial Panel)
- RNAV Approach (Partial Panel)
- Missed Approach Procedures
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 150 feet, airspeed within 15 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3 Approaches and Departures

Objective

The purpose of this stage is to allow the pilot to become proficient in instrument approach and departure techniques.

Completion Standards

Stage Three is complete when the pilot has successfully achieved the objectives of each module and can, at minimum, describe the procedures for each portion of flight covered.

Flight Training

- VOR Approach Procedures
- ILS Approach Procedures
- LOC Approach Procedures
- RNAV Approach Procedures
- Missed Approach Procedures
- Circling Approach Procedures
- Landing from an Approach (Straight in or Circling)
- Localizer Back-course Approach Procedures
- Instrument Approaches from Holds
- Partial Panel Approach Procedures
- Radar Vectors to Approaches
- SID's
- STAR's
- ODP's

Stage 3/ Module 1

*Simulator/TAA or Arrow Recommended***Flight Training (1.5 Hours)****Module Objective:**

For the student to continue to develop RNAV approach and missed approach procedures

Content*Review*

- Preflight Inspection
- Navigation
- ILS Approach
- RNAV Approach
- Missed Approaches
- Holds
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3/ Module 2

*Simulator/TAA or Arrow Recommended***Flight Training (1.5 Hours)****Module Objective:**

For the student to become proficient in RNAV approaches and missed approach procedures and introduce circling approach procedures.

Content*Review*

- Preflight Inspection
- Navigation
- ILS Approach
- RNAV Approach
- Missed Approaches
- Holding Procedures
- Postflight Procedures

Teach

- Circle to Land

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3/ Module 3

Simulator or Arrow Recommended

Flight Training (1.5 Hours)

Module Objective:

For the student to review VOR Approach procedures and continue to develop their skills on circling approaches.

Content

Review

- Preflight Inspection
- GPS Navigation
- VOR Approach
- ILS Approach
- Missed Approaches
- Circle to Land
- Holding Procedures
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3/ Module 4

Simulator or Arrow Recommended

Flight Training (1.5 Hours)

Module Objective:

For the student to be introduced to LOC approaches and continue to develop their skills in VOR approaches and holds.

Content

Review

- Preflight Inspection
- GPS Navigation
- VOR Approach (Partial Panel)
- Missed Approaches
- Circle to Land
- Holding Procedures (Partial Panel)
- Postflight Procedures

Teach

- LOC Approach

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3/ Module 5

Simulator or Arrow Recommended

Flight Training (1.5 Hours)

Module Objective:

For the student to become proficient in RNAV approaches and missed approach procedures and gain a greater understanding of LOC approaches.

Content

Review

- Preflight Inspection
- GPS Navigation
- RNAV Approach (Partial Panel)
- LOC Approach
- Missed Approaches
- Circle to Land
- Holding Procedures (Partial Panel)
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3/ Module 6

Simulator Recommended

Flight Training (1.5 Hours)

Module Objective:

For the student to become proficient in ILS and missed approach procedures.

Content

Review

- Preflight Inspection
- ILS Approach
- RNAV Approach
- VOR Approach (Partial Panel)
- Missed Approaches
- Holding Procedures (All Entries, Normal and Partial Panel)
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3/ Stage Check

Flight Training (1.5 Hours)**Module Objective:**

For the student to perform precision and non-precision approach procedures within lesson standards.

Content*Review*

- Preflight Inspection
- ILS Approach
- RNAV Approach
- Partial Panel VOR Approach
- Missed Approaches
- Holding Procedures (All Entries, Normal and Partial Panel)
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 3/ Optional Review

*Simulator Recommended***Flight Training (1.5 Hours)****Module Objective:**

For the student to review and practice any approaches or holds they are deficient on.

Content*Review*

- Preflight Inspection
- GPS Navigation
- VOR Navigation
- ILS Approach
- RNAV Approach
- VOR Approach
- LOC Approach
- Holding Procedures (All Entries, Normal and Partial Panel)
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 125 feet, airspeed within 10 Knots, bank angle within 10 degrees and heading within 10 degrees, and less than full scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4 Enroute and Checkride Preparation

Objective

The purpose of this stage is to allow the pilot to become proficient in en-route procedures and prepare the pilot for the FAA Practical Tests.

Completion Standards

Stage Four is complete when the pilot has successfully achieved the objectives of each module, is proficient in all aspects of instrument flight, and can maintain standards at or above the ACS. At completion of this stage, the pilot should be prepared for the FAA Practical Tests.

Flight Training

- Enroute Procedures
- Obtaining Weather Information
- Cross-Country Flight Planning
- Emergency Procedures
- Partial Panel Flight
- Cross Country Procedures
- Diversion Procedures
- Lost Communication Procedures
- Review of Maneuvers
- Checkride Sign-Off

Stage 4/ Module 1

*Arrow Recommended***Flight Training (2.0 Hours)****Module Objective:**

For the student to conduct a cross country flight of fifty nautical miles straight line distance or more to gain an understanding of the associated instrument flight planning.

Content*Review*

- Preflight Inspection
- IFR Clearance
- VOR Approach
- Missed Approach Procedures
- RNAV Approach
- Postflight Procedures

Teach

- Navigation to an Airport 50 NM or Greater

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4/ Module 2

*Arrow Recommended***Flight Training (2.0 Hours)****Module Objective:**

For the student to conduct a cross country flight of fifty nautical miles straight line distance or more to gain an understanding of the associated instrument flight planning.

Content:*Review*

- Preflight Inspection
- IFR Clearance
- Partial Panel ILS Approach
- Missed Approach Procedures
- RNAV Approach
- Postflight Procedures

Teach

- Partial Panel Navigation to an Airport 50 NM or Greater
- Diversion Procedures
- Lost Communication Procedures

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4/ Module 3

*Arrow Recommended***Flight Training (3.5 Hours)****Module Objective:**

For the student to conduct a cross country flight of a total of two hundred fifty nautical miles or more with landings at a total of three airports to gain an understanding of the associated instrument flight planning.

Content*Review*

- Preflight Inspection
- IFR Clearance
- Partial Panel Navigation to an Airport 100 NM or Greater, 250NM Total Distance
- Partial Panel VOR Approach
- ILS Approach
- Partial Panel GPS Navigation
- RNAV Approach
- Landings at a minimum of three points
- Holding Procedures
- Lost Communication Procedures
- Circle to Land
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4/ Module 4

Flight Training (1.5 Hours)**Module Objective:**

For the student to prepare to take the Instrument Practical Test.

Content*Review*

- Preflight Inspection
- IFR Clearance
- VOR Navigation
- VOR Approach
- ILS Approach
- RNAV Approach
- One Partial Panel Approach (Instructor Discretion on Type)
- Holding Procedures
- Missed Approach Procedures
- Lost Communication Procedures
- One Circle to Land Approach (Instructor Discretion on Type)
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4/ Module 5

Flight Training (1.5 Hours)**Module Objective:**

For the student to prepare to take the Instrument Practical Test.

Content*Review*

- Preflight Inspection
- IFR Clearance
- VOR Navigation
- VOR Approach
- ILS Approach
- RNAV Approach
- One Partial Panel Approach (Instructor Discretion on Type)
- Holding Procedures
- Missed Approach Procedures
- One Circle to Land Approach (Instructor Discretion on Type)
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4/ Module 6

Flight Training (1.5 Hours)**Module Objective:**

For the student to prepare to take the Instrument Practical Test.

Content*Review*

- Preflight Inspection
- IFR Clearance
- VOR Navigation
- VOR Approach
- ILS Approach
- RNAV Approach
- One Partial Panel Approach (Instructor Discretion on Type)
- Holding Procedures
- Missed Approach Procedures
- One Circle to Land Approach (Instructor Discretion on Type)
- Unusual Attitudes
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4 Stage Check & End of Course Test

(2.5 Hours)

Flight Training (1.5 Hours)

Module Objective:

To provide a final check to ensure the student is ready to take the Instrument Practical Test.

Content

Review

- Preflight Inspection
- IFR Clearance
- VOR Approach
- ILS Approach
- RNAV Approach
- One Partial Panel Approach (Instructor Discretion on Type)
- Holding Procedures
- Missed Approach Procedures
- Lost Communication Procedures
- One Circle to Land Approach (Instructor Discretion on Type)
- Unusual Attitudes
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

Stage 4/ Optional Review

Simulator Recommended

(2.5 Hours)

Flight Training (1.5 Hours)

Module Objective:

To allow the student to review any deficient flight knowledge areas.

Content

Review

- Preflight Inspection
- IFR Clearance
- VOR Approach
- ILS Approach
- RNAV Approach
- One Partial Panel Approach (Instructor Discretion on Type)
- Holding Procedures
- Missed Approach Procedures
- Lost Communication Procedures
- One Circle to Land Approach (Instructor Discretion on Type)
- Unusual Attitudes
- Postflight Procedures

Completion Standards:

When the student demonstrates the ability to fly within 100 feet, airspeed within 10 Knots, bank angle within 5 degrees and heading within 10 degrees, and less than $\frac{3}{4}$ scale deflection of vertical or lateral guidance the module is considered complete.

