



PILOT RISE
LLC

Flight Instructor INSTRUMENT Syllabus

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Version 5

Description:

This course helps you fulfill the requirements of 14 CFR, Section 61, Subpart H for obtaining a Certified Flight Instructor certificate for Instrument Airplane. The focus of this course is to teach you instructing skills not just to pass a test, but to be a safe and knowledgeable instructor.

The student is expected to begin training with their CFI complete or in progress.

This course consists of four major parts:

- Flight Training
- Ground Training
- Basic Aviation Training Device (BATD)
- Pilot Approach Practice (PilotApproach.com)
- Instruction Practice

Objective:

The student will obtain the knowledge, skill, and aeronautical experience necessary to meet the requirements for a CFI-I certificate.

Topics:

Ground Training:

1. Fundamentals of Instructing (review)
2. Technical Subject Areas
 - a. Flight Instrument & Navigation Equipment
 - b. Regulations & Publications Related to IFR
3. Preflight Preparation
 - a. Weather Information (review)
 - b. Cross-Country Flight Planning
 - c. Instrument Cockpit Check
4. ATC Clearances & Procedures
 - a. Clearances
 - b. ODPs, SIDs, STARs
5. Flight by Reference to Instruments
 - a. Maneuvering
 - b. Unusual Attitudes
6. Navigation Systems
 - a. Intercepting & Tracking a Course
 - b. DME Arcs
 - c. Holding Procedures
7. Approach Procedures
 - a. VOR, VOR/DME, LOC, LOC BC, SDF, LDA, NDB, ILS, PAR, RNAV
 - b. LPV, LP+V, LP, LNAV/VNAV, LNAV+V, LNAV
 - c. Missed Approach
 - d. Circling Approach
8. Emergency Operations
 - a. Loss of Communications
 - b. Partial Panel Approach
 - c. Engine Failure

Flight Training:

1. Preflight Preparation
 - a. Instrument Cockpit Check
2. ATC Clearances & Procedures
 - a. Clearances
 - b. ODPs, SIDs, STARs
3. Flight by Reference to Instruments
 - a. Straight-and-level Flight
 - b. Turns
 - c. Change of Airspeed
 - d. Constant Airspeed Climbs & Descents
 - e. Constant Rate Climbs & Descents
 - f. Timed Turns to Headings
 - g. Steep Turns
 - h. Unusual Attitudes
4. Navigation Systems
 - a. Intercepting & Tracking a Course
 - b. DME Arcs
 - c. Holding Procedures
5. Approach Procedures
 - a. VOR, VOR/DME, LOC, LOC BC, ILS, PAR, RNAV
 - b. Missed Approach
 - c. Circling Approach
 - d. Landing from Straight-In Approach
6. Emergency Operations
 - a. Loss of Communications
 - b. Partial Panel Approach
 - c. Engine Failure
7. Post Flight Procedures
 - a. Checking Instruments & Equipment

Ground Training:

Students are expected to complete their FII written test prior to beginning this course. Use Sheppard Air in preparation for the written tests. You do not require a sign-off to take the written tests.

In preparation for this course, review ALL of your training materials from your Instrument training. If needed, we have a ton of resources you can use and we can direct you to additional online resources. This course is not designed to teach you how to fly; you will be taught how to instruct and how to find the answer to any question a student may ask.

Utilize [PilotApproach.com](https://www.pilotapproach.com) to assist as a training aid and to gain a better understanding of instrument approaches.

BATD:

A BATD will be used for the majority of all lessons that need the use of an aircraft. This reduces the costs of training enormously.

This time will not be loggable toward a certificate, but it is usually over 70% cheaper per hour to practice and train using a training device.

Ways the device is useful during instructor training:

- Relocate to anywhere on Earth
- Freeze to discuss stuff
- Load saved scenarios
- Simulated scenarios are impossible or unsafe to simulate in the actual aircraft

Lesson Time Allocation

This is an estimate. It is possible to finish with fewer hours. It is also possible to need more training. Ground hours will be roughly half during the ground instruction stage if taking this course with another CFI candidate.

Lesson	Dual	Non-Certified Sim	Instrument	Ground
STAGE 1 - Ground & Sim				
1				3.0
2		1.5		2.0
3		1.5		2.0
4		1.0		2.0
5		1.5		2.0
STAGE 2 - Flight Instructing				
1	3.0		2.5	0.5
2	2.0		2.5	0.5
STAGE 4 - Checkride Prep				
1				4.5
2	3.0		2.5	0.5
Totals	8.0		7.5	17.0

STAGE 1 - LESSON 1
Ground & Pilot Approach

Objective:

The student will be tested on their understanding of approaches, instrument regulations, and instrument concepts.

GROUND

- Technical Subject Areas
 - Aircraft Flight Instruments & Nav Equipment
 - Regulations & Publications Related to IFR Ops
- Preflight Preparation
 - Cross-Country Flight Planning
 - Instrument Cockpit Check
- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Flight by Reference to Instruments
 - Recovery from unusual attitudes
- Navigation Systems
 - Intercepting and Tracking Navigational Systems & DME Arcs
 - Holding Procedures
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed Approach
- Emergency Operations
 - Loss of Communications

PILOT APPROACH

- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Navigation Systems
 - Intercepting and Tracking Navigational Systems & DME Arcs
 - Holding Procedures
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed Approach

HOMEWORK

- Study CFI-I knowledge
- Review materials as needed
- Create teaching materials & visual aids
- Practice on PilotApproach.com

STAGE 1 - LESSON 2

GROUND & Sim

Objective:

The student will begin “teaching” ground topics and demonstrate abilities on a non-certified sim.

GROUND

- Flight by Reference to Instruments
 - Recovery from unusual attitudes
 - Straight & Level
 - Turns
 - Change of Airspeed in Straight & Level and Turning Flight
 - Constant Airspeed Climbs & Descents
 - Constant Rate Climbs & Descents
 - Timed Turns to Magnetic Compass Headings
 - Steep Turns
- Navigation Systems
 - Intercepting and Tracking Navigational Systems & DME Arcs
 - Holding Procedures
- Postflight Procedures
 - Checking Instruments & Equipment

SIM

- Flight by Reference to Instruments
 - Recovery from unusual attitudes
 - Straight & Level
 - Turns
 - Change of Airspeed in Straight & Level and Turning Flight
 - Constant Airspeed Climbs & Descents
 - Constant Rate Climbs & Descents
 - Timed Turns to Magnetic Compass Headings
 - Steep Turns
- Navigation Systems
 - Intercepting and Tracking Navigational Systems & DME Arcs
 - Holding Procedures
- Postflight Procedures
 - Checking Instruments & Equipment

HOMEWORK

- CFI-I Oral Prep Study
- Review materials as needed
- Practice on PilotApproach.com

STAGE 1 - LESSON 3
GROUND & Pilot Approach

Objective:

The student will continue “teaching” ground topics and practice teaching on Pilot Approach.

GROUND

- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Navigation Systems
 - Intercepting and Tracking
 Navigational Systems & DME Arcs
 - Holding Procedures
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed Approach

Pilot Approach

- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Navigation Systems
 - Intercepting and Tracking
 Navigational Systems & DME Arcs
 - Holding Procedures
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed Approach

HOMEWORK

- CFI-I Oral Prep Study
- Review materials as needed
- Practice on Sim & PilotApproach.com as needed

STAGE 1 - LESSON 4

GROUND & Sim

Objective:

The student will practice “teaching” areas selected by the instructor and practice teaching on the sim.

GROUND

- Technical Subject Areas
 - Aircraft Flight Instruments & Nav Equipment
 - Regulations & Publications Related to IFR Ops
- Preflight Preparation
 - Cross-Country Flight Planning
 - Instrument Cockpit Check
- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed Approach
 - Circling Approach
 - Landing from Straight-In Approach
- Emergency Operations
 - Loss of Attitude & Heading Indicators

SIM

- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed Approach
 - Circling Approach
 - Landing from Straight-In Approach
- Emergency Operations
 - Loss of Attitude & Heading Indicators

HOMEWORK

- CFI-I Oral Prep Study
- Review materials as needed
- Practice on Sim & PilotApproach.com as needed

STAGE 1 - LESSON 5
GROUND & SIM & PILOT APPROACH

Objective:

The student will continue “teaching” ground subjects and in the sim and on PilotApproach as needed.

GROUND

- Technical Subject Areas
- Preflight Preparation
- ATC Clearances & Procedures
- Flight by Reference to Instruments
- Navigation Systems
- Instrument Approach Procedures
- Emergency Operations
- Postflight Procedures

SIM & PILOT APPROACH

- ATC Clearances & Procedures
- Flight by Reference to Instruments
- Navigation Systems
- Instrument Approach Procedures
- Emergency Operations
- Postflight Procedures

HOMEWORK

- CFI-I Oral Prep Study
- Review materials as needed
- Practice on Sim & PilotApproach.com as needed

STAGE 2 - LESSON 1

Dual | Local

Objective:

The student will begin “flight instructing” in the real aircraft. This flight should be conducted in IFR. It is preferred to be completed in IMC.

GROUND

- Preflight Preparation
 - Cross-Country Flight Planning
 - Instrument Cockpit Check
- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances

HOMEWORK

- CFI-I Oral Prep Study
- Review materials as needed
- Practice on PilotApproach.com & Sim as needed.

Sample Lesson Plan:

- Plan T67 KMWL KAFW T67
- Get clearance over the phone.
- Constant Airspeed & Rate Climbs
- Change of Airspeed Level & Turning
- Straight and Level
- Request block altitude & deviations left and right of course for student training.
- Steep turns, unusual attitudes, turns, timed turns to headings
- Simulated loss of comms
- Intercepting & Tracking course
- VOR approach into KMWL to missed approach.
- Holding
- RNAV or ILS approach into KMWL to circle to land to a missed approach.
- Flight by instruments practice & teaching while flying to KAFW.

FLIGHT

- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Flight by Reference to Instruments
 - Recovery from unusual attitudes
 - Straight & Level
 - Turns
 - Change of Airspeed in Straight & Level and Turning Flight
 - Constant Airspeed Climbs & Descents
 - Constant Rate Climbs & Descents
 - Timed Turns to Magnetic Compass Headings
 - Steep Turns
- Navigation Systems
 - Intercepting and Tracking
 - Navigational Systems & DME Arcs
 - Holding Procedures
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed Approach
 - Circling Approach
 - Landing from Straight-In Approach
- Emergency Operations
 - Loss of Communications
 - Loss of Attitude & Heading Indicators
- Postflight Procedures
 - Checking Instruments & Equipment

- Plan ILS or RNAV into KAFW. Ask ATC to simulate no-gyro turns with you. Teach loss of attitude & heading. Practice timed turns.
- Complete no-gyro approach into KAFW to a landing.
- Depart KAFW special VFR to Hicks. Pretending to land into Hicks is a circle-to-land for training purposes.

STAGE 2 - LESSON 2
Dual | Local | Sim | Pilot Approach

Objective:

The student will practice “flight instructing” as needed until they are proficient and ready. Any ground practice will be provided as well.

GROUND

- Technical Subject Areas
- Preflight Preparation
- ATC Clearances & Procedures
- Flight by Reference to Instruments
- Navigation Systems
- Instrument Approach Procedures
- Emergency Operations
- Postflight Procedures

FLIGHT

- ATC Clearances & Procedures
- Flight by Reference to Instruments
- Navigation Systems
- Instrument Approach Procedures
- Emergency Operations
- Postflight Procedures

HOMEWORK

- CFI-I Oral Prep Study
- Review materials as needed
- Practice on PilotApproach.com & Sim

STAGE 3 - LESSON 1
Ground Practice Checkride

Objective:

The student will teach ground lessons required by the CFI-I PTS. The instructor will evaluate the student in accordance with the CFI-I PTS.

GROUND

- Technical Subject Areas
 - Aircraft Flight Instruments & Nav Equipment
 - Regulations & Publications Related to IFR Ops
- Preflight Preparation
 - Cross-Country Flight Planning
 - Instrument Cockpit Check
- ATC Clearances & Procedures
 - ATC Clearances OR
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Navigation Systems
 - Intercepting and Tracking Navigational Systems & DME Arcs
 - Holding Procedures
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Plus one task
- Emergency Operations
 - Loss of Communications

HOMEWORK

- CFI-I Oral Prep Study
- Review materials as needed
- Practice on PilotApproach.com as needed.

STAGE 3 - LESSON 2

Practice Checkride

Objective:

The instructor will evaluate the CFI candidate in accordance with the CFI-I PTS to see if they are prepared for their CFI-I checkride.

GROUND

Evaluate:

- As Required

FLIGHT

- ATC Clearances & Procedures
 - ATC Clearances
 - Compliance with Departure, Enroute, and Arrival Procedures & Clearances
- Flight by Reference to Instruments
 - Recovery from unusual attitudes
 - Plus one task
- Navigation Systems
 - Intercepting and Tracking
Navigational Systems & DME Arcs
 - Holding Procedures
- Instrument Approach Procedures
 - Non-Precision Instrument Approach
 - Precision Instrument Approach
 - Missed or Circling or Landing
 - One approach with no gyros
- Emergency Operations
 - Loss of Communications
 - Loss of Attitude & Heading Indicators
- Postflight Procedures
 - Checking Instruments & Equipment

HOMEWORK

- Final Checkride Prep