

## **Flight Instructor - Instrument Airplane**

### **Flight By Reference to Instruments**

---

#### **Scenario:**

Your student is beginning training for an instrument rating. You are going to develop a maneuver lesson that contains a scenario where the student is going to fly to a nearby airport by flying with reference to the instruments. During this flight, you will teach the student the basic instrument flight maneuvers and demonstrate how each one is to be flown. In addition, you analyze and correct any problems your student demonstrates.

#### **Lesson Objectives:**

The purpose of this lesson is for the student instructor to learn to effectively perform and analyze flight by reference to instrument maneuvers. If a multiengine airplane is being used, to also effectively perform and analyze engine out operations while flying by reference to instruments.

The student instructor will also be able to assess the risks associated with this flight and be able to explain how to manage those risks to insure a safe training flight is conducted.

#### **Pre-Briefing:**

The student instructor will review the desired outcomes, discuss the scenario for the flight, and discuss the key elements of each maneuver to be flown. The student instructor will develop a maneuver lesson that describes and utilizes the scenario prescribed for this lesson. During the preflight briefing, the instructor will play the role of the student being trained and respond accordingly.

The student instructor should be able to explain the risks associated with simulated instrument flight using view limiting devices and the risks associated with instrument training.

If a multiengine airplane is being used, the student instructor shall review the procedures used for simulating an engine failure, the procedures to be used in the event of an actual engine failure, and the risks associated with simulated engine failures during training.

#### **Completion Standards:**

This lesson will be complete when the student instructor can perform, teach and analyze each maneuver to the level shown on the desired outcome table and

within the tolerances specified by the Flight Instructor Instrument Practical Test Standard for Airplane.

FI-IA Flight By Reference to Instruments Desired Outcome Grade Sheet			Task Grades					SRM Grades	
			Not Observed	Describe	Explain	Practice	Perform	Explain	Practice
Scenario Activities	Task	Desired Performance							
Preflight Lesson on a Maneuver to be Performed in Flight	Maneuver Lesson								
Preflight Procedures	Weather Information								
	Instrument Cockpit Check								
	SRM								
Air Traffic Control Clearances and Procedures	Air Traffic Control Clearances								
	Compliance with Departure, En Route, and Arrival Procedures and Clearances								
	SRM								
Flight by Reference to Instruments	Straight-and-Level Flight								
	Turns								
	Change of Airspeed in Straight-and-Level Flight and Turning Flight								
	Constant Airspeed Climbs and Descents								
	Constant Rate Climbs and Descents								
	Timed Turn to Magnetic Compass Headings								
	Steep Turns								
	Recovery from Unusual Flight Attitudes								
	Engine Failure During Straight-and-Level Flight and Turns (Multiengine Airplanes Only)								
	SRM								
Post-flight Procedures	Checking Instruments and Equipment								
	SRM								

**De-Briefing:**

The debriefing will be lead by the student instructor using the Learner-Centered Grading method. The student instructor will critique the instructor about the instructor’s “simulated student” performance. Then the student instructor will critique his/her own performance using the Desired Outcomes Grading sheet as a guide. The instructor and student instructor will discuss any discrepancies in their respective evaluations.

### **Notes to the Instructor:**

The scenario for this flight is to practice flight by reference to instruments. You should play the role of the student being trained and your student instructor should play the role of the instructor during the scenario. On the flight to the other airport, the student instructor should demonstrate to you how to fly each of the maneuvers and procedures listed in the Desired Outcomes Grade Sheet. After demonstrating each of these maneuvers, you can land and discuss the performance on the first leg.

On the return leg, you should fly the airplane in the role of the student and perform each of the maneuvers and have the student instructor analyze your performance.

Care need to be taken when conducting recoveries from unusual attitudes.

Your decision to actually wear the view limiting device while playing the role of the student should be based on the actual flight environment and traffic situation. Do not compromise your duties as PIC or safety while playing the student role. Be sure of the safety aspects of this flight. It is recommended that this flight be conducted in visual meteorological conditions.