

# Instrument Rating Lesson Outline

## 1. SUBJECT AREAS (GENERAL)

- a. Regulations: FAR's, AIM ☐☐☐
- b. Aviation Publications, AFD, TERPS ☐☐☐
- c. Airspace (ABCDEG, SUA, Other) ☐☐☐
- d. ADM: PAVE, IMSAFE, DECIDE ☐☐☐
- e. Special Emphasis Areas ☐☐☐
- f. Anatomy of an IFR Flight ☐☐☐

## 2. PREFLIGHT PREPARATION

- a. Pilot/Aircraft Qualifications, Currency ☐☐☐
- b. Weather Information ☐☐☐
  - 1. Wx Reports and Observations ☐☐☐
  - 2. Wx Briefings, Hazardous Wx, In-Flight ☐☐☐
  - 3. Wx Forecasts, Charts, Icing, Freezing,... ☐☐☐
  - 4. Notam's, ... ☐☐☐
- c. Cross-Country Flight Planning ☐☐☐
  - 1. Airway and Direct Routes ☐☐☐
  - 2. Altitudes (MEA MOCA OROCA MCA MRA) ☐☐☐
  - 3. Flight Plan, Filing, Clearance Delivery ☐☐☐
  - 4. Alternates, SID's, STAR's, ODP's ☐☐☐
- d. Performance, Airports, POH, AFD ☐☐☐

## 3. PREFLIGHT PROCEDURES

- a. Aircraft Systems ☐☐☐
  - 1. Pitot Static System ☐☐☐
  - 2. Vacuum System ☐☐☐
  - 3. Anti-Icing, De-Icing Equipment ☐☐☐
- b. VFR/IFR Flight Instruments ☐☐☐
- c. Nav Equipment, VOR, ADF, DME, GPS ☐☐☐
- d. Preflight Instrument Checks, Taxi checks ☐☐☐

## 4. ATC CLEARANCES AND PROCEDURES

- a. ATC Control Clearances ☐☐☐
- b. Departure Clearances, SID, ODP, TO mins ☐☐☐
- c. En Route Clearances, Reporting ☐☐☐
- d. Arrival Clearances, Procedures, STARS ☐☐☐
- e. Holding Procedures ☐☐☐
- f. En Route to Approach transitions ☐☐☐

## 5. FLIGHT BY REFERENCE TO INSTRUMENTS

- a. Scan, Primary/Support, Cross-Inter-Control ☐☐☐
- b. Instrument Takeoff ☐☐☐
- c. Straight/Level Flight ☐☐☐
- d. Airspeed Changes ☐☐☐
- e. Constant airspeed climbs/descends ☐☐☐
- f. Constant rate climbs/descends ☐☐☐
- g. Unusual Attitudes, full and Partial Panel ☐☐☐
- h. Partial Panel flying ☐☐☐
- i. Compass turns, Timed Turns, Partial Panel ☐☐☐
- j. Vertical S's, turning, alternating ☐☐☐
- k. Steep Turns ☐☐☐
- l. Power On/Off Stalls and Recovery ☐☐☐

## 6. NAVIGATION AND NAVIGATION SYSTEMS

- a. VOR Navigation, Intercepting and Tracking ☐☐☐
- b. NDB Navigation, Intercepting and Tracking ☐☐☐
- c. GPS Navigation, device, RAIM ☐☐☐
- d. DME Arcs ☐☐☐
- e. Holding Patterns and Hold Entries ☐☐☐

## 7. INSTRUMENT APPROACH PROCEDURES

- a. Charts ☐☐☐
  - 1. Approach Charts (IAP) ☐☐☐
  - 2. Low En-Route, Area Charts ☐☐☐
- b. Non-Precision Approach (NPA) ☐☐☐
  - 1. VOR Approach ☐☐☐
  - 2. NDB Approach ☐☐☐
  - 3. GPS Approach (LPV, LNAV, VNAV) ☐☐☐
  - 4. LOC, LDA approaches ☐☐☐
  - 5. Partial Panel Approaches ☐☐☐
- c. Precision Approach (PA) ☐☐☐
  - 1. ILS Approach (system, LOC, GS, ALS, BKN) ☐☐☐
- d. Missed Approach ☐☐☐
- e. Straight-in Approaches ☐☐☐
- f. Circling Approaches ☐☐☐
- g. No Gyro, Radar Vectoring & Radar Approaches ☐☐☐
- h. Procedure turns/Course reversals ☐☐☐
- i. Partial Panel Approaches ☐☐☐
- j. Visual Approaches ☐☐☐

## 8. EMERGENCY OPERATIONS

- a. Lost Communications (AVE F, MEA) ☐☐☐
- b. Loss of Primary Flight Instruments ☐☐☐
- c. Cockpit, audio panel, troubleshooting ☐☐☐
- d. Engine out, let-down procedures ☐☐☐

## 9. POSTFLIGHT PROCEDURES

- a. Checking Instruments and Equipment ☐☐☐

## 10. Addition Areas and Maneuvers

- a. Minimum Equipment, Rqd Maintenance ☐☐☐
- b. Mnemonics, Acronyms, Checklists, Mem Items ☐☐☐
- c. *GPS programming, Nav, Approaches, Fltplan* ☐☐☐
- d. *Autopilot for IFR use.* ☐☐☐
- e. *A/C Logs, Maintenance Tour, Tower Tour* ☐☐☐
- f. *Characterize your aircraft (AS/AI/VSI)* ☐☐☐
- g. *No instrument approach (use handheld device)* ☐☐☐
- h. *Pop-Up IFR clearance* ☐☐☐

## 11. Stage Preps/Checks

- a. Checkride Prep: Practical Test Standards (ACS) ☐☐☐
- b. Checkride Prep: Oral Prep Areas Checklist ☐☐☐

### Aeronautical Experience – 14CFR 61.65

50 hours Cross-Country time (min 10 in airplane)	
40 hours of Actual or Simulated instrument time	
15 hours dual (actual or simulated instrument time	
3 hours dual within 2 calendar months of checkride	
Instrument long Cross-Country. Filed IFR, 250nm along airways directed by ATC, an instrument approach at each airport, 3 different kinds of approaches with use of nav	