This guide is dedicated to the many talented students, pilots and flight instructors I have had the opportunity to work with over the years. Also, special thanks to Mark Hayes, Robert Hess, Meredyth Malocsay, and many others who supplied the patience, encouragement, and understanding necessary to complete the project.

— M.D.H.
Contents

Introduction ...........................................................................................................vii

1 Preflight
A. Pilot Qualifications................................................................. 1–3
B. Preflight Action for Flight....................................................... 1–8
C. Preflight Action for Aircraft..................................................... 1–11
D. IFR Flight Plan ........................................................................ 1–17
E. Route Planning ........................................................................ 1–21
F. Flight Instruments ............................................................... 1–25
   Pitot/Static System ............................................................... 1–25
   Gyroscopic System .............................................................. 1–32
   Magnetic Compass ............................................................... 1–35
   Electronic Flight Instrument Displays .............................. 1–36
G. Fundamentals of Weather ...................................................... 1–39
H. Obtaining Weather Information ........................................... 1–47
I. Aviation Weather Reports and Observations ....................... 1–49
J. Aviation Weather Forecasts ................................................... 1–52
K. Aviation Weather Charts ...................................................... 1–57
Additional Study Questions ......................................................... 1–63

2 Departure
A. Authority and Limitations of the Pilot ................................. 2–3
B. Departure Clearance ............................................................ 2–4
C. Departure Procedures .......................................................... 2–6
D. VOR Accuracy Checks .......................................................... 2–11
E. Transponder ........................................................................... 2–12
F. Airport Facilities ...................................................................... 2–13
Additional Study Questions ......................................................... 2–18
3 **En Route**

A. Enroute Limitations .......................................................... 3–3
B. Enroute Procedures ..................................................... 3–5
C. Oxygen Requirements .................................................. 3–11
D. Emergencies ............................................................... 3–12
E. Single-Pilot Resource Management ................................. 3–15
F. Adverse Weather ............................................................ 3–20
G. Navigation Systems ....................................................... 3–25
H. Airway Route System ..................................................... 3–36
I. Airspace ................................................................. 3–43
J. Special Use Airspace ...................................................... 3–45

Additional Study Questions .................................................. 3–47

4 **Arrival**

A. Approach Control .......................................................... 4–3
B. Precision Approaches ..................................................... 4–9
C. Nonprecision Approaches ............................................... 4–14
D. RNAV (GPS) Approaches ............................................... 4–19
E. Circling Approaches ........................................................ 4–25
F. Missed Approaches .......................................................... 4–28
G. Landing Procedures ........................................................ 4–31
H. Instrument Approach Procedure Charts: General ............. 4–32
I. Instrument Approach Procedure Charts: Plan View ............ 4–33
J. Instrument Approach Procedure Charts: Profile ................. 4–35
K. Instrument Approach Procedure Charts: Minimums ............ 4–37

Additional Study Questions .................................................. 4–41

5 **Scenario-Based Training**

Introduction ...................................................................... 5–3
Scenario-Based Questions .................................................. 5–4

**Appendix 1**  Applicant’s Practical Test Checklist

**Appendix 2**  Flight Instructor–Instrument Airplane Supplement

**Appendix 3**  FAA Instrument Proficiency Check Guidance
Introduction

The Instrument Oral Exam Guide is a comprehensive guide designed for private or commercial pilots who are involved in training for the instrument rating. This guide was originally designed for use in a Part 141 flight school, but quickly became popular with those training under 14 CFR Part 61 not affiliated with an approved school. This book is also helpful for instrument-rated pilots who wish to refresh their knowledge or are preparing for an instrument proficiency check (IPC).

The Instrument Rating Airman Certification Standards (FAA-S-ACS-8) specify the areas in which knowledge must be demonstrated by the applicant before a pilot certificate or rating can be issued. This guide has been designed to evaluate a pilot’s knowledge of these areas and contains questions and answers organized into four main chapters which represent logical divisions of a typical instrument flight. An FAA evaluator may ask questions from any of the subject areas within these divisions, at any time during the practical test, to determine if the applicant has the required knowledge. For some topics, the evaluator will ask the applicant to describe or explain; for other items, the evaluator will assess the applicant’s understanding with a scenario that requires appropriately applying and/or correlating knowledge, experience, and information to the circumstances of the given scenario. Chapter 5 of this guide provides examples of scenario-based questions the evaluator may use to test this. Through intensive post-instrument-checkride debriefings, we have provided you with the most consistent questions asked along with the information necessary for a knowledgeable response.

At the end of this guide are three appendices: Appendix 1 with the “Applicant’s Practical Test Checklist” to be used when making final preparations for the checkride, and Appendix 2 has the “Flight Instructor—Instrument Airplane Supplement” that provides additional study material for CFII candidates preparing for the add-on to their existing CFI ticket, but it is also of potential interest to pilots preparing for the instrument checkride or an IPC. Appendix 3 is an excerpt of the FAA’s
“Instrument Proficiency Check Guidance” document, which assists a CFII in determining whether a pilot seeking an IPC endorsement has both the knowledge and skills for safe operation in all aspects of instrument flying. It should also prove very useful to pilots preparing for the instrument checkride or an IPC—see a full version of this FAA guide on the “Reader Resource” webpage for this book.

You may supplement this guide with other study materials as noted in parentheses after each question; for example: (FAA-H-8083-15). The abbreviations for these materials and their titles are listed below. Be sure that you use the latest revision of these references when reviewing for the test. Also, check the ASA website at www.asa2fly.com for the latest updates to this book on our “Textbook Updates” page; all the latest changes in FAA procedures and regulations that affect these questions will be listed there.

14 CFR Part 43  Maintenance, Preventive Maintenance, Rebuilding, and Alteration
14 CFR Part 61  Certification: Pilots, Flight Instructors, and Ground Instructors
14 CFR Part 91  General Operating and Flight Rules
14 CFR Part 93  Special Air Traffic Rules
14 CFR Part 95  IFR Altitudes
14 CFR Part 97  Standard Instrument Procedures
14 CFR Part 142 Training Centers
AC 00-6  Aviation Weather
AC 00-24  Thunderstorms
AC 00-45  Aviation Weather Services
AC 00-54  Pilot Windshear Guide
AC 61-65  Certification: Pilots, and Flight Instructors, and Ground Instructors
AC 61-67  Stall and Spin Awareness Training
AC 61-98  Currency and Additional Qualification Requirements for Certificated Pilots
AC 61-134 General Aviation Controlled Flight Into Terrain Awareness
AC 68-1  Alternative Pilot Physical Examination and Education Requirements
AC 90-100 U.S. Terminal and En Route Area Navigation (RNAV) Operations

AC 91-73 Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations

AC 91-74 Pilot Guide: Flight in Icing Conditions

AC 91-78 Use of Class 1 or Class 2 Electronic Flight Bag (EFB)

AIM Aeronautical Information Manual

AFM FAA Approved Flight Manual

AWC Aviation Weather Center


FAA-H-8083-3 Airplane Flying Handbook

FAA-H-8083-6 Advanced Avionics Handbook

FAA-H-8083-9 Aviation Instructor’s Handbook


FAA-H-8083-25 Pilot’s Handbook of Aeronautical Knowledge


FAA-H-8083-31 Aviation Maintenance Technician Handbook—Airframe

FAA InFO 15012 Logging Instrument Approach Procedures (IAP)

FAA-P-8740-16 Understanding and Caring for your Gyroscopic Instruments

FAA-P-8740-30 How to Obtain a Good Weather Briefing

FAA-P-8740-36 Proficiency and the Private Pilot

FAA-S-ACS-8 Instrument Rating—Airplane Airman Certification Standards

NPRM NPRM-2016-6142-001

Order 8260.3 United States Standard for Terminal Instrument Procedures (TERPs)

P/CG Pilot/Controller Glossary included in the AIM

POH Pilot Operating Handbook

USRGD FAA Aeronautical Chart User’s Guide

Chart Supplement U.S. (formerly A/FD)
These documents are available from [www.faa.gov](http://www.faa.gov). Additionally, many of these publications are reprinted by ASA and are available from aviation retailers nationwide.

A review of the information presented within this guide should provide the necessary preparation for the oral section of an FAA instrument certification or re-certification check.

Were you asked a question during your checkride that was not covered in this book? If so, please send the question to ASA. We are constantly striving to improve our publications to meet the industry needs.

email: asa@asa2fly.com  
Fax: 425.235.0128  
7005 132nd Place SE  
Newcastle, WA 98059-3153
A. Pilot Qualifications

1. An applicant for an instrument rating must have at least how much and what type of flight time as pilot? (14 CFR 61.65)

A person who applies for an instrument–airplane rating must have logged the following:

a. 50 hours of cross-country flight time as PIC, of which 10 hours must have been in an airplane;

b. 40 hours of actual or simulated instrument time in the Part 61 areas of operation, of which 15 hours must have been received from an authorized instructor who holds an instrument airplane rating, and the instrument time includes:
   - 3 hours of instrument flight training from an authorized instructor in an airplane that is appropriate to the instrument–airplane rating within 2 calendar months before the date of the practical test;
   - Instrument flight training on cross country flight procedures, including one cross country flight in an airplane with an authorized instructor, that is performed under IFR, when a flight plan has been filed with an ATC facility, and that involves a flight of 250 NM along airways or ATC-directed routing, an instrument approach at each airport, and 3 different kinds of approaches with the use of navigation systems.

Exam Tip: The evaluator may ask you to demonstrate that you’re current and eligible to take the practical test. When preparing for your practical test, verify that you have the required hours, that you’re current, and don’t forget to double-check all of your endorsements. Make sure you have totaled all of the logbook columns and that the entries make sense.

2. When is an instrument rating required? (14 CFR 61.3, 61.133, 91.135, 91.157)

When operations are conducted:

a. Under instrument flight rules (IFR flight plan),

b. In weather conditions less than the minimum for VFR flight,
c. In Class A airspace,
d. Under Special VFR within Class B, Class C, Class D and Class E surface areas between sunset and sunrise.
e. When carrying passengers for hire on cross-country flights in excess of 50 nautical miles or at night.

3. What are the recency-of-experience requirements to be PIC of a flight under IFR? (14 CFR 61.57)

The recency-of-experience requirements are:

a. A flight review;
b. To carry passengers, 3 takeoffs and landings within the preceding 90 days in an aircraft of the same category, class and type, if a type rating is required (landings must be full stop at night or in a tailwheel).
c. Within the 6 calendar months preceding the month of the flight, performed and logged in actual weather conditions or under simulated conditions using a view-limiting device, at least the following tasks in an airplane:
   • Six instrument approaches.
   • Holding procedures and tasks.
   • Intercepting and tracking courses through the use of navigational electronic systems.

Note: 14 CFR §61.57(c) allows the use of an aircraft and/or a flight simulator, flight training device, or aviation training device for maintaining instrument experience, subject to certain limitations.

Remember: 6-6-HIT. 6 approaches in previous 6 months including Holding, Intercepting and Tracking courses.

4. If a pilot allows his/her instrument currency to expire, what can be done to become current again? (14 CFR 61.57, 91.109)

A pilot is current for the first 6 months following his/her instrument checkride or proficiency check. If the pilot has not accomplished at least 6 approaches (including holding procedures, intercepting/tracking courses through the use of navigation
systems) within this first 6 months, he/she is no longer legal to file and fly under IFR. To become legal again, the regulations allow a “grace period” (the second 6-month period), in which a pilot may get current by finding an “appropriately rated” safety pilot, and in simulated IFR conditions only, acquire the 6 approaches, etc. If the second 6-month period also passes without accomplishing the minimum, a pilot may reinstate his/her currency by accomplishing an instrument proficiency check given by an examiner, an authorized instructor, or an FAA-approved person to conduct instrument practical tests.

5. **Explain the difference between being “current” and being “proficient.”** (FAA-H-8083-2, FAA-P-8740-36)

Being “current” means that a pilot has accomplished the minimum FAA regulatory requirements within a specific time period so he or she can exercise the privileges of the certificate. It means that you’re “legal” to make a flight, but does not necessarily mean that you’re proficient or competent to make that flight. A “proficient” pilot is capable of conducting a flight with a high degree of competence; proficiency requires that the pilot have a wide range of knowledge and skills. Being proficient is not about just being “legal” in terms of the regulations, but is about being smart and safe in terms of pilot experience and competence.

6. **What are the required qualifications for a person to act as a “safety pilot”?** (14 CFR 61.3, 61.23, and 91.109)

The safety pilot must:

a. Possess at least a private pilot certificate with category and class ratings appropriate to the aircraft being flown.

b. Possess an appropriate medical certificate (the safety pilot is acting as a required crewmember).

c. If the flight is to be conducted on an IFR flight plan, the person acting as PIC of the flight must hold an instrument rating and be instrument current.
Instrument Pilot

ORAL EXAM GUIDE

INCLUDES A CHAPTER ON SCENARIO-BASED TRAINING BY ARLYNN MCMAHON

The OEG Series is an excellent study tool for students and instructors alike, arranged in a question-and-answer format. Use when you’re gearing up for the Practical Exam, as well as for a general refresher! Other Oral Exam Guides available from ASA...

- Private Pilot
- Commercial Pilot
- Multi-Engine Pilot
- Flight Instructor
- Airline Transport Pilot
- Helicopter Pilot
- Aircraft Dispatcher
- Flight Review
- Aviation Maintenance Technician

Aviation Supplies & Academics, Inc.
7005 132nd Place SE
Newcastle, Washington 98059-3153
425-235-1500
www.asa2fly.com

TRANSPORTATION  USD $12.95
ISBN 978-1-61954-598-4