



Flight Instructor

ORAL EXAM GUIDE



MICHAEL D. HAYES

COMPREHENSIVE PREPARATION
FOR THE FAA CHECKRIDE

EIGHTH EDITION

Flight Instructor

ORAL EXAM GUIDE

MICHAEL D. HAYES

EIGHTH EDITION

COMPREHENSIVE PREPARATION
FOR THE FAA CHECKRIDE



AVIATION SUPPLIES & ACADEMICS, INC.
NEWCASTLE, WASHINGTON

Flight Instructor Oral Exam Guide
Eighth Edition
by Michael D. Hayes

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

© 2023 Aviation Supplies & Academics, Inc.
All rights reserved. First edition published 1994. Eighth edition published 2023.

See the ASA website at asa2fly.com/oegcfi for Reader Resources containing additional information and updates relating to this book.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means without the prior written permission of the copyright holder. While every precaution has been taken in the preparation of this book, the publisher and Michael D. Hayes assume no responsibility for damages resulting from the use of the information contained herein.

None of the material in this book supersedes any operational documents or procedures issued by the Federal Aviation Administration, aircraft and avionics manufacturers, flight schools, or the operators of aircraft.

ASA-OEG-CF18

ISBN 978-1-64425-299-4

Additional formats available:

eBook EPUB ISBN 978-1-64425-300-7

eBook PDF ISBN 978-1-64425-301-4

Printed in the United States of America

2027 2026 2025 2024 2023 9 8 7 6 5 4 3 2 1

Library of Congress Cataloging-in-Publication Data:

Names: Hayes, Michael D., author.

Title: Flight instructor oral exam guide : comprehensive preparation for the FAA checkride / Michael D. Hayes.

Other titles: Certified flight instructor oral exam guide

Description: Eighth edition. | Newcastle, Washington : Aviation Supplies & Academics, Inc., 2023.

Identifiers: LCCN 2023002634 (print) | LCCN 2023002635 (ebook) | ISBN 9781644252994 (trade paperback) | ISBN 9781644253007 (epub) | ISBN 9781644253014 (pdf)

Subjects: LCSH: United States. Federal Aviation Administration—Examinations—Study guides. | Flight training—Examinations—Study guides. | Airplanes—Piloting—Examinations—Study guides. | LCGFT: Study guides.

Classification: LCC TL712 .H39 2023 (print) | LCC TL712 (ebook) | DDC 629.132/52076—dc23/eng/20230208

LC record available at <https://lccn.loc.gov/2023002634>

LC ebook record available at <https://lccn.loc.gov/2023002635>

Contents

Introduction	ix
1 Fundamentals of Instructing	1
A. Effects of Human Behavior and Communication on the Learning Process	2
B. Learning Process	12
C. Course Development, Lesson Plans, and Classroom Training Techniques	26
D. Student Evaluation, Assessment, and Testing	40
E. Elements of Effective Teaching in a Professional Environment.....	47
F. Elements of Effective Teaching That Include Risk Management and Accident Prevention	52
2 Technical Subject Areas	61
A. Human Factors	62
B. Visual Scanning and Collision Avoidance	71
C. Runway Incursion Avoidance	76
D. Principles of Flight.....	79
E. Airplane Flight Controls and Operation of Systems	85
F. Performance and Limitations	99
G. National Airspace System	106
H. Navigation Systems and Radar Services.....	111
I. Navigation and Cross-Country Flight Planning.....	117
J. 14 CFR and Publications.....	121
K. Endorsements and Logbook Entries.....	124
L. Night Operations	130
M. High Altitude Operations—Supplemental Oxygen.....	135
N. High Altitude Operations—Pressurization.....	138

3	Preflight Preparation	143
	A. Pilot Qualifications	144
	<i>General</i>	144
	<i>Aircraft Rating and Special Certification</i>	156
	<i>Student Pilots</i>	159
	<i>Recreational Pilots</i>	167
	<i>Private Pilots</i>	170
	<i>Commercial Pilots</i>	175
	<i>Airline Transport Pilots</i>	179
	<i>Flight Instructors</i>	180
	B. Airworthiness Requirements	185
	<i>Aircraft Maintenance Requirements</i>	190
	C. Weather Information	196
	<i>Aviation Weather Charts</i>	205
	<i>Meteorology</i>	209
4	Preflight Procedures	221
	A. Preflight Assessment	222
	B. Flight Deck Management.....	225
	C. Engine Starting.....	227
	D. Taxiing, Airport Signs, and Lighting.....	229
	E. Before Takeoff Check	239
5	Airport Operations	243
	A. Communications, Light Signals, and Runway Lighting Systems	244
	B. Traffic Patterns	251
6	Takeoffs, Landings, and Go-Arounds	259
	A. Normal Takeoff and Climb.....	260
	B. Normal Approach and Landing.....	263
	C. Soft-Field Takeoff and Climb.....	266
	D. Soft-Field Approach and Landing.....	270
	E. Short-Field Takeoff and Maximum Performance Climb	273
	F. Short-Field Approach and Landing.....	276
	G. Slip to a Landing	280
	H. Go-Around/Rejected Landing.....	284
	I. Power-Off 180° Accuracy Approach and Landing	286

7	Fundamentals of Flight	291
	A. Straight-and-Level Flight.....	292
	B. Level Turns.....	294
	C. Straight Climbs and Climbing Turns.....	295
	D. Straight Descents and Descending Turns.....	298
8	Performance and Ground Reference Maneuvers	301
	A. Steep Turns.....	302
	B. Steep Spiral	305
	C. Chandelles	307
	D. Lazy Eights.....	310
	E. Ground Reference Maneuvers.....	312
	<i>Rectangular Course</i>	312
	<i>S-Turns</i>	315
	<i>Turns Around a Point</i>	317
	F. Eights on Pylons.....	320
9	Slow Flight, Stalls, and Spins	325
	A. Maneuvering During Slow Flight	326
	B. Demonstration of Flight Characteristics at Various Configurations and Airspeeds	329
	C. Power-Off Stalls.....	336
	D. Power-On Stalls	339
	E. Accelerated Stalls.....	343
	F. Cross-Controlled Stall Demonstration	346
	G. Elevator Trim Stall Demonstration	349
	H. Secondary Stall Demonstration.....	352
	I. Spin Awareness and Spins.....	354
10	Basic Instrument Maneuvers	357
	A. Straight-and-Level Flight.....	358
	B. Constant Airspeed Climbs.....	360
	C. Constant Airspeed Descents.....	362
	D. Turns to Headings	364
	E. Recovery from Unusual Flight Attitudes	366

11	Emergency Operations	371
	A. Emergency Descent.....	372
	B. Emergency Approach and Landing.....	374
	C. Systems and Equipment Malfunctions.....	377
	D. Emergency Equipment and Survival Gear.....	380
12	Postflight Procedures	383
	A. After Landing, Parking, and Securing.....	384
13	Scenario-Based Training <i>by Arlynn McMahon</i>	389
	Introduction	390
	Scenario-Based Questions.....	391
Appendix 1	Applicant's Practical Test Checklist.....	407
Appendix 2	Safety of Flight (from FAA-S-ACS-25).....	411

Introduction

The *Flight Instructor Oral Exam Guide* is a comprehensive guide designed for commercial pilots who are involved in training for the initial Flight Instructor Certificate.

This guide was originally designed for use in a Part 141 school but has quickly become popular with those training under 14 CFR Part 61 who are not affiliated with an approved school. It will also prove beneficial to flight instructors who wish to refresh their knowledge or who are preparing to renew their Flight Instructor Certificate.

The *Flight Instructor—Airplane Airman Certification Standards* (FAA-S-ACS-25) specifies the areas in which knowledge and skill must be demonstrated by the applicant before issuance of a Flight Instructor Certificate with the associated category and class ratings. This *Flight Instructor Oral Exam Guide* is designed to evaluate a pilot's knowledge of those areas. Organized around the ACS Areas of Operation and Tasks, this guide provides questions and detailed answers specific to the ACS areas of knowledge, risk management, and skill elements relevant to the tasks. During the exam, an FAA examiner will attempt to determine that the applicant is able to make a practical application of the fundamentals of instructing and is competent to teach the subject matter, procedures, and maneuvers included in the standards to learners with varying backgrounds and levels of experience and ability. Based on very intensive debriefings after flight instructor checkrides, we have provided you with the questions most consistently asked along with the information or the appropriate reference necessary for a knowledgeable response.

This guide may be supplemented with other comprehensive study materials as noted in parentheses after each question; for example: (FAA-H-8083-9). The abbreviations for these materials and their titles are listed below. Ensure that you use the latest revision of these references when reviewing for the test. Also, check the ASA website at asa2fly.com/oegcfi for the most recent updates to this book due to changes in FAA procedures and regulations as well as for Reader Resources containing additional relevant information and updates.

14 CFR Part 3	<i>General Requirements</i>
14 CFR Part 11	<i>General Rulemaking Procedures</i>
14 CFR Part 21	<i>Certification Procedures for Products and Articles</i>
14 CFR Part 23	<i>Airworthiness Standards: Normal Category Airplanes</i>
14 CFR Part 43	<i>Maintenance, Preventive Maintenance, Rebuilding, and Alteration</i>
14 CFR Part 45	<i>Identification and Registration Marking</i>
14 CFR Part 47	<i>Aircraft Registration</i>
14 CFR Part 61	<i>Certification: Pilots, Flight Instructors, and Ground Instructors</i>
14 CFR Part 67	<i>Medical Standards and Certification</i>
14 CFR Part 68	<i>Requirements for Operating Certain Small Aircraft Without a Medical Certificate</i>
14 CFR Part 91	<i>General Operating and Flight Rules</i>
14 CFR Part 97	<i>Standard Instrument Procedures</i>
14 CFR Part 119	<i>Certification: Air Carriers and Commercial Operators</i>
49 CFR Part 830	<i>NTSB, Notification and Reporting of Aircraft Accidents or Incidents and Overdue Aircraft</i>
49 CFR Part 1552	<i>Transportation Security Administration, Civil Aviation Security, Flight Schools</i>
AC 20-105	<i>Reciprocating Engine Power-Loss Accident Prevention and Trend Monitoring</i>
AC 21-40	<i>Guide for Obtaining a Supplemental Type Certificate</i>
AC 23-8	<i>Flight Test Guide for Certification of Part 23 Airplanes</i>
AC 39-7	<i>Airworthiness Directives</i>
AC 60-6	<i>Airplane Flight Manuals (AFM), Approved Manual Materials, Markings, and Placards—Airplanes</i>
AC 61-65	<i>Certification: Pilots and Flight and Ground Instructors</i>
AC 61-67	<i>Stall and Spin Awareness Training</i>
AC 61-98	<i>Currency Requirements and Guidance for the Flight Review and Instrument Proficiency Check</i>

AC 61-107	<i>Aircraft Operations at Altitudes Above 25,000 Feet Mean Sea Level or Mach Numbers Greater Than .75</i>
AC 61-134	<i>General Aviation Controlled Flight Into Terrain Awareness</i>
AC 68-1	<i>BasicMed</i>
AC 90-23	<i>Aircraft Wake Turbulence</i>
AC 90-48	<i>Pilots' Role in Collision Avoidance</i>
AC 90-66	<i>Non-Towered Airport Flight Operations</i>
AC 90-100	<i>U.S. Terminal and En Route Area Navigation (RNAV) Operations</i>
AC 90-114	<i>Automatic Dependent Surveillance–Broadcast Operations</i>
AC 91-63	<i>Temporary Flight Restrictions (TFR) and Flight Limitations</i>
AC 91-67	<i>Minimum Equipment Requirements for General Aviation Operations under Part 91</i>
AC 91-73	<i>Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations</i>
AC 91-78	<i>Use of Class 1 or Class 2 Electronic Flight Bag (EFB)</i>
AC 91-92	<i>Pilot's Guide to a Preflight Briefing</i>
FAA-H-8083-1	<i>Aircraft Weight and Balance Handbook</i>
FAA-H-8083-2	<i>Risk Management Handbook</i>
FAA-H-8083-3	<i>Airplane Flying Handbook</i>
FAA-H-8083-9	<i>Aviation Instructor's Handbook</i>
FAA-H-8083-15	<i>Instrument Flying Handbook</i>
FAA-H-8083-25	<i>Pilot's Handbook of Aeronautical Knowledge</i>
FAA-H-8083-28	<i>Aviation Weather Handbook</i>
FAA-H-8083-30	<i>Aviation Maintenance Technician Handbook—General</i>
FAA-H-8083-31	<i>Aviation Maintenance Technician Handbook—Airframe</i>
FAA-H-8083-32	<i>Aviation Maintenance Technician Handbook—Powerplant</i>
FAA-P-8740-24	<i>Winter Flying Tips</i>
FAA-P-8740-36	<i>Proficiency and the Private Pilot</i>

FAA-P-8740-50	<i>On Landings—Part III</i>
FAA-P-8740-51	<i>How to Avoid a Mid Air Collision</i>
FAA-P-8740-69	<i>Aeronautical Decision Making</i>
FAA-S-ACS-6	<i>Private Pilot—Airplane Airman Certification Standards</i>
FAA-S-ACS-7	<i>Commercial Pilot—Airplane Airman Certification Standards</i>
FAA-S-ACS-8	<i>Instrument Rating—Airplane Airman Certification Standards</i>
FAA-S-ACS-25	<i>Flight Instructor—Airplane Airman Certification Standards</i>
AIM	<i>FAA Aeronautical Information Manual</i>
AIP	<i>FAA Aeronautical Information Publication</i>
AIS FAQ	<i>FAA Aeronautical Information Services: Frequently Asked Questions</i>
CAMI OK-06-033	<i>Civil Aerospace Medical Institute, Basic Survival Skills for Aviation</i>
CAMI OK-21-0375	<i>Civil Aerospace Medical Institute, Oxygen Equipment Use in General Aviation Operations</i>
CS	<i>Chart Supplement U.S. (formerly Aircraft/Facility Directory)</i>
FAA Safety	<i>FAA Safety Briefing Magazine/Fly Safe Fact Sheets</i>
NPRM	<i>Notice of Proposed Rulemaking 2016-6142-001</i>
Order 8900.1	<i>Flight Standards Information Management System</i>
P/CG	<i>Pilot/Controller Glossary</i>
POH/AFM	<i>Pilot's Operating Handbooks and FAA-Approved Airplane Flight Manuals</i>
TSA	<i>Transportation Security Administration</i>
USRGD	<i>FAA Aeronautical Chart Users' Guide</i>

Most of these documents are available on the FAA's website (faa.gov). Additionally, many of the publications are reprinted by ASA (asa2fly.com) and are available from aviation retailers worldwide.

A review of the information and references presented within this guide should provide the necessary preparation for the FAA initial Flight Instructor Practical Test.

Fundamentals of Instructing

1

SAMPLE

A. Effects of Human Behavior and Communication on the Learning Process

1. What is the definition of *human behavior*?

(FAA-H-8083-9)

Human behavior is the product of factors that cause people to act in predictable ways. It can also be defined as the result of a person's attempt to satisfy certain needs. A working knowledge of human behavior can help an instructor better understand learners.

2. Why is understanding human behavior important for effective flight instruction? (FAA-H-8083-9)

By observing human behavior, instructors can gain the knowledge needed to better understand themselves as instructors as well as the learning needs of learners. Understanding human behavior leads to successful instruction.

3. What are examples of how human behavior can affect motivation and learning? (FAA-H-8083-9)

- a. Aviation learners are usually out of their normal surroundings during training, and their need for association and belonging is more pronounced. Instructors should make every effort to help new learners feel at ease and to reinforce their decision to pursue a career or hobby in aviation.
- b. A learner may have a repressed fear of flying that inhibits his or her ability to learn how to fly.
- c. A death in the family, a divorce, or even a failing grade on an important test may trigger harmful defensive reactions.
- d. Physiological and emotional factors, such as anxiety, may have a potent effect on a person's actions and the ability to learn from perceptions and may result in hesitation or impulsive actions. When introducing stalls, learner anxiety can be minimized by first reviewing the aerodynamic principles and explaining how stalls affect flight characteristics. Also, carefully describing the physical sensations to be expected, as well as the recovery procedures can help reduce anxiety.

4. Explain why the relationship between the instructor and learner is so important. (FAA-H-8083-9)

The instructor/learner relationship has a significant impact on how effective an instructor's teaching will be and how much a learner will learn.

5. How does personality type affect instructors and learners? (FAA-H-8083-9)

Based on personality type, everyone has an individual style of learning. Recognizing that learning style and working with it, rather than against it, benefits both the instructor and the learner.

6. Why is it important to recognize personal instruction style? (FAA-H-8083-9)

The match or mismatch between the way an instructor teaches and the way an individual learns contributes to instructional satisfaction or dissatisfaction. Learners whose styles are compatible with the teaching styles of their instructors tend to retain information longer, apply it more effectively, learn more, and have a more positive attitude toward the course in general.

7. Define *motivation*. (FAA-H-8083-9)

A motivation is a need or desire that causes a person to act. Motivation can be positive or negative, tangible or intangible, subtle or obvious.

8. Where does a learner's motivation to learn come from? (FAA-H-8083-9)

A motivation to learn can come from many sources. All of these sources of motivation have one thing in common: they all offer some type of reward in exchange for performing the hard work. Examples include:

- a. A fundamental interest in and fascination with aircraft or with the experience of flight.
- b. A way to boost the learner's self-image or ego.
- c. Pursuit of aviation training because it offers a promising career.
- d. A belief that aviation offers fun and excitement or simply a more convenient form of transportation.

9. Explain why it's important for an instructor to understand what motivates a learner. (FAA-H-8083-9)

Motivation is the most dominant force that governs the learner's progress and ability to understand and can be used to the advantage of the instructor.

10. What can an instructor do to maintain a learner's motivation and progress? (FAA-H-8083-9)

Make each lesson a pleasant experience.

11. How effective is the use of negative motivation in promoting efficient learning when compared with the use of positive motivation? (FAA-H-8083-9)

Negative motivation may engender fear; while negative motivation may be useful in certain situations, it is not as effective in promoting efficient learning as positive motivation.


Positive motivation is provided by the promise or achievement of rewards. These rewards may be personal or social, and they may involve financial gain, satisfaction of the self-concept, personal gain, or public recognition.

12. You've noticed that your learner has begun arriving for ground and flight lessons unprepared (e.g., reading assignments are not completed). As their instructor, what should you do? (FAA-H-8083-9)

Instructors must be prepared to deal with a number of circumstances in which motivation levels drop. It is natural for motivation to wane somewhat after the initial excitement of the student's first days of training or between major training events, such as solo, evaluations, or practical tests. Students may come to lessons unprepared or give the general sense that aviation training is no longer a priority. During these times, it is often helpful to remind students of their own stated goals for seeking aviation training.

Flight Instructor

ORAL EXAM GUIDE



Other Oral Exam Guides
available from ASA:

- Private Pilot
- Instrument Pilot
- Commercial Pilot
- Multi-Engine Pilot
- Airline Transport Pilot
- Helicopter Pilot
- Aircraft Dispatcher
- Flight Review
- Aviation Mechanic

ASA's Oral Exam Guide Series is an excellent study tool for students and instructors alike. Arranged in a question-and-answer format, this comprehensive guide lists the questions most likely to be asked by evaluators during the practical exam and provides succinct, ready responses. FAA references are provided throughout for further study.

This expanded eighth edition of the *Flight Instructor Oral Exam Guide* includes "Fundamentals of Instructing" questions covering the subjects from the FAA's *Aviation Instructor's Handbook* (FAA-H-8083-9). Its content accounts for the latest FAA test standards, including new risk management considerations and chapters covering all Areas of Operation and Tasks. This book is the complete resource to prepare applicants for the FAA CFI Airplane checkride and is valuable as a general refresher.



Aviation Supplies & Academics, Inc.

7005 132nd Place SE
Newcastle, Washington 98059 USA
425-235-1500 | asa2fly.com

ASA-OEG-CFIS

TRANSPORTATION USD \$19.95

ISBN 978-1-64425-299-4



5 1995 >



9 781644 252994