FAA-S-ACS-28

U.S. Department
of Transportation

Federal Aviation
Administration

Flight Instructor – Instrument Rating
Powered-Lift
Airman Certification Standards

Flight Standards Service
Washington, DC 20591

Foreword

The U.S. Department of Transportation, Federal Aviation Administration (FAA), Office of Safety Standards, Regulatory Support Division, Airman Testing Standards Branch, has published the Flight Instructor–Instrument Rating Powered-Lift Airman Certification Standards (ACS) to communicate the aeronautical knowledge, risk management, and flight proficiency standards for the Flight Instructor–Instrument Rating in the powered-lift category.

This ACS is available for download, in PDF format, from www.faa.gov.

Comments regarding this ACS may be emailed to afs630comments@faa.gov.

The FAA created FAA-G-ACS-2, Airman Certification Standards Companion Guide for Pilots, to provide guidance considered relevant and useful to the community. FAA-G-ACS-2 is available for download, in PDF format, from www.faa.gov.

Table of Contents

Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations

Introduction

Airman Certification Standards Concept

The goal of the airman certification process is to ensure the applicant possesses the knowledge, ability to manage risks, and skill consistent with the privileges of the certificate or rating being exercised, in order to act as pilot-in-command (PIC).

Safe operations in today's National Airspace System (NAS) require the integration of aeronautical knowledge, risk management, and flight proficiency standards. To accomplish these goals, the FAA drew upon the expertise of organizations and individuals across the aviation and training community to develop the ACS. The ACS integrates the elements of knowledge, risk management, and skill required for each airman certificate or rating. It thus forms a more comprehensive standard for what an applicant must know, consider, and do to demonstrate proficiency to pass the tests required for issuance of the applicable airman certificate or rating.

Use of the Term Flight Manual

Throughout this document, the term "flight manual" refers to the approved powered-lift aircraft flight manual.

Area of Operation I. Fundamentals of Instructing

Note: *The evaluator must select Task E, Task F, and at least one other Task for initial flight instructor applicants. During a practical test for an added flight instructor rating or flight instructor reinstatement, the evaluator has discretion to evaluate the applicant on Fundamentals of Instructing.*

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

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-25

Objective: To determine the applicant understands human behavior and effective communication, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant understands and explains:
FI.I.A.K1	Elements of human behavior, including:
FI.I.A.K1a	a. Definitions of human behavior
FI.I.A.K1b	b. Instructor and learner relationship
FI.I.A.K1c	c. Motivation
FI.I.A.K1d	d. Human needs
FI.I.A.K1e	e. Defense mechanisms
FI.I.A.K2	Learner emotional reactions, including:
FI.I.A.K2a	a. Anxiety and stress
FI.I.A.K2b	b. Impatience
FI.I.A.K2c	c. Worry or lack of interest
FI.I.A.K2d	d. Physical discomfort, illness, fatigue, and dehydration
FI.I.A.K2e	e. Apathy due to inadequate instruction
FI.I.A.K3	Teaching the adult learner.
FI.I.A.K4	Effective communication, including:
FI.I.A.K4a	a. Basic elements of communication
FI.I.A.K4b	b. Barriers to effective communication
FI.I.A.K4c	c. Developing communication skills

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
FI.I.A.R1	Recognizing and accommodating human behavior.
FI.I.A.R2	Barriers to communication.

Skills:	The applicant exhibits the skill to:
FI.I.A.S1	Give examples of how human behavior affects motivation and learning.
FI.I.A.S2	Describe what the instructor can do to deal with:
FI.I.A.S2a	a. Serious abnormal emotional behavior

FI.I.A.S2b b. Defense mechanisms

FI.I.A.S3 Use effective communication in ground and flight instruction.

Task B. Learning Process

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-25

Objective: To determine the applicant understands the learning process, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant understands and explains:
FI.I.B.K1	Definitions of learning.
FI.I.B.K2	Learning theory as it applies to ground and flight instruction, including:
FI.I.B.K2a	a. Behaviorism
FI.I.B.K2b	b. Cognitive Theory
FI.I.B.K3	Perceptions and insight.
FI.I.B.K4	Acquiring knowledge.
FI.I.B.K5	Laws of learning.
FI.I.B.K6	Domains of learning, including:
FI.I.B.K6a	a. Cognitive
FI.I.B.K6b	b. Affective
FI.I.B.K6c	c. Psychomotor
FI.I.B.K7	Characteristics of learning.
FI.I.B.K8	Scenario-based training (SBT).
FI.I.B.K9	Acquiring skill knowledge, including:
FI.I.B.K9a	a. Stages
FI.I.B.K9b	b. Knowledge of results
FI.I.B.K9c	c. How to develop skills
FI.I.B.K9d	d. Learning plateaus
FI.I.B.K10	Types of practice.
FI.I.B.K11	Evaluation versus critique.
FI.I.B.K12	Distractions, interruptions, fixation, and inattention.
FI.I.B.K13	Errors.
FI.I.B.K14	Memory, including:
FI.I.B.K14a	a. Sensory
FI.I.B.K14b	b. Short-Term Memory (STM) and Long-Term Memory (LTM)
FI.I.B.K14c	c. How usage affects memory
FI.I.B.K14d	d. Forgetting
FI.I.B.K15	Retention of learning.
FI.I.B.K16	Transfer of learning.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
FI.I.B.R1	Inadequate or incomplete instruction.
FI.I.B.R2	Lack of learner motivation.
FI.I.B.R3	Recognizing and correcting learner errors.

Skills:	The applicant exhibits the skill to:
FI.I.B.S1	Apply educational theories to ground and flight instruction.
FI.I.B.S2	Recognize and correct conditions that undermine the learning process.
FI.I.B.S3	Plan for and use techniques, including realistic distractions that teach flight students how to manage a workload.

Task C. Course Development, Lesson Plans, and Classroom Training Techniques

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-25

Objective: To determine the applicant understands the teaching process, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant understands and explains:
FI.I.C.K1	Teaching, including:
FI.I.C.K1a	a. Process
FI.I.C.K1b	b. Essential skills
FI.I.C.K2	Course of training.
FI.I.C.K3	Preparation of a lesson, including:
FI.I.C.K3a	a. Training objectives and completion standards
FI.I.C.K3b	b. Performance-based objectives
FI.I.C.K3c	c. Importance of Airman Certification Standards (ACS) in aviation training curricula
FI.I.C.K3d	d. Decision-based objectives
FI.I.C.K4	Organization of material.
FI.I.C.K5	Training delivery methods, including:
FI.I.C.K5a	a. Lecture
FI.I.C.K5b	b. Discussion
FI.I.C.K5c	c. Guided discussion
FI.I.C.K5d	d. Cooperative or group learning
FI.I.C.K5e	e. Demonstration-performance
FI.I.C.K5f	f. Drill and practice
FI.I.C.K6	Electronic learning (e-Learning).
FI.I.C.K7	Instructional aids and training technologies, including:
FI.I.C.K7a	a. Characteristics of effective instructional aids
FI.I.C.K7b	b. Reasons for use
FI.I.C.K7c	c. Guidelines for use
FI.I.C.K7d	d. Types
FI.I.C.K8	Integrated flight instruction.
FI.I.C.K9	Problem-based instruction.
FI.I.C.K10	Planning instructional activity, including:
FI.I.C.K10a	a. Blocks of learning
FI.I.C.K10b	b. Training syllabus
FI.I.C.K10c	c. Lesson plans

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
FI.I.C.R1	Selection of teaching method.

Skills:	The applicant exhibits the skill to:
FI.I.C.S1	Prepare an instructional lesson plan using teaching methods and materials appropriate for Task and learner characteristics, including:
FI.I.C.S1a	a. Aeronautical knowledge ground lesson applicable for a classroom
FI.I.C.S1b	b. Maneuver introduction and ground lesson

Task D. Student Evaluation, Assessment, and Testing

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-25

Objective: To determine the applicant understands evaluation and testing, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant understands and explains:
FI.I.D.K1	Purpose and characteristics of effective assessment.
FI.I.D.K2	Traditional assessments.
FI.I.D.K3	Authentic assessments, including:
FI.I.D.K3a	a. Learner-centered assessment
FI.I.D.K3b	b. Maneuver or procedure grades
FI.I.D.K3c	c. Assessing risk management skills
FI.I.D.K4	Choosing an effective assessment method.
FI.I.D.K5	Purposes and types of critiques.
FI.I.D.K6	Oral assessment, including:
FI.I.D.K6a	a. Characteristics of effective questions
FI.I.D.K6b	b. Types of questions to avoid
FI.I.D.K6c	c. Answering learner questions
FI.I.D.K7	Assessment of piloting ability.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
FI.I.D.R1	Delivering an assessment.

Skills:	The applicant exhibits the skill to:
FI.I.D.S1	Use appropriate methods and techniques to assess learner performance in ground or flight training.

Task E. Elements of Effective Teaching in a Professional Environment

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-25

Objective: To determine the applicant understands effects of instructor behavior on effective teaching, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates understanding of:
FI.I.E.K1	Aviation instructor responsibilities, including:
FI.I.E.K1a	a. Helping learners
FI.I.E.K1b	b. Providing adequate instruction
FI.I.E.K1c	c. Training to established standards of performance
FI.I.E.K1d	d. Emphasizing the positive
FI.I.E.K1e	e. Minimizing learner frustrations
FI.I.E.K2	Flight instructor responsibilities, including supervision and surveillance during training.
FI.I.E.K3	Flight instructor qualifications and professionalism.
FI.I.E.K4	Professional development.
FI.I.E.K5	Instructor ethics and conduct.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
FI.I.E.R1	Fulfilling instructor responsibilities.
FI.I.E.R2	Exhibiting professionalism.

Skills:	The applicant exhibits the skill to:
FI.I.E.S1	Deliver ground or flight instruction on an evaluator-assigned Task in a manner consistent with instructor responsibilities and professional characteristics as stated in K1 through K5.

Task F. Elements of Effective Teaching that Include Risk Management and Accident Prevention

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-25

Objective: To determine the applicant understands teaching practical risk management, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant understands and explains:
FI.I.F.K1	Teaching risk identification, assessment, and mitigation.
FI.I.F.K2	Teaching risk management tools, including:
FI.I.F.K2a	a. Pilot/Aircraft/enVironment/External Pressures (PAVE) checklist
FI.I.F.K2b	b. Flight Risk Assessment Tools (FRATs)
FI.I.F.K3	When and how to introduce risk management.
FI.I.F.K4	Risk management teaching techniques by phase of instruction.
FI.I.F.K5	Managing risk during flight instruction, including:
FI.I.F.K5a	a. Common flight instruction risks
FI.I.F.K5b	b. Best practices
FI.I.F.K5c	c. Special considerations while teaching takeoffs and landings
FI.I.F.K6	Aeronautical Decision-Making (ADM) to include using Crew Resource Management (CRM) or Single-Pilot Resource Management (SRM), as appropriate.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
FI.I.F.R1	Hazards associated with providing flight instruction.
FI.I.F.R2	Obstacles to maintaining situational awareness during flight instruction.
FI.I.F.R3	Recognizing and managing hazards arising from human behavior, including hazardous attitudes.
Skills:	The applicant exhibits the skill to:
FI.I.F.S1	Use scenario-based training (SBT) to demonstrate, teach, and assess risk management and Aeronautical Decision-Making (ADM) skills in the context of a Task specified by the evaluator.
FI.I.F.S2	Identify, assess, and mitigate risks commonly associated with flight instruction by maintaining:
FI.I.F.S2a	a. Awareness and oversight of the learner's actions, with timely and appropriate supervision, intervention, or mitigation as needed
FI.I.F.S2b	b. Awareness of the learner's cognitive/physiological state, with timely action to mitigate anxiety, fatigue, or other obstruction to learning
FI.I.F.S2c	c. Overall situational awareness of the aircraft's dynamic state, its position in space, and vigilance for unexpected events or changing circumstances that occur in the environment
FI.I.F.S3	Model and teach safety practices, including maintaining:
FI.I.F.S3a	a. Collision avoidance while simultaneously providing instruction
FI.I.F.S3b	b. Avoidance of unnecessary distractions
FI.I.F.S3c	c. Coordinated flight
FI.I.F.S3d	d. Awareness of who is manipulating controls through positive exchange of flight controls

FI.I.F.S3e e. Continuous awareness of the aircraft's dynamic state and position in the NAS

Area of Operation II. Technical Subject Areas

The evaluator must select Tasks B, C, D, and at least one other Task from this Area of Operation.

Task A. Human Factors

References: AIM; FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-25, FAA-H-8083-33

Objective: To determine the applicant understands personal health, flight physiology, aeromedical and human factors, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.II.A.K1	Symptoms, recognition, causes, effects, and corrective actions associated with aeromedical and physiological issues, including:
PI.II.A.K1a	a. Hypoxia
PI.II.A.K1b	b. Hyperventilation
PI.II.A.K1c	c. Middle ear and sinus problems
PI.II.A.K1d	d. Spatial disorientation
PI.II.A.K1e	e. Motion sickness
PI.II.A.K1f	f. Carbon monoxide poisoning
PI.II.A.K1g	g. Stress
PI.II.A.K1h	h. Fatigue
PI.II.A.K1i	i. Dehydration and nutrition
PI.II.A.K1j	j. Hypothermia
PI.II.A.K1k	k. Optical illusions
PI.II.A.K1l	l. Dissolved nitrogen in the bloodstream after scuba dives
PI.II.A.K2	Regulations regarding use of alcohol and drugs.
PI.II.A.K3	Effects of alcohol, drugs, and over-the-counter medications.
PI.II.A.K4	Aeronautical Decision-Making (ADM) to include using Crew Resource Management (CRM) or Single-Pilot Resource Management (SRM), as appropriate.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.II.A.R1	Aeromedical and physiological issues.
PI.II.A.R2	Hazardous attitudes.
PI.II.A.R3	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.II.A.R4	Confirmation and expectation bias.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.II.A.S1	Associate the symptoms and effects for at least three of the conditions listed in K1a through K1l with the cause(s) and corrective action(s).
PI.II.A.S2	Perform self-assessment, including fitness for flight and personal minimums, for actual flight or a scenario given by the evaluator.

Task B. Endorsements and Logbook Entries Related to Instrument Instruction

References: 14 CFR part 61; AC 61-65; FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15

Objective: To determine the applicant understands logbook entries and endorsements related to instrument flight, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instrument instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.II.B.K1	Required logbook entries for instruction given.
PI.II.B.K2	Preparation of a recommendation for practical test to include endorsements and logbook entries.
PI.II.B.K3	Required endorsement of a pilot logbook for the satisfactory completion of an instrument proficiency check.
PI.II.B.K4	Required flight instructor records.
PI.II.B.K5	Flight instructor renewal and reinstatement requirements.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.II.B.R1	Endorsements without appropriate limitations or expiration dates.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.II.B.S1	Describe and prepare logbook entries/endorsements required for at least two of the events specified in the elements or sub-elements of K1 through K5.

Task C. Aircraft Systems Related to Instrument Flight Rules (IFR) Operations

References: 14 CFR part 91; AC 91-74; FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15; Flight Manual

Objective: To determine the applicant understands anti-icing or deicing systems, and other systems related to IFR flight, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.II.C.K1	The general operational characteristics and limitations of applicable anti-icing and deicing systems, including airframe, rotor, intake, fuel, and pitot-static systems.
PI.II.C.K2	Flight control systems.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.II.C.R1	Operations in icing conditions.
PI.II.C.R2	Limitations of anti-icing and deicing systems.
PI.II.C.R3	Use of automated systems in instrument conditions.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.II.C.S1	Demonstrate familiarity with anti- or de-icing procedures or information published by the manufacturer specific to the aircraft used on the practical test.
PI.II.C.S2	Demonstrate familiarity with the automatic flight control system (AFCS) procedures or information published by the manufacturer specific to the aircraft used on the practical test, if applicable.

Task D. Aircraft Flight Instruments and Navigation Equipment

References: 14 CFR part 91; AC 90-100, AC 90-105, AC 90-107, AC 91-78, AC 91.21-1; AIM; FAA-H-8083-9, FAA-H-8083-15

Objective: To determine the applicant understands managing instruments for an IFR flight, can apply that knowledge, manage associated risks, demonstrates appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.II.D.K1	Operation of the aircraft's applicable flight instrument system(s), including:
PI.II.D.K1a	a. Pitot-static instrument system and associated instruments
PI.II.D.K1b	b. Gyroscopic/electric/vacuum instrument system and associated instruments
PI.II.D.K1c	c. Electrical systems, electronic flight instrument displays [primary flight display (PFD), multi-function display (MFD)], transponder and automatic dependent surveillance - broadcast (ADS-B)
PI.II.D.K1d	d. Magnetic compass
PI.II.D.K2	Operation of the aircraft's applicable navigation system(s), including:
PI.II.D.K2a	a. Very high frequency (VHF) Omnidirectional Range (VOR), distance measuring equipment (DME), instrument landing system (ILS), marker beacon receiver/indicators
PI.II.D.K2b	b. Area navigation (RNAV), global positioning system (GPS), Wide Area Augmentation System (WAAS), flight management system (FMS), autopilot
PI.II.D.K3	Use of an electronic flight bag (EFB), if used.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.II.D.R1	Management of automated navigation and autoflight systems.
PI.II.D.R2	Difference between approved and non-approved navigation devices.
PI.II.D.R3	Common failure modes of flight and navigation instruments.
PI.II.D.R4	Use of an electronic flight bag.
PI.II.D.R5	Use of navigation databases.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.II.D.S1	Teach at least one of the elements or sub-elements listed in K1 through K3.
PI.II.D.S2	Operate and manage an applicant supplied electronic flight bag (EFB), if used.

Task E. Regulations and Publications Related to Instrument Flight Operations

References: 14 CFR parts 1, 61, 91, 95, 97; 49 CFR part 830; AIM; Chart Supplements; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16; Flight Manual

Objective: To determine the applicant understands the Code of Federal Regulations and other relevant publications, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
AI.II.E.K1	14 CFR parts 1, 61, 91, 95, and 97.
AI.II.E.K2	49 CFR part 830.
AI.II.E.K3	Advisory Circulars, INFOs and SAFOs.
AI.II.E.K4	Airman Certification Standards or Practical Test Standards.
AI.II.E.K5	Flight manuals.
AI.II.E.K6	Aeronautical Information Manual (AIM).
AI.II.E.K7	IFR Navigation Charts.

Risk Management:	The applicant demonstrates instructional knowledge by teaching how to identify, explain, and manage risk associated with:
AI.II.E.R1	Use of expired charts, manuals, or publications without current updates.

Skills:	The applicant demonstrates and simultaneously explains how to:
AI.II.E.S1	Teach at least one of the elements listed in K1 through K7.

Area of Operation III. Preflight Preparation

Task A. Weather Information

References: 14 CFR part 91; AC 00-6, AC 00-45, AC 91-92; AIM; FAA-H-8083-9, FAA-H-8083-25

Objective: To determine the applicant understands weather information, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Note: *If K2 is selected, the evaluator must assess the applicant's knowledge of at least three sub-elements.*

Note: *If K3 is selected, the evaluator must assess the applicant's knowledge of at least three sub-elements.*

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.III.A.K1	Sources of weather data (e.g., National Weather Service, Flight Service) for flight planning purposes.
PI.III.A.K2	Acceptable weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight such as:
PI.III.A.K2a	a. Aviation routine weather reports (METARs) and pilot reports (PIREPs)
PI.III.A.K2b	b. Terminal aerodrome forecasts (TAFs) and graphical forecasts for aviation (GFAs)
PI.III.A.K2c	c. Inflight weather advisories including Airman's Meteorological Information (AIRMET) and Significant Meteorological Information (SIGMET)
PI.III.A.K2d	d. Wind and temperature aloft forecast (FB)
PI.III.A.K2e	e. Surface analysis and weather depiction charts
PI.III.A.K2f	f. Significant weather prognostic charts
PI.III.A.K2g	g. Thunderstorm watches, warnings, and convective activity forecast charts
PI.III.A.K3	Meteorology applicable to the departure, en route, alternate, and destination for flights conducted under Instrument Flight Rules (IFR) to include expected climate and hazardous conditions such as:
PI.III.A.K3a	a. Atmospheric composition and stability
PI.III.A.K3b	b. Wind (e.g., windshear, mountain wave, factors affecting wind, etc.)
PI.III.A.K3c	c. Temperature and heat exchange
PI.III.A.K3d	d. Moisture/precipitation
PI.III.A.K3e	e. Weather system formation, including air masses and fronts
PI.III.A.K3f	f. Clouds
PI.III.A.K3g	g. Turbulence
PI.III.A.K3h	h. Thunderstorms and microbursts
PI.III.A.K3i	i. Icing and freezing level information
PI.III.A.K3j	j. Fog/mist
PI.III.A.K3k	k. Frost
PI.III.A.K3l	l. Obstructions to visibility (e.g., smoke, haze, volcanic ash, etc.)
PI.III.A.K4	Flight deck instrument displays of digital weather and aeronautical information.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:

PI.III.A.R1	Making the go/no-go and continue/divert decisions, including:
PI.III.A.R1a	a. Circumstances that would make diversion prudent
PI.III.A.R1b	b. Personal weather minimums
PI.III.A.R1c	c. Hazardous weather conditions, including known or forecast icing or turbulence aloft
PI.III.A.R2	Use and limitations of:
PI.III.A.R2a	a. Installed onboard weather equipment
PI.III.A.R2b	b. Aviation weather reports and forecasts
PI.III.A.R2c	c. Inflight weather resources

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.III.A.S1	Use available aviation weather resources to obtain an adequate weather briefing.
PI.III.A.S2	Analyze the implications of at least three of the conditions listed in K3a through K3l, using actual weather or weather conditions provided by the evaluator.
PI.III.A.S3	Correlate weather information to make a go/no-go decision.
PI.III.A.S4	Determine whether an alternate airport is required, and, if required, whether the selected alternate airport meets regulatory requirements.

Task B. Cross-Country Flight Planning

References: 14 CFR part 91; AIM; Chart Supplements; FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16, FAA-H-8083-25, FAA-H-8083-33; IFR Enroute Charts; NOTAMs; IFR Navigation Charts

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with planning an IFR cross-country and filing an IFR flight plan, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.III.B.K1	Route planning, including consideration of the available navigational facilities, special use airspace, preferred routes, and primary and alternate airports.
PI.III.B.K2	Altitude selection accounting for terrain and obstacles, IFR cruising altitudes, and effect of wind and oxygen requirements.
PI.III.B.K3	Calculating:
PI.III.B.K3a	a. Time, climb and descent rates, course, distance, heading, true airspeed, and groundspeed
PI.III.B.K3b	b. Estimated time of arrival, including conversion to universal coordinated time (UTC)
PI.III.B.K3c	c. Fuel requirements, including reserve
PI.III.B.K4	Elements of an IFR flight plan.
PI.III.B.K5	Procedures for activating and closing an IFR flight plan in controlled and uncontrolled airspace.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.III.B.R1	Pilot.
PI.III.B.R2	Aircraft.
PI.III.B.R3	Environment (e.g., weather, icing, airports/heliports/helipads/landing areas, airspace, terrain, obstacles).
PI.III.B.R4	External pressures.
PI.III.B.R5	Limitations of air traffic control (ATC) services.
PI.III.B.R6	Limitations of electronic planning applications and programs.
PI.III.B.R7	Fuel planning.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.III.B.S1	Prepare, present, and explain a cross-country flight plan assigned by the evaluator including a risk analysis based on real time weather, which includes calculating time en route and fuel considering factors such as power settings, operating altitude, wind, fuel reserve requirements, and weight and balance requirements.
PI.III.B.S2	Recalculate fuel reserves based on a scenario provided by the evaluator.
PI.III.B.S3	Create a navigation plan and simulate filing an IFR flight plan.
PI.III.B.S4	Interpret departure, arrival, en route, and approach procedures with reference to appropriate and current charts.
PI.III.B.S5	Recognize simulated wing or thrust component contamination due to airframe icing and demonstrate knowledge of adverse effects of airframe icing during pre-takeoff, takeoff, cruise, and landing phases of flight as well as the corrective actions.

PI.III.B.S6 Apply pertinent information from appropriate and current aeronautical charts, Chart Supplements; Notices to Air Missions (NOTAMs) relative to airport, runway and taxiway closures; and other flight publications.

Task C. Instrument Flight Deck Check

References: 14 CFR part 91; AC 91.21-1; FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-25, FAA-H-8083-33; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with conducting a preflight check on the aircraft's instruments necessary for an IFR flight, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.III.C.K1	Purpose of performing an instrument flight deck check and how to detect possible defects.
PI.III.C.K2	IFR airworthiness, including aircraft inspection requirements and required equipment for IFR flight.
PI.III.C.K3	Required procedures, documentation, and limitations of flying with inoperative equipment.
PI.III.C.K4	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.III.C.R1	Operating with inoperative equipment.
PI.III.C.R2	Operating with outdated navigation publications or databases.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.III.C.S1	Perform preflight inspection by following the checklist appropriate to the aircraft and determine if the aircraft is in a condition for safe instrument flight.
PI.III.C.S2	Analyze and correct common errors related to this Task.

Area of Operation IV. Preflight Lesson on a Maneuver to be Performed in Flight

The evaluator asks the applicant to present a preflight lesson on the selected maneuver as the lesson would be taught to a student and determines the outcome of this Task before the flight portion of the practical test.

Task A. Maneuver Lesson

References: FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33; Flight Manual

Objective: To determine the applicant understands the elements associated with a maneuver Task selected from Area of Operation VI through Area of Operation IX and applies that knowledge when delivering ground instruction. Previously developed lesson plans from the instructor applicant's library may be used.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.IV.A.K1	Purpose of the maneuver.
PI.IV.A.K2	Elements of the maneuver and the associated common errors.
PI.IV.A.K3	Desired outcome(s), including completion standards.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.IV.A.R1	The selected maneuver Task.
Skills:	The applicant exhibits the skill to:
PI.IV.A.S1	Deliver instruction on the selected maneuver using a lesson plan, teaching methods, and teaching aids, as appropriate, that incorporate K1 through K3.

Area of Operation V. Air Traffic Control (ATC) Clearances and Procedures

Task A. Compliance with Air Traffic Control Clearances

References: 14 CFR part 91; AIM; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with ATC clearances and procedures while operating solely by reference to instruments, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.V.A.K1	Elements and procedures related to ATC clearances and pilot/controller responsibilities for departure, en route, and arrival phases of flight, including clearance void times.
PI.V.A.K2	Pilot-in-Command (PIC) emergency authority.
PI.V.A.K3	Lost communication procedures and procedures for flights outside of radar environments.
PI.V.A.K4	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.V.A.R1	Less than full understanding of an ATC clearance.
PI.V.A.R2	Inappropriate, incomplete, or incorrect ATC clearances.
PI.V.A.R3	ATC clearance inconsistent with aircraft performance or navigation capability.
PI.V.A.R4	ATC clearance intended for other aircraft with similar call signs.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.V.A.S1	Correctly copy, read back, interpret, and comply with simulated or actual ATC clearances in a timely manner using standard phraseology as provided in the Aeronautical Information Manual (AIM).
PI.V.A.S2	Correctly set communication frequencies, navigation systems (identifying when appropriate), and transponder codes in compliance with the ATC clearance.
PI.V.A.S3	Use the current and appropriate paper or electronic navigation publications.
PI.V.A.S4	Intercept all courses, radials, and bearings appropriate to the procedure, route, or clearance in a timely manner.
PI.V.A.S5	Maintain the applicable airspeed ±10 knots, headings ±10°, altitude ±100 feet; track a course, radial, or bearing within ¾-scale deflection of the course deviation indicator (CDI).
PI.V.A.S6	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.V.A.S7	Perform the appropriate checklist items relative to the phase of flight.
PI.V.A.S8	Analyze and correct common errors related to this Task.

Task B. Holding Procedures

References: 14 CFR part 91; AIM; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16

Objective: To determine the applicant understands holding procedures, can apply that knowledge, manage associated risks, demonstrate pilot-in-command skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.V.B.K1	Elements related to holding procedures, including reporting criteria, appropriate speeds, and recommended entry procedures for standard, nonstandard, published, and non-published holding patterns.
PI.V.B.K2	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.V.B.R1	Recalculating fuel reserves if assigned an unanticipated expect further clearance (EFC) time.
PI.V.B.R2	Scenarios and circumstances that could result in minimum fuel or the need to declare an emergency.
PI.V.B.R3	Scenarios that could lead to holding, including deteriorating weather at the planned destination.
PI.V.B.R4	Holding entry and wind correction while holding.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.V.B.S1	Use an entry procedure appropriate for a standard, nonstandard, published, or non-published holding pattern.
PI.V.B.S2	Change to the holding airspeed appropriate for the altitude when 3 minutes or less from, but prior to arriving at, the holding fix and set appropriate power as needed for fuel conservation.
PI.V.B.S3	Recognize arrival at the holding fix and promptly initiate entry into the holding pattern.
PI.V.B.S4	Maintain airspeed ±10 knots, altitude ±100 feet, selected headings within ±10°, and track a selected course, radial, or bearing within ¾-scale deflection of the course deviation indicator (CDI).
PI.V.B.S5	Comply with the holding pattern leg length and other restrictions, if applicable, associated with the holding pattern.
PI.V.B.S6	Use proper wind correction procedures to maintain the desired pattern and to arrive over the fix as close as possible to a specified time.
PI.V.B.S7	Use a multi-function display (MFD) and other graphical navigation displays, if installed, to monitor position in relation to the desired flightpath during holding.
PI.V.B.S8	Comply with ATC reporting requirements and restrictions associated with the holding pattern.
PI.V.B.S9	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.V.B.S10	Analyze and correct common errors related to this Task.

Area of Operation VI. Flight by Reference to Instruments

The evaluator shall select Task H and at least one other Task. The applicant shall select either the primary and supporting or the control and performance method for teaching this Area of Operation.

Task A. Straight-and-Level Flight

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33

Objective: To determine the applicant understands attitude instrument flying during straight-and-level flight, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VI.A.K1	Elements related to attitude instrument flying during straight-and-level flight.
PI.VI.A.K2	The relationship of pitch, bank, power, and configuration in straight-and-level flight.
PI.VI.A.K3	Interpretation, operation, and limitations of pitch, bank, and power instruments, using full panel and partial panel.
PI.VI.A.K4	Normal and abnormal instrument indications, interpretations, and operations.
PI.VI.A.K5	Instrument cross-check techniques.
PI.VI.A.K6	Common errors related to this Task.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VI.A.R1	Fixation and omission.
PI.VI.A.R2	Instrument Interpretation.
PI.VI.A.R3	Control application solely by reference to instruments.
PI.VI.A.R4	Aircraft coordination.
PI.VI.A.R5	Situations that can affect physiology and degrade instrument cross-check.
PI.VI.A.R6	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
PI.VI.A.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VI.A.S1	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, configuration, and trim corrections when applicable.
PI.VI.A.S2	Maintain straight-and-level flight using instrument cross-check and interpretation and coordinated control application.
PI.VI.A.S3	Maintain altitude ±100 feet, heading ±10°, and airspeed ±10 knots.
PI.VI.A.S4	Analyze and correct common errors related to this Task.

Task B. Turns

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33

Objective: To determine the applicant understands attitude instrument flying during turns can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VI.B.K1	Elements related to attitude instrument flying during a standard rate turn.
PI.VI.B.K2	The relationship of pitch, bank, power, and configuration to a standard rate turn.
PI.VI.B.K3	Full and partial panel procedures for a constant rate turn, including the performance of a half-standard rate turn.
PI.VI.B.K4	Normal and abnormal instrument indications, interpretations, and operations.
PI.VI.B.K5	Instrument cross-check techniques.
PI.VI.B.K6	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VI.B.R1	Fixation and omission.
PI.VI.B.R2	Instrument Interpretation.
PI.VI.B.R3	Control application solely by reference to instruments.
PI.VI.B.R4	Aircraft coordination.
PI.VI.B.R5	Situations that can affect physiology and degrade instrument cross-check.
PI.VI.B.R6	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
PI.VI.B.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VI.B.S1	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, configuration, and trim corrections when applicable.
PI.VI.B.S2	Maintain turns using instrument cross-check and interpretation and coordinated control application.
PI.VI.B.S3	Maintain altitude ±100 feet, maintain a standard rate turn, roll out on the assigned heading ±10°, and maintain airspeed ±10 knots.
PI.VI.B.S4	Analyze and correct common errors related to this Task.

Task C. Change of Airspeed in Straight-And-Level and Turning Flight

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33

Objective: To determine the applicant understands attitude instrument flying during changing of airspeed in straight-and-level and turning flight, and can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge: The applicant demonstrates instructional knowledge by describing and explaining:

PI.VI.C.K1	Elements related to attitude instrument flying while maintaining altitude during change of airspeed in straight-and-level and turning flight.
PI.VI.C.K2	The relationship of pitch, bank, power, and configuration in straight-and-level and turning flight.
PI.VI.C.K3	Full and partial panel procedures for change of airspeed in straight-and-level and turning flight.
PI.VI.C.K4	Normal and abnormal instrument indications, interpretations, and operations.
PI.VI.C.K5	Instrument cross-check techniques.
PI.VI.C.K6	Common errors related to this Task.

Risk Management: The applicant demonstrates instructional knowledge by teaching how to identify, explain, and manage risk associated with:

PI.VI.C.R1	Fixation and omission.
PI.VI.C.R2	Instrument Interpretation.
PI.VI.C.R3	Control application solely by reference to instruments.
PI.VI.C.R4	Aircraft coordination.
PI.VI.C.R5	Situations that can affect physiology and degrade instrument cross-check.
PI.VI.C.R6	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
PI.VI.C.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills: The applicant demonstrates and simultaneously explains how to:

PI.VI.C.S1	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, configuration, and trim corrections when applicable.
PI.VI.C.S2	Maintain change of airspeed in straight-and-level and turning flight using instrument cross-check and interpretation and coordinated control application.
PI.VI.C.S3	Maintain altitude ±100 feet, maintain a standard rate turn, roll out on the assigned heading ±10°, and obtain the desired airspeed ±10 knots.
PI.VI.C.S4	Analyze and correct common errors related to this Task.

Task D. Constant Airspeed Climbs and Descents

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33

Objective: To determine the applicant understands attitude instrument flying during constant airspeed climbs and descents with and without turns, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge: The applicant demonstrates instructional knowledge by describing and explaining:

PI.VI.D.K1	Elements related to attitude instrument flying during constant airspeed climbs and descents.
PI.VI.D.K2	The relationship of pitch, bank, power, and configuration in constant airspeed climbs and descents including turns.
PI.VI.D.K3	Flight control inputs to maintain a constant airspeed in a straight or turning climb or descent using full and partial panel procedures.
PI.VI.D.K4	Normal and abnormal instrument indications, interpretations, and operations.
PI.VI.D.K5	Instrument cross-check techniques.
PI.VI.D.K6	Common errors related to this Task.

Risk Management: The applicant demonstrates instructional knowledge by teaching how to identify, explain, and manage risk associated with:

PI.VI.D.R1	Fixation and omission.
PI.VI.D.R2	Instrument Interpretation.
PI.VI.D.R3	Aircraft coordination.
PI.VI.D.R4	Situations that can affect physiology and degrade instrument cross-check.
PI.VI.D.R5	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
PI.VI.D.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.VI.D.R7	Control application solely by reference to instruments.

Skills: The applicant demonstrates and simultaneously explains how to:

PI.VI.D.S1	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, configuration, and trim corrections when applicable.
PI.VI.D.S2	Conduct a straight climb or descent, from either cruising, climbing, or descending airspeed, maintain heading ±10°.
PI.VI.D.S3	Level off at the assigned altitude and maintain altitude ±100 feet.
PI.VI.D.S4	Roll out on the assigned heading ±10°upon completion of the turn.
PI.VI.D.S5	Maintain airspeed ±10 knots during the maneuver.
PI.VI.D.S6	Analyze and correct common errors related to this Task.

Task E. Constant Rate Climbs and Descents

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33

Objective: To determine the applicant understands attitude instrument flying during constant rate climbs and descents with and without turns, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VI.E.K1	Elements related to attitude instrument flying during constant rate climbs and descents.
PI.VI.E.K2	The relationship of pitch, bank, power, and configuration in constant rate climbs and descents including turns.
PI.VI.E.K3	Flight control inputs to maintain a constant rate in a straight or turning climb or descent using full and partial panel procedures.
PI.VI.E.K4	Normal and abnormal instrument indications, interpretations, and operations.
PI.VI.E.K5	Instrument cross-check techniques.
PI.VI.E.K6	Common errors related to this Task.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
PI.VI.E.R1	Fixation and omission.
PI.VI.E.R2	Instrument Interpretation.
PI.VI.E.R3	Aircraft coordination.
PI.VI.E.R4	Situations that can affect physiology and degrade instrument cross-check.
PI.VI.E.R5	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
PI.VI.E.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.VI.E.R7	Control application solely by reference to instruments.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VI.E.S1	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, configuration, and trim corrections when applicable.
PI.VI.E.S2	Conduct a constant rate straight climb or descent, from either cruising, climbing, or descending airspeed, maintain heading ±10°.
PI.VI.E.S3	Roll out on the assigned heading ±10°upon completion of the turn.
PI.VI.E.S4	Maintain airspeed ±10 knots during the maneuver.
PI.VI.E.S5	Level off at the assigned altitude and maintain altitude ±100 feet.
PI.VI.E.S6	Analyze and correct common errors related to this Task.

Task F. Timed Turns to Magnetic Compass Headings

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33

Objective: To determine the applicant understands attitude instrument flying during timed turns to magnetic compass headings, and can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VI.F.K1	Elements related to attitude instrument flying during timed turns to magnetic compass headings, including operating characteristics and errors of the magnetic compass.
PI.VI.F.K2	The relationship of pitch, bank, and power during timed turns to magnetic compass headings.
PI.VI.F.K3	Full and partial panel procedures for timed turns to specified magnetic compass headings.
PI.VI.F.K4	Normal and abnormal instrument indications and operations.
PI.VI.F.K5	Instrument cross-check techniques.
PI.VI.F.K6	Common errors related to this Task.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VI.F.R1	Fixation and omission.
PI.VI.F.R2	Instrument Interpretation.
PI.VI.F.R3	Aircraft coordination.
PI.VI.F.R4	Situations that can affect physiology and degrade instrument cross-check.
PI.VI.F.R5	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
PI.VI.F.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.VI.F.R7	Control application solely by reference to instruments.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VI.F.S1	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, configuration, and trim corrections when applicable.
PI.VI.F.S2	Complete timed turns to specific magnetic compass headings using instrument cross-check and interpretation and coordinated control application.
PI.VI.F.S3	Maintain altitude ±100 feet, maintain a standard rate turn, roll out on the assigned heading ±10°, and obtain the desired airspeed ±10 knots.
PI.VI.F.S4	Analyze and correct common errors related to this Task.

Task G. Steep Turns

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33

Objective: To determine the applicant understands attitude instrument flying during steep turns, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VI.G.K1	Elements related to attitude instrument flying during steep turns.
PI.VI.G.K2	The relationship of pitch, bank, power, and configuration during steep turns.
PI.VI.G.K3	Full and partial panel procedures for entry and completion of steep turns.
PI.VI.G.K4	Normal and abnormal instrument indications and operations.
PI.VI.G.K5	Instrument cross-check techniques.
PI.VI.G.K6	Common errors related to this Task.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VI.G.R1	Fixation and omission.
PI.VI.G.R2	Instrument Interpretation.
PI.VI.G.R3	Control application solely by reference to instruments.
PI.VI.G.R4	Aircraft coordination.
PI.VI.G.R5	Situations that can affect physiology and degrade instrument cross-check.
PI.VI.G.R6	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
PI.VI.G.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VI.G.S1	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, configuration, and trim corrections when applicable.
PI.VI.G.S2	Demonstrates and simultaneously explains steep turns from an instructional standpoint.
PI.VI.G.S3	Establish the manufacturer's recommended airspeed; or if one is not available, an airspeed not to exceed maneuvering speed (VA).
PI.VI.G.S4	Conduct an Instrument cross check using full and/or partial panel instruments.
PI.VI.G.S5	Perform the Task in the opposite direction.
PI.VI.G.S6	Maintain the entry altitude ±100 feet, airspeed ±10 knots, bank ±5°, and roll out on the entry heading ±10°.
PI.VI.G.S7	Analyze and correct common errors related to this Task.

Task H. Recovery from Unusual Flight Attitudes

References: FAA-H-8083-2, FAA-H-8083-15, FAA-H-8083-9, FAA-H-8083-33; Flight Manual

Objective: To determine the applicant understands attitude instrument flying while recovering from unusual attitudes, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction, solely by reference to instruments.

Note: *See Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VI.H.K1	Prevention of unusual attitudes, including flight causal, physiological, and environmental factors, and system and equipment failures.
PI.VI.H.K2	Full panel and partial panel procedures for recovery from unusual attitudes in flight.
PI.VI.H.K3	Procedures available to safely regain visual meteorological conditions (VMC) after flight into inadvertent instrument meteorological conditions (IIMC) or unintended instrument meteorological conditions (UIMC).
PI.VI.H.K4	Appropriate use of automation, if applicable.
PI.VI.H.K5	Common errors related to this Task.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VI.H.R1	Situations that could lead to loss of control in-flight (LOC-I) or unusual attitudes in-flight (e.g., stress, task saturation, inadequate instrument scan distractions, and spatial disorientation).
PI.VI.H.R2	Assessment of the unusual attitude.
PI.VI.H.R3	Control input errors, inducing undesired aircraft attitudes.
PI.VI.H.R4	Collision hazards.
PI.VI.H.R5	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.VI.H.R6	Interpreting flight instruments.
PI.VI.H.R7	Control application solely by reference to instruments.
PI.VI.H.R8	Operating envelope considerations.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VI.H.S1	Use proper instrument cross-check and interpretation to identify an unusual attitude (including both nose-high and nose-low) in flight, and apply the appropriate flight control, power input, and aircraft configuration in the correct sequence, to return to a stabilized level flight attitude.
PI.VI.H.S2	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.VI.H.S3	Analyze and correct common errors related to this Task.

Area of Operation VII. Navigation Aids

Task A. Intercepting and Tracking Navigational Systems and DME Arcs

References: 14 CFR part 91; AIM; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16; Flight Manual

Objective: To determine the applicant understands intercepting and tracking navigation aids and arcs solely by reference to instruments, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Note: *The evaluator should reference the manufacturer's equipment supplement(s) as necessary for appropriate limitations, procedures, etc.*

Note: *See Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VII.A.K1	Ground-based navigation (orientation, course determination, equipment, tests and regulations), including procedures for intercepting and tracking courses and arcs.
PI.VII.A.K2	Satellite-based navigation (orientation, course determination, equipment, tests, and regulations, interference, appropriate use of databases, Receiver Autonomous Integrity Monitoring (RAIM), and Wide Area Augmentation System (WAAS)), including procedures for intercepting and tracking courses and arcs.
PI.VII.A.K3	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VII.A.R1	Management of automated navigation and autoflight systems.
PI.VII.A.R2	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.VII.A.R3	Limitations of the navigation system in use.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VII.A.S1	Tune and identify the navigation facility/program the navigation system and verify system accuracy as appropriate for the equipment installed in the aircraft.
PI.VII.A.S2	Determine aircraft position relative to the navigational facility or waypoint.
PI.VII.A.S3	Set and orient to the course to be intercepted.
PI.VII.A.S4	Intercept the specified course at appropriate angle, inbound to or outbound from a navigational facility or waypoint.
PI.VII.A.S5	Maintain airspeed ±10 knots, altitude ±100 feet, and selected headings ±5°.
PI.VII.A.S6	Apply proper correction to maintain a course, allowing no more than ¾-scale deflection of the course deviation indicator (CDI). If a distance measuring equipment (DME) arc is selected, maintain that arc ±1 nautical mile.
PI.VII.A.S7	Recognize navigational system or facility failure, and when required, report the failure to air traffic control (ATC).
PI.VII.A.S8	Use a multi-function display (MFD) and other graphical navigation displays, if installed, to monitor position, track wind drift, and to maintain situational awareness.
PI.VII.A.S9	At the discretion of the evaluator, use the autopilot to make appropriate course intercepts, if installed.

PI.VII.A.S10 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

PI.VII.A.S11 Analyze and correct common errors related to this Task.

Task B. Departure, En Route, and Arrival Operations

References: 14 CFR part 91, 97; AC 90-100, AC 90-105, AC 91-74; AIM;FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with IFR departure, en route, and arrival operations solely by reference to instruments, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VII.B.K1	Elements related to ATC routes, including departure procedures (DPs) and associated climb gradients; standard terminal arrival (STAR) procedures and associated constraints.
PI.VII.B.K2	Pilot/controller responsibilities, communication procedures, and ATC services available to pilots.
PI.VII.B.K3	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VII.B.R1	ATC communications and compliance with published procedures.
PI.VII.B.R2	Limitations of traffic avoidance equipment.
PI.VII.B.R3	Responsibility to use "see and avoid" techniques when possible.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VII.B.S1	Select, identify (as necessary) and use the appropriate communication and navigation facilities associated with the proposed flight.
PI.VII.B.S2	Perform the appropriate checklist items relative to the phase of flight.
PI.VII.B.S3	Use the current and appropriate paper or electronic navigation publications.
PI.VII.B.S4	Establish two-way communications with the proper controlling agency, use proper phraseology, and comply in a timely manner with all ATC instructions and airspace restrictions.
PI.VII.B.S5	Intercept all courses, radials, and bearings appropriate to the procedure, route, or clearance in a timely manner.
PI.VII.B.S6	Comply with all applicable charted procedures.
PI.VII.B.S7	Maintain airspeed ±10 knots, altitude ±100 feet, and selected headings ±10°, and apply proper correction to maintain a course allowing no more than ¾-scale deflection of the course deviation indicator (CDI).
PI.VII.B.S8	Update/interpret weather in flight.
PI.VII.B.S9	Use displays of digital weather and aeronautical information, as applicable to maintain situational awareness.
PI.VII.B.S10	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.VII.B.S11	Analyze and correct common errors related to this Task.

Area of Operation VIII. Instruction Approach Procedures

Evaluators shall combine testing of the required approaches as outlined in appendix 3 with Task(s) C, D, or E.

Task A. Non-precision Approach

References: 14 CFR part 91; AC 120-108; AIM;FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16; Terminal Procedures Publications

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with performing non-precision approach procedures solely by reference to instruments, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Note: *See Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VIII.A.K1	Procedures and limitations associated with a non-precision approach, including the differences between Localizer Performance (LP) and Lateral Navigation (LNAV) approach guidance.
PI.VIII.A.K2	Navigation system indications and annunciations expected during an area navigation (RNAV) approach.
PI.VIII.A.K3	Ground-based and satellite-based navigation systems used for a non-precision approach.
PI.VIII.A.K4	A stabilized approach, including energy management concepts.
PI.VIII.A.K5	Copter Point-in-Space (PinS) approaches.
PI.VIII.A.K6	Common errors related to this Task.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VIII.A.R1	Deviating from the assigned approach procedure.
PI.VIII.A.R2	Selecting a navigation frequency.
PI.VIII.A.R3	Management of automated navigation and autoflight systems.
PI.VIII.A.R4	Aircraft configuration during an approach and missed approach.
PI.VIII.A.R5	An unstable approach, including excessive descent rates.
PI.VIII.A.R6	Deteriorating weather conditions on approach.
PI.VIII.A.R7	Operating below the minimum descent altitude (MDA) without proper visual references.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VIII.A.S1	Accomplish the non-precision instrument approaches selected by the evaluator.
PI.VIII.A.S2	Establish two-way communications with air traffic control (ATC) appropriate for the phase of flight or approach segment, and use proper communication phraseology.
PI.VIII.A.S3	Select, tune, identify, and confirm the operational status of navigation equipment to be used for the approach.
PI.VIII.A.S4	Comply with all clearances issued by ATC or the evaluator.
PI.VIII.A.S5	Recognize if any flight instrumentation is inaccurate or inoperative, and take appropriate action.

PI.VIII.A.S6 Advise ATC or the evaluator if unable to comply with a clearance.

PI.VIII.A.S7 Complete the appropriate checklist(s).

PI.VIII.A.S8 Establish the appropriate aircraft configuration and airspeed considering meteorological and operating conditions.

PI.VIII.A.S9 Maintain altitude ±100 feet, selected heading ±10°, airspeed ±10 knots, no more than ¾ scale CDI deflection, and accurately track radials, courses, or bearings, prior to beginning the final approach segment.

PI.VIII.A.S10 Adjust the published MDA and visibility criteria for the aircraft approach category, as appropriate, for factors that include Notices of Air Missions (NOTAMs), inoperative aircraft or navigation equipment, or inoperative visual aids associated with the landing environment, etc.

PI.VIII.A.S11 Establish a stabilized descent to the appropriate altitude.

PI.VIII.A.S12 For the final approach segment, maintain no more than ¾ scale CDI deflection, airspeed ±10 knots, and altitude, if applicable, above MDA +100/-0 feet to the Visual Descent Point (VDP) or missed approach point (MAP).

PI.VIII.A.S13 Assess if the required visual references are available, and either initiate the missed approach procedure or continue for landing.

PI.VIII.A.S14 Use a multi-function display (MFD) and other graphical navigation displays, if installed, to monitor position, track wind drift, and to maintain situational awareness.

PI.VIII.A.S15 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

PI.VIII.A.S16 Analyze and correct common errors related to this Task.

Task B. Precision Approach

References: 14 CFR part 91; AC 90-105, AC 90-107; AIM; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16; Terminal Procedures Publications

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with performing precision approach procedures solely by reference to instruments, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Note: *See Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VIII.B.K1	Procedures and limitations associated with a precision approach, including determining required descent rates and adjusting minimums in the case of inoperative equipment.
PI.VIII.B.K2	Navigation system displays, annunciations, and modes of operation.
PI.VIII.B.K3	Ground-based and satellite-based navigation systems (orientation, course determination, equipment, tests and regulations, interference, appropriate use of navigation data, signal integrity).
PI.VIII.B.K4	A stabilized approach, including energy management concepts.
PI.VIII.B.K5	Common errors related to this Task.

Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VIII.B.R1	Deviating from the assigned approach procedure.
PI.VIII.B.R2	Selecting a navigation frequency.
PI.VIII.B.R3	Management of automated navigation and autoflight systems.
PI.VIII.B.R4	Aircraft configuration during an approach and missed approach.
PI.VIII.B.R5	An unstable approach, including excessive descent rates.
PI.VIII.B.R6	Deteriorating weather conditions on approach.
PI.VIII.B.R7	Continuing to descend below the Decision Altitude (DA)/Decision Height (DH) when the required visual references are not visible.

Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VIII.B.S1	Accomplish the precision instrument approach(es) selected by the evaluator.
PI.VIII.B.S2	Establish two-way communications with air traffic control (ATC) appropriate for the phase of flight or approach segment, and use proper communication phraseology.
PI.VIII.B.S3	Select, tune, identify, and confirm the operational status of navigation equipment to be used for the approach.
PI.VIII.B.S4	Comply with all clearances issued by ATC or the evaluator.
PI.VIII.B.S5	Recognize if any flight instrumentation is inaccurate or inoperative, and take appropriate action.
PI.VIII.B.S6	Advise ATC or the evaluator if unable to comply with a clearance.
PI.VIII.B.S7	Complete the appropriate checklist(s).
PI.VIII.B.S8	Establish the appropriate aircraft configuration and airspeed considering meteorological and operating conditions.

PI.VIII.B.S9 Maintain altitude ±100 feet, selected heading ±10°, airspeed ±10 knots, no more than ¾ scale CDI deflection, and accurately track radials, courses, or bearings, prior to beginning the final approach segment.

PI.VIII.B.S10 Adjust the published DA/DH and visibility criteria for the aircraft approach category, as appropriate, to account for NOTAMS, inoperative aircraft or navigation equipment, or inoperative visual aids associated with the landing environment.

PI.VIII.B.S11 Establish a predetermined rate of descent at the point where vertical guidance begins, which approximates that required for the aircraft to follow the vertical guidance.

PI.VIII.B.S12 Maintain a stabilized final approach from the final approach fix (FAF) to DA/DH allowing no more than ¾-scale deflection of either the vertical or lateral guidance indications, and maintain the desired airspeed ±10 knots.

PI.VIII.B.S13 Immediately initiate the missed approach procedure when at the DA/DH, and the required visual references for the runway are not unmistakably visible and identifiable.

PI.VIII.B.S14 Transition to a normal landing approach only when the aircraft is in a position from which a descent to a landing on the runway, or to a heliport, can be made at a normal rate of descent using normal maneuvering.

PI.VIII.B.S15 Maintain a stabilized visual flight path from the DA/DH to the runway aiming point where a normal landing may be accomplished within the touchdown zone or as directed by the evaluator.

PI.VIII.B.S16 Use a multi-function display (MFD) and other graphical navigation displays, if installed, to monitor position, track wind drift, and to maintain situational awareness.

PI.VIII.B.S17 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

PI.VIII.B.S18 Analyze and correct common errors related to this Task.

Task C. Missed Approach

References: 14 CFR part 91; AIM; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16; Terminal Procedures Publications

Objective: To determine the applicant understands performing a missed approach procedure solely by reference to instruments, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VIII.C.K1	Elements related to missed approach procedures and limitations associated with standard instrument approaches, including while using a flight management system (FMS) or autopilot, if equipped.
PI.VIII.C.K2	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VIII.C.R1	Deviations from prescribed procedures or ATC instructions.
PI.VIII.C.R2	Holding, diverting, or electing to fly the approach again.
PI.VIII.C.R3	Aircraft configuration during an approach and missed approach.
PI.VIII.C.R4	Factors that might lead to executing a missed approach procedure before the MAP or to a go-around below DA, DH, or MDA, as applicable.
PI.VIII.C.R5	Management of automated navigation and autoflight systems.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VIII.C.S1	Promptly initiate the missed approach procedure and report it to ATC.
PI.VIII.C.S2	Apply the appropriate power setting and aircraft configuration for the flight conditions to obtain the desired performance.
PI.VIII.C.S3	Comply with the published or alternate missed approach procedure.
PI.VIII.C.S4	Advise ATC or the evaluator if unable to comply with a clearance, restriction, or climb gradient.
PI.VIII.C.S5	Follow the recommended checklist items appropriate to the missed approach/go-around procedure.
PI.VIII.C.S6	Maintain the recommended airspeed ±10 knots; heading, course, or bearing ±10°; and altitude(s) ±100 feet during the missed approach procedure.
PI.VIII.C.S7	Use an MFD and other graphical navigation displays, if installed, to monitor position and track to help navigate the missed approach.
PI.VIII.C.S8	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.VIII.C.S9	Request ATC clearance to attempt another approach, proceed to the alternate airport, holding fix, or other clearance limit, as appropriate, or as directed by the evaluator.
PI.VIII.C.S10	Analyze and correct common errors related to this Task.

Task D. Circling Approach

References: 14 CFR part 91; AIM; FAA-H-8083-9, FAA-H-8083-2, FAA-H-8083-15, FAA-H-8083-16; Terminal Procedures Publications

Objective: To determine the applicant understands performing a circling approach procedure, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge: The applicant demonstrates instructional knowledge by describing and explaining:

PI.VIII.D.K1	Elements related to circling approach procedures and limitations, including approach categories and related airspeed restrictions.
PI.VIII.D.K2	Common errors related to this Task.

Risk Management: The applicant demonstrates instructional knowledge by teaching how to identify, explain, and manage risk associated with:

PI.VIII.D.R1	Prescribed circling approach procedures.
PI.VIII.D.R2	Executing a circling approach at night or with marginal visibility.
PI.VIII.D.R3	Losing visual contact with an identifiable part of the airport.
PI.VIII.D.R4	Management of automated navigation and autoflight systems.
PI.VIII.D.R5	Management of altitude, airspeed, or distance while circling.
PI.VIII.D.R6	Collision hazards.
PI.VIII.D.R7	Executing a missed approach after the MAP while circling.

Skills: The applicant demonstrates and simultaneously explains how to:

PI.VIII.D.S1	Comply with the circling approach procedure considering turbulence, windshear, and the maneuvering capability and approach category of the aircraft.
PI.VIII.D.S2	Confirm the direction of traffic and adhere to all restrictions and instructions issued by ATC or the evaluator.
PI.VIII.D.S3	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.VIII.D.S4	Establish the approach and landing configuration. Maintain a stabilized approach and a descent rate that ensures arrival at the MDA, or the preselected circling altitude above the MDA, prior to the missed approach point.
PI.VIII.D.S5	Maintain airspeed ±10 knots, desired heading/track ±10°, and altitude +100/-0 feet until descending below the MDA or the preselected circling altitude above the MDA.
PI.VIII.D.S6	Visually maneuver to a base or downwind leg appropriate for the landing runway and environmental conditions.
PI.VIII.D.S7	If a missed approach occurs, turn in the appropriate direction using the correct procedure and appropriately configure the aircraft.
PI.VIII.D.S8	If landing, initiate a stabilized descent. Touch down on the first one-third of the selected runway without excessive maneuvering, without exceeding the normal operating limits of the aircraft, and without exceeding 30° of bank.
PI.VIII.D.S9	Analyze and correct common errors related to this Task.

Task E. Landing from an Instrument Approach

References: 14 CFR part 91; AIM; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with performing procedures for a landing from an instrument approach, and provides effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.VIII.E.K1	Elements related to the pilot's responsibilities, and the environmental, operational, and meteorological factors that affect landing from a straight-in or circling approach.
PI.VIII.E.K2	Airport signs, markings, and lighting, including approach lighting systems.
PI.VIII.E.K3	Appropriate landing profiles and aircraft configurations.
PI.VIII.E.K4	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.VIII.E.R1	Attempting to land from an unstable approach.
PI.VIII.E.R2	Flying below the glidepath.
PI.VIII.E.R3	Transitioning from instrument to visual references for landing.
PI.VIII.E.R4	Aircraft configuration for landing.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.VIII.E.S1	Transition at the DA/DH, MDA, or visual descent point (VDP) to a visual flight condition, allowing for safe visual maneuvering and a normal landing.
PI.VIII.E.S2	Adhere to all ATC or evaluator advisories, such as NOTAMs, windshear, wake turbulence, runway surface, and other operational considerations.
PI.VIII.E.S3	Complete the appropriate checklist(s).
PI.VIII.E.S4	Maintain positive aircraft control throughout the landing maneuver.
PI.VIII.E.S5	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.VIII.E.S6	Analyze and correct common errors related to this Task.

Area of Operation IX. Emergency Operations

Task A. Loss of Communications

References: 14 CFR part 91; AIM; FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16

Objective: To determine the applicant understands procedures for loss of communications while operating solely by reference to instruments, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.IX.A.K1	Procedures to follow in the event of lost communication during various phases of flight, including techniques for reestablishing communications, when it is acceptable to deviate from an instrument flight rules (IFR) clearance, and when to begin an approach at the destination.
PI.IX.A.K2	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.IX.A.R1	Possible reasons for loss of communication.
PI.IX.A.R2	Deviation from procedures for lost communications.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.IX.A.S1	Recognize a simulated loss of communication.
PI.IX.A.S2	Simulate actions to re-establish communication.
PI.IX.A.S3	Determine whether to continue to flight plan destination or deviate.
PI.IX.A.S4	Determine appropriate time to begin an approach.
PI.IX.A.S5	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.IX.A.S6	Analyze and correct common errors related to this Task.

Task B. Powerplant(s) Inoperative (Simulated) during Straight-and-Level Flight and Turns

References: FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-33; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with flight solely by reference to instruments with powerplant(s) inoperative, and provide effective instruction.

Note: *See Appendix 2: Safety of Flight.*

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.IX.B.K1	Procedures used if powerplant(s) fail during straight-and-level flight and turns while on instruments.
PI.IX.B.K2	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.IX.B.R1	Identification of the inoperative powerplant(s).
PI.IX.B.R2	Inability to climb or maintain altitude with any inoperative powerplant(s).
PI.IX.B.R3	Collision hazards.
PI.IX.B.R4	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.IX.B.R5	Fuel management.
PI.IX.B.R6	Configuring the aircraft.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.IX.B.S1	Promptly recognize powerplant(s) failure and maintain positive aircraft control.
PI.IX.B.S2	Establish the best inoperative powerplant(s) aircraft configuration.
PI.IX.B.S3	Use flight controls and configure the aircraft as required to maintain best performance or as recommended by the manufacturer.
PI.IX.B.S4	Verify the prescribed checklist procedures used for securing any inoperative powerplant(s).
PI.IX.B.S5	Attempt to determine and resolve the reason for the powerplant(s) failure.
PI.IX.B.S6	Monitor powerplant functions and make necessary adjustments.
PI.IX.B.S7	Maintain the specified altitude ±100 feet or minimum sink rate if applicable, airspeed ±10 knots, and the specified heading ±10°.
PI.IX.B.S8	Assess the aircraft's performance capability and decide an appropriate action to ensure a safe landing.
PI.IX.B.S9	Maintain control and fly within the aircraft's operating limitations.
PI.IX.B.S10	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.IX.B.S11	Analyze and correct common errors related to this Task.

Task C. Instrument Approach and Landing with Inoperative Powerplant(s) (Simulated)

References: 14 CFR part 91; FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16, FAA-H-8083-33; Terminal Procedures Publications; Flight Manual

Objective: To determine the applicant understands executing a published instrument approach solely by reference to instruments with powerplant(s) inoperative, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.IX.C.K1	Instrument approach procedures with any powerplant(s) inoperative.
PI.IX.C.K2	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.IX.C.R1	Potential powerplant(s) failure during approach.
PI.IX.C.R2	Distractions, task prioritization, loss of situational awareness, or disorientation.
PI.IX.C.R3	Collision hazards.
PI.IX.C.R4	Configuring the aircraft.
PI.IX.C.R5	Performing a go-around/rejected landing with any failed powerplant(s).
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.IX.C.S1	Promptly recognize powerplant(s) failure and maintain positive aircraft control.
PI.IX.C.S2	Confirm the correct aircraft configuration.
PI.IX.C.S3	Follow the manufacturer's recommended emergency procedures and complete the appropriate checklist.
PI.IX.C.S4	Use flight controls in the proper combination as recommended by the manufacturer.
PI.IX.C.S5	Monitor the operating powerplant(s) and aircraft systems and make adjustments as necessary.
PI.IX.C.S6	Request and follow an actual or a simulated air traffic control (ATC) clearance for an instrument approach.
PI.IX.C.S7	Maintain altitude ±100 feet, airspeed ±10 knots, and selected heading ±10°.
PI.IX.C.S8	Establish a rate of descent that ensures arrival at the minimum descent altitude (MDA) or decision altitude (DA)/decision height (DH) with the aircraft in a position from which a descent to a landing on the intended runway can be made, either straight in or circling as appropriate.
PI.IX.C.S9	On final approach segment, maintain vertical (as applicable) and lateral guidance within ¾-scale deflection.
PI.IX.C.S10	Maintain aircraft control and fly the aircraft within the powerplant(s) inoperative operating limitations.
PI.IX.C.S11	Comply with the published criteria for the aircraft approach category.
PI.IX.C.S12	Execute a landing.
PI.IX.C.S13	Complete the appropriate checklist(s).

PI.IX.C.S14 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

PI.IX.C.S15 Analyze and correct common errors related to this Task.

Task D. Approach with Loss of Primary Flight Instrument Indicators

References: 14 CFR part 91; FAA-H-8083-2, FAA-H-8083-9, FAA-H-8083-15, FAA-H-8083-16, FAA-H-8083-33; Terminal Procedures Publications; Flight Manual

Objective: To determine the applicant understands performing an approach solely by reference to instruments with the loss of primary flight control instruments, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.IX.D.K1	Recognizing if primary flight instruments are inaccurate or inoperative, and advising ATC or the evaluator.
PI.IX.D.K2	Possible failure modes of primary instruments and how to correct or minimize the effect of the loss.
PI.IX.D.K3	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.IX.D.R1	Use of secondary flight displays when primary displays have failed.
PI.IX.D.R2	Maintaining aircraft control.
PI.IX.D.R3	Distractions, task prioritization, loss of situational awareness, or disorientation.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.IX.D.S1	Advise ATC or the evaluator if unable to comply with a clearance.
PI.IX.D.S2	Complete a non-precision instrument approach without the use of the primary flight instruments using the skill elements of the non-precision approach Task (see Area of Operation VIII, Task A).
PI.IX.D.S3	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
PI.IX.D.S4	Analyze and correct common errors related to this Task.

Area of Operation X. Postflight Procedures

Task A. Checking Instruments and Equipment

References: 14 CFR part 91; FAA-H-8083-9; Flight Manual

Objective: To determine the applicant understands procedures for checking flight instruments and equipment during postflight, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

Knowledge:	The applicant demonstrates instructional knowledge by describing and explaining:
PI.X.A.K1	Procedures for documenting in-flight/postflight discrepancies.
PI.X.A.K2	Common errors related to this Task.
Risk Management:	The applicant explains and teaches how to identify and manage risk associated with:
PI.X.A.R1	Performance and documentation of postflight inspection and aircraft discrepancies.
Skills:	The applicant demonstrates and simultaneously explains how to:
PI.X.A.S1	Conduct a postflight inspection and document discrepancies and servicing requirements, if any.
PI.X.A.S2	Analyze and correct common errors related to this Task.

Appendix 1: Practical Test Roles, Responsibilities, and Outcomes

Eligibility Requirements for an Instrument Rating

The prerequisite requirements and general eligibility for a practical test and the specific requirements for the issuance of a Flight Instructor–Instrument rating in the powered-lift category can be found in 14 CFR part 61, sections 61.39(a) and 61.183.

In accordance with 14 CFR part 61, section 61.39, the applicant must pass the airman knowledge test before taking the practical test, if applicable to the certificate or rating sought.

Applicants seeking an initial instructor-instrument rating or an additional instructor-instrument rating in the powered-lift category must pass the appropriate knowledge test listed in the following table as a prerequisite for the practical test.

Test Code	Test Name	Number of Questions	Age	Allotted Time	Passing Score
FOI*	Fundamentals of Instructing	50	16	1.5	70
IIP	Flight Instructor Instrument - Powered-Lift	50	16	2.5	70
FPA	Flight Instructor Instrument - Powered-Lift (Added Rating)	20	16	1.0	70

* The FOI knowledge test applies unless the applicant meets the criteria listed in 14 CFR part 61, section 61.183(e).

Use of the ACS During a Practical Test

The practical test is conducted in accordance with the ACS and FAA regulations that are current as of the date of the test.

The Areas of Operation in this ACS align with the Areas of Operation found in 14 CFR part 61, section 61.187(b). Each Area of Operation includes Tasks appropriate to that Area of Operation. Each Task contains an Objective stating what the applicant must know, consider, and/or do. The ACS then lists the aeronautical knowledge, risk management, and skill elements relevant to the specific Task, along with the conditions and standards for acceptable performance. The ACS uses Notes to emphasize special considerations.

During the ground and flight portion of the practical test, the FAA expects evaluators to assess the applicant's mastery of the topic in accordance with the level of learning most appropriate for the specified Task. The oral questioning will continue throughout the entire practical test. For some topics, the evaluator will ask the applicant to describe or explain. For other items, the evaluator will assess the applicant's understanding by providing a scenario that requires the applicant to appropriately apply and/or correlate knowledge, experience, and information to the circumstances of the given scenario. The flight portion of the practical test requires the applicant to demonstrate knowledge, risk management, flight proficiency, and operational skill in accordance with the ACS.

The elements within each Task in this ACS are coded according to a scheme that includes four components. For example, FI.I.C.K2:

FI = Applicable ACS

I = Area of Operation

C = Task

K2 = Task element (in this example, Knowledge 2)

There is no requirement for an evaluator to test every knowledge and risk management element in a Task; rather the evaluator has discretion to sample as needed to ensure the applicant's mastery of that Task. The required minimum elements to be tested from each applicable Task include:

- any elements in which the applicant was shown to be deficient on the knowledge test;
- at least one knowledge element;
- at least one risk management element; and
- all skill elements unless otherwise noted.

The Airman Knowledge Test Report (AKTR) lists ACS codes that correlate to a specific Task element for a given Area of Operation for any incorrect responses on the knowledge test.

Knowledge and risk management elements are primarily evaluated during the knowledge testing phase of the airman

certification process. The evaluator administering the practical test has the discretion to combine Tasks/elements as appropriate to testing scenarios.

Unless otherwise noted in the Task, the evaluator must test each item in the skills section by observing the applicant perform each one. As safety of flight conditions permit, the evaluator should use questions during flight to test knowledge and risk management elements not evident in the demonstrated skills. To the greatest extent practicable, evaluators should test the applicant's ability to apply and correlate information and use rote questions only when they are appropriate for the material being tested.

If the Task includes a knowledge or risk element with sub-elements, the evaluator may choose the primary element and select at least one sub-element to satisfy the requirement. Selection of the sub-element satisfies the requirement for one element unless otherwise noted.

For example, an evaluator who chooses FI.I.F.K2 may select a sub-element such as FI.I.F.K2b to satisfy the requirement to select one knowledge element.

The References for each Task indicate the source material for Task elements. For example, in the Task element "Acceptable weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight such as:" (PI.III.A.K2), the applicant should be prepared for questions on any weather product presented in the references for that Task.

The FAA encourages applicants and instructors to use the ACS when preparing for the airman knowledge tests and practical tests. Evaluators must conduct the practical test in accordance with the current ACS and FAA regulations pursuant to 14 CFR part 61, section 61.43. If an applicant is entitled to credit for Areas of Operation previously passed as indicated on a Notice of Disapproval of Application or Letter of Discontinuance, evaluators shall use the ACS currently in effect on the date of the test.

The ground portion of the practical test allows the evaluator to determine whether the applicant is sufficiently prepared to advance to the flight portion of the practical test. The applicant must pass the ground portion of the practical test before beginning the flight portion. The oral questioning will continue throughout the entire practical test.

Instructor Responsibilities

The instructor trains and qualifies the applicant to meet the established standards for knowledge, risk management, and skill elements in all Tasks appropriate to the certificate and rating sought. The instructor should use this ACS and its references when preparing the applicant to take the practical test and when retraining the applicant to proficiency in any subject(s) missed on the knowledge test.

Evaluator Responsibilities

An evaluator is:

- Aviation Safety Inspector (ASI);
- Pilot examiner (other than administrative pilot examiners);
- Training center evaluator (TCE);
- Chief instructor, assistant chief instructor, or check instructor of pilot school holding examining authority; or
- Instrument Flight Instructor (CFII) conducting an instrument proficiency check (IPC).

The evaluator who conducts the practical test determines whether the applicant meets the established standards of aeronautical knowledge, risk management, and skills for the Tasks in the appropriate ACS. This responsibility also includes verifying the experience requirements specified for a certificate or rating.

The evaluator must determine that the applicant meets FAA Aviation English Language Standard (AELS). An applicant for an FAA certificate or rating must be able to communicate in English in a discernible and understandable manner with air traffic control (ATC), pilots, and others involved in preparing an aircraft for flight and operating an aircraft in flight. This communication may or may not involve radio communications. An applicant for an FAA certificate issued in accordance with 14 CFR parts 61, 63, 65, or 107 who cannot hear or speak due to a medical deficiency may be eligible for an FAA certificate with specific operational limitations. For additional information, reference AC 60-28, FAA English Language Standard for an FAA Certificate issued under 14 CFR Parts 61, 63, 65, and 107, as amended.

If the applicant's ability to meet the FAA AELS comes into question before starting the practical test, the evaluator will not begin the practical test. An evaluator who is not an ASI will check the box, Referred to FSO for Aviation English Language Standard Determination, located on the bottom of page 2 of the applicant's FAA Form 8710-1, Airman Certificate and/or Rating Application, or FAA Form 8710-11, Airman Certificate and/or Rating Application - Sport Pilot, as applicable. The

evaluator will refer the applicant to the appropriate Flight Standards Office (FSO).

If the applicant's ability to meet the FAA AELS comes into question after the practical test begins, an evaluator who is not an ASI will discontinue the practical test and check the box, Referred to FSO for Aviation English Language Standard Determination, on the application. The evaluator will also issue FAA Form 8060-5, Notice of Disapproval of Application, with the comment “Does Not Demonstrate FAA AELS” in addition to any unsatisfactory Task(s). The evaluator will refer the applicant to the appropriate FSO. ASIs conducting the practical test may assess an applicant’s English language proficiency in accordance with FAA Order 8900.1.

In either case, the evaluator must complete and submit the application file through normal application procedures and notify the appropriate FSO of the referral.

The evaluator must develop a plan of action (POA) and administer each practical test in English that includes all required Areas of Operation and Tasks. The POA must include scenario(s) that evaluate as many of the required Areas of Operation and Tasks as possible. As the scenario(s) unfolds during the test, the evaluator will introduce problems and emergencies that test the applicant’s ability. The evaluator has the discretion to modify the POA in order to accommodate unexpected situations as they arise. For example, the evaluator may elect to suspend and later resume a scenario in order to assess certain Tasks.

The evaluator conducting the practical test must determine that the applicant meets acceptable standards of teaching ability in the selected Tasks. The evaluator makes this determination by confirming the applicant’s:

Ability to apply the fundamentals of instructing;

- Knowledge of and ability to teach the subject matter, procedures, and maneuvers covered in the Tasks;
- Ability to perform the Tasks at the level of a commercial pilot while giving effective flight instruction; and
- Ability to analyze and correct common errors related to the procedures and maneuvers covered in the Tasks.

During the flight portion of the practical test, the evaluator may act as a student during selected maneuvers. This gives the evaluator an opportunity to evaluate the flight instructor applicant’s ability to analyze and correct simulated common errors related to these maneuvers.

Possible Outcomes of the Test

A practical test has three possible outcomes: (1) Temporary Airman Certificate (satisfactory), (2) Notice of Disapproval of Application (unsatisfactory), or (3) Letter of Discontinuance.

If the evaluator determines that a Task is incomplete, or the outcome is uncertain, the evaluator must require the applicant to repeat that Task, or portions of that Task. This provision does not mean that instruction, practice, or the repetition of an unsatisfactory Task is permitted during the practical test.

Satisfactory Performance

Refer to 14 CFR part 61, section 61.43, for satisfactory performance requirements.

Satisfactory performance will result in the issuance of a temporary certificate.

Unsatisfactory Performance

If, in the judgment of the evaluator, the applicant does not meet the standards for any Task, the applicant fails the Task and associated Area of Operation and the evaluator issues a Notice of Disapproval of Application. The evaluator lists the Area(s) of Operation in which the applicant did not meet the standard, any Area(s) of Operation not tested, and the number of practical test failures. The evaluator should also list the Tasks failed or Tasks not tested within any unsatisfactory or partially completed Area(s) of Operation. 14 CFR part 61, section 61.43(c)-(f) provides additional unsatisfactory performance requirements and parameters.

Typical areas of unsatisfactory performance and grounds for disqualification include:

- Any action or lack of action by the applicant that requires corrective intervention by the evaluator to maintain safe flight.
- Failure to use proper and effective visual scanning techniques to clear the area before and while performing maneuvers.
- Consistently exceeding tolerances stated in the skill elements of the Task.
- Failure to take prompt corrective action when tolerances are exceeded.

- Failure to exercise risk management.
- Failure to provide effective instruction while demonstrating a procedure or maneuver.

The evaluator or the applicant may end the test if the applicant fails a Task. The evaluator may continue the test only with the consent of the applicant. The applicant receives credit only for those Areas of Operation and the associated Tasks performed satisfactorily.

Letter of Discontinuance

Refer to 14 CFR part 61, section 61.43(e)(2) for conditions to issue a Letter of Discontinuance.

If discontinuing a practical test for reasons other than unsatisfactory performance (e.g., equipment failure, weather, illness), the evaluator must return all test paperwork to the applicant. The evaluator must prepare, sign, and issue a Letter of Discontinuance that lists those Areas of Operation the applicant successfully completed and the time period remaining to complete the test to receive credit for previously completed Areas of Operation. The evaluator should advise the applicant to present the Letter of Discontinuance to the evaluator when the practical test resumes in order to receive credit for the items successfully completed. The Letter of Discontinuance becomes part of the applicant's certification file.

Time Limit and Credit after a Discontinued Practical Test

Refer to 14 CFR part 61, sections 61.39(f) and 61.43(f) after issuance of a Letter of Discontinuance or Notice of Disapproval of Application.

Additional Rating Task Table

For an applicant who holds a flight instructor-instrument rating in another category and seeks an additional Flight Instructor–Instrument rating in the powered-lift category, the evaluator must evaluate that applicant in the Areas of Operation and Tasks listed in the Additional Rating Task Table. The evaluator may evaluate the applicant’s competence in the remaining Areas of Operation and Tasks.

Addition of a Flight Instructor-Instrument Powered-Lift Rating to an Existing Flight Instructor Certificate or Rating

The following table indicates the required Tasks for each Area of Operation tested in accordance with this ACS.

	Flight Instructor Certificate and Rating Held				
Area of Operation	**PL**	**AP**	**RH**	**IA**	**IH**
I	None	None	None	None	None
II	C,D,E	C,D,E	C,D,E	E	E
III	B,C	B,C	B,C	C	C
IV	None	None	None	None	None
V	*	*	*	None	None
VI	A	A	*	*	*
VII	*	*	*	None	None
VIII	*	*	*	**	**
IX	*	*	*	*	*
X	*	*	*	*	*

Note: *An asterisk directs the evaluator to follow the selection requirements for the Area of Operation and Tasks in the body of this ACS. ** indicates one approach from either Task A or Task B combined with Task C, D, or E.*

Flight Instructor-Instrument Renewal/Reinstatement

In accordance with 14 CFR part 61, section 61.199(a), the renewal or reinstatement of one rating on a Flight Instructor Certificate renews or reinstates all privileges existing on the certificate.

Renewal & Reinstatement of an Instrument Flight Instructor

Required Area of Operation	Required Tasks
I	**
II	Task B and 1 other Task
III	1 Task
IV	1 Task
V	1 Task
VI	2 Tasks
VII	1 Task
VIII	A or B combined with Task C, D, or E
IX	1 Task
X	1 Task

Note: *A double asterisk directs the evaluator to consider the period of inactivity. The evaluator may test FOI Tasks for any reinstatement.*

Appendix 2: Safety of Flight

General

Safety of flight must be the prime consideration at all times. The evaluator, applicant, and crew must be continually alert for other traffic. If performing aspects of a given maneuver, such as emergency procedures, would jeopardize safety, the evaluator will ask the applicant to simulate that portion of the maneuver. The evaluator will assess the applicant's use of visual scanning and collision avoidance procedures throughout the entire test.

Stall, Spin, Angle of Attack Awareness

An applicant, instructor, and evaluator must avoid operations that lead to inadvertent high angle of attack flight that may lead to loss of control, when thrust-borne-lift is insufficient for wing-borne flight.

Use of Checklists

Throughout the practical test, the applicant is evaluated on the use of an appropriate checklist.

Assessing proper checklist use depends upon the specific Task. In all cases, the evaluator should determine whether the applicant demonstrates CRM, appropriately divides attention and uses proper visual scanning. In some situations, reading the actual checklist may be impractical or unsafe. In such cases, the evaluator should assess the applicant's performance of published or recommended immediate action "memory" items along with his or her review of the appropriate checklist once conditions permit.

In a single-pilot aircraft, the applicant should demonstrate the crew resource management (CRM) principles described as single-pilot resource management (SRM). Proper use depends on the specific Task being evaluated. If the use of the checklist while accomplishing elements of an Objective would be either unsafe or impractical in a single-pilot operation, the applicant should review the checklist after accomplishing the elements.

Positive Exchange of Flight Controls

A clear understanding of who has control of the aircraft must exist. Prior to flight, the pilots involved should conduct a briefing that includes reviewing the procedures for exchanging flight controls.

The FAA recommends a positive three-step process for exchanging flight controls between pilots:

- When one pilot seeks to have the other pilot take control of the aircraft, they will say, "You have the flight controls."
- The second pilot acknowledges immediately by saying, "I have the flight controls."
- The first pilot again says, "You have the flight controls," and visually confirms the exchange.

Pilots should follow this procedure during any exchange of flight controls, including any occurrence during the practical test. The FAA also recommends that both pilots use a visual check to verify that the exchange has occurred. Doubt as to who is flying the aircraft should not occur.

Use of Distractions

Numerous studies indicate that many accidents have occurred when the pilot has been distracted during critical phases of flight. The evaluator should incorporate realistic distractions during the flight portion of the practical test to evaluate the pilot's situational awareness and ability to utilize proper control technique while dividing attention both inside and outside the flight deck.

Aeronautical Decision-Making, Risk Management, Crew Resource Management, and Single-Pilot Resource Management

Throughout the practical test, the evaluator must assess the applicant's ability to use sound aeronautical decision-making procedures in order to identify hazards and mitigate risk. The evaluator must accomplish this requirement by reference to the risk management elements of the given Task(s), and by developing scenarios that incorporate and combine Tasks appropriate to assessing the applicant's risk management in making safe aeronautical decisions. For example, the evaluator may develop a scenario that incorporates weather decisions and performance planning.

In assessing the applicant's performance, the evaluator should take note of the applicant's use of CRM and, if appropriate,

SRM. CRM/SRM is the set of competencies that includes situational awareness, communication skills, teamwork, task allocation, and decision-making within a comprehensive framework of standard operating procedures (SOP). SRM specifically refers to the management of all resources onboard the aircraft, as well as outside resources available to the single pilot.

Multi-Powerplant Considerations

For instrument practical tests conducted in multi-powerplant aircraft, the evaluator must discuss with the applicant the methods for simulating a powerplant(s) failure in accordance with the aircraft manufacturer's recommended procedures during the required preflight briefing.

Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations

Aircraft Requirements & Limitations

If the aircraft has inoperative equipment and can be operated in accordance with 14 CFR part 91, section 91.213, it must be determined if any inoperative instruments or equipment are required to complete the practical test. The inoperative equipment must not interfere with practical test requirements.

Equipment Requirements & Limitations

The aircraft must meet the requirements as outlined in 14 CFR part 61, section 61.45.

To assist in management of the aircraft during the practical test, the applicant is expected to demonstrate automation management skills by utilizing installed, available, or airborne equipment such as autopilot, avionics and systems displays, and/or a flight management system (FMS). The evaluator is expected to test the applicant's knowledge of the systems that are available or installed and operative during both the ground and flight portions of the practical test. If the applicant has trained using a portable electronic flight bag (EFB) to display charts and data and wishes to use the EFB during the practical test, the applicant is expected to demonstrate appropriate knowledge, risk management, and skill appropriate to its use.

If the practical test involves maneuvering the aircraft solely by reference to instruments, the applicant is required by 14 CFR part 61, section 61.45(d)(2) to provide an appropriate view limiting device acceptable to the Administrator. The applicant and the evaluator should establish a procedure as to when and how this device should be donned and removed and brief this procedure before the flight. This device must prevent the applicant from having visual reference outside the aircraft, but it must not restrict the evaluator's ability to see and avoid other traffic. The use of the device does not apply to specific elements within a Task when there is a requirement for visual references.

Use of Flight Simulation Training Devices (FSTD)

Applicants for a pilot certificate or rating can accomplish all or part of a practical test or proficiency check in an FSTD qualified under 14 CFR part 60, which includes full flight simulators (FFS) or flight training devices (FTD), only when conducted within an FAA-approved training program provided by an operator utilizing a part 119 air carrier or commercial operator certificate or an operator that holds a part 141 or 142 air agency certificate. Each operational rule part identifies additional requirements for the approval and use of FSTDs in an FAA-approved training program. Reference part 61, section 61.64(a)(2).

Credit for Pilot Time in an FSTD

14 CFR part 61 and part 141 specify the minimum experience requirements for each certificate or rating sought. 14 CFR part 61 and the appendices to part 141 specify the maximum amount of FFS or FTD flight training time an applicant can apply toward those experience requirements.

Use of Aviation Training Devices (ATD)

Applicants for a pilot certificate or rating cannot use an ATD to accomplish a practical test, a 14 CFR part 61, section 61.58 proficiency check, or the flight portion of a 14 CFR part 61, section 61.57 flight review. An ATD is defined in 14 CFR part 61, section 61.1.

The FAA's General Aviation and Commercial Division evaluates and approves ATDs as permitted under 14 CFR part 61, section 61.4(c) and FAA Order 8900.1. Each ATD is then issued an FAA letter of authorization (LOA) that is valid for 60 calendar months. The LOA for each ATD lists the pilot time credit allowances and associated limitations.

The Pilot Training and Certification Group public website provides a list of the FAA-approved ATDs and the associated manufacturer.

Credit for Pilot Time in an ATD

14 CFR part 61 and part 141 specify the minimum experience requirements for each certificate or rating sought. 14 CFR part 61 and the appendices to part 141 specify the maximum amount of ATD flight training time an applicant can apply toward those experience requirements. The LOA for each FAA-approved ATD lists the pilot time credit allowances and the associated limitations.

Evaluators must request an applicant to provide a copy of the manufacturer's LOA when using ATD flight training time credit

to meet the minimum experience requirements for an airman pilot certificate, rating, or privilege.

Operational Requirements, Limitations, & Task Information

VI. Flight by Reference to Instruments

Task H. Recovery from Unusual Flight Attitudes

The evaluator shall conduct a preflight briefing with the applicant regarding recovery. Any intervention by the evaluator to prevent the aircraft from exceeding any operating limitation or entering an unsafe flight condition shall be disqualifying and the Task is unsatisfactory.

VII. Navigation Systems

Task A. Intercepting and Tracking Navigational Systems and DME Arcs

The evaluator may not select DME arcs, unless charted and available (including use of RNAV substitution techniques, if appropriate).

VIII. Instrument Approach Procedures

Use of Area Navigation (RNAV) or Required Navigation Performance (RNP) Navigation System

For practical tests conducted in an aircraft equipped with an installed, instrument flight rules (IFR)-approved RNAV or required navigational performance (RNP) system, or in a flight simulation training device (FSTD) equipped to replicate an installed, IFR-approved RNAV or RNP system, the applicant must demonstrate approach proficiency using that system. The applicant may use a suitable RNAV system on conventional procedures and routes as described in the Aeronautical Information Manual (AIM) to accomplish ACS tasks on conventional approach procedures, as appropriate.

Vertical or Lateral Deviation Standard

The standard is to allow no more than a ¾ scale deflection of either the vertical or lateral deviation indications during the final approach. As markings on flight instruments vary, a ¾ scale deflection of either vertical or lateral guidance is deemed to occur when it is displaced ¾ of the distance that it may be deflected from the indication representing that the aircraft is on the correct flight path.

Task A. Non-precision Approach

A non-precision approach is a standard instrument approach procedure to a published minimum descent altitude without approved vertical guidance. The applicant may use navigation systems that display advisory vertical guidance during non-precision approach operations, if available.

The evaluator must select and the applicant must accomplish at least two different non-precision approaches in simulated or actual instrument meteorological conditions:

- At least one procedure must include a course reversal maneuver (e.g., procedure turn, holding in lieu, or the course reversal from an initial approach fix on a Terminal Area Arrival).
- The applicant must accomplish at least one procedure from an initial approach fix without the use of autopilot and without the assistance of radar vectors. During this Task, flying without using the autopilot does not prevent use of the yaw damper and flight director.
- The applicant must fly one procedure with reference to backup or partial panel instrumentation or navigation display, depending on the aircraft's instrument avionics configuration, representing a realistic failure mode(s) for the equipment used.

The evaluator has discretion to have the applicant perform a landing or a missed approach at the completion of each approach.

Task B. Precision Approach

The applicant must accomplish a precision approach to the decision altitude (DA) using aircraft navigational equipment for centerline and vertical guidance in simulated or actual instrument meteorological conditions. A precision approach is a standard instrument approach procedure to a published decision altitude using provided approved vertical guidance.

The evaluator has discretion to have the applicant perform a landing or a missed approach at the completion of each approach.