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Commercial Pilot – Airplane Airman Certification Standards

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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).

In fulfilling its responsibilities for the airman certification process, the Federal Aviation Administration (FAA) Flight Standard Service (AFS) plans, develops, and maintains materials related to airman certification training and testing. These materials include several components. The FAA knowledge test measures mastery of the aeronautical knowledge areas listed in Title 14 of the Code of Federal Regulations (14 CFR) part 61. Other materials, such as handbooks in the FAA-H-8083 series, provide guidance to applicants on aeronautical knowledge, risk management, and flight proficiency.

Safe operations in today's National Airspace System (NAS) require 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 Airman Certification Standards (ACS). The ACS integrates the elements of knowledge, risk management, and skill listed in 14 CFR part 61 for each airman certificate or rating. It thus forms a more comprehensive standard for what an applicant must know, consider, and do for the safe conduct and successful completion of each Task to be tested on both the qualifying FAA knowledge test and the oral and flight portions of the practical test.

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.

Note: *As used in the ACS, an evaluator is any person authorized to conduct airman testing (e.g., an FAA Aviation Safety Inspector (ASI)), Designated Pilot Examiner (DPE), or other individual authorized to conduct airman testing for a certificate or rating).*

Using the ACS

The ACS consists of **Areas of Operation** arranged in a logical sequence, beginning with Preflight Preparation and ending with Postflight Procedures. Each Area of Operation includes **Tasks** appropriate to that Area of Operation. Each Task begins with an **Objective** stating what the applicant should 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. The ACS uses the terms "will" and "must" to convey directive (mandatory) information. The term "may" denotes items that are recommended but not required. The **References** for each Task indicate the source material for Task elements. For example, in Tasks such as "Weather products required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight." (CA.I.C.K2), the applicant should be prepared for questions on any weather product presented in the references for that Task.

The abbreviation(s) within parentheses immediately following a Task refer to the category and/or class airplane appropriate to that Task. The meaning of each abbreviation is as follows:

ASEL: Airplane – Single-Engine Land
ASES: Airplane – Single-Engine Sea
AMEL: Airplane – Multiengine Land
AMES: Airplane – Multiengine Sea

Note: *When administering a test, the Tasks appropriate to the class airplane (ASEL, ASES, AMEL, or AMES) used for the test must be included in the plan of action. The absence of a class indicates the Task is for all classes.*

Each Task in the ACS is coded according to a scheme that includes four elements. For example:

CA.I.C.K1:

- CA** = Applicable ACS (Commercial Pilot – Airplane)
- I** = Area of Operation (Preflight Preparation)
- C** = Task (Weather Information)
- K1** = Task element Knowledge 1 (Sources of weather data (e.g., National Weather Service, Flight Service) for flight planning purposes.)

Knowledge test questions correspond to the ACS codes, which will ultimately replace the system of Learning Statement Codes (LSC). After this transition occurs, the Airman Knowledge Test Report (AKTR) will list an ACS code that correlates to a specific Task element for a given Area of Operation and Task. Remedial instruction and re-testing will be specific, targeted, and based on specified learning criteria. Similarly, a Notice of Disapproval for the practical test will use the ACS codes to identify the deficient Task elements. Applicants and evaluators should interpret the AKTR codes using the ACS revision in effect on the date of the knowledge test.

However, for knowledge tests taken before this system comes on line, only the LSC code (e.g., “PLT058”) will be displayed on the AKTR. The LSC codes link to references and broad subject areas. By contrast, each ACS code represents a unique Task element in the ACS. Because of this fundamental difference, there is no one-to-one correlation between Learning Statement (PLT) codes and ACS codes.

Because all active knowledge test questions for the Commercial Pilot Airplane Knowledge Test (CAX) now align with the corresponding ACS, evaluators can use LSC codes in conjunction with this ACS for targeting retesting of missed knowledge subject areas. The evaluator should look up the LSC code(s) on the applicant’s AKTR in the Learning Statement Reference Guide available using the following link: [Learning Statement Reference Guide](#). After noting the subject area(s), the evaluator can use the corresponding Area(s) of Operation/Task(s) in the ACS to narrow the scope of material for retesting, and to evaluate the applicant’s understanding of that material in the context of the appropriate ACS Area(s) of Operation and Task(s).

The applicant must pass the Commercial Pilot Airplane Knowledge Test (CAX) before taking the commercial pilot 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. Further, the applicant must pass the ground portion of the practical test before beginning the flight portion.

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 oral questioning will continue throughout the entire practical test.

Evaluators conduct the practical test in accordance with the current ACS and FAA regulations, and the FAA encourages applicants and instructors to use the ACS when preparing for knowledge tests and practical tests. The FAA will revise the ACS as circumstances require. However, if an applicant is entitled to credit for Areas of Operation previously passed as indicated on a Notice of Disapproval or Letter of Discontinuance, evaluators should continue using the ACS effective on the test cycle start date.

I. Preflight Preparation

Task	A. Pilot Qualifications
References	14 CFR parts 61, 68, 91; AC 68-1; FAA-H-8083-2, FAA-H-8083-25
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with operating as pilot-in-command (PIC) as a commercial pilot.
Knowledge	The applicant demonstrates understanding of:
CA.I.A.K1	Certification requirements, recent flight experience, and recordkeeping.
CA.I.A.K2	Privileges and limitations.
CA.I.A.K3	Medical certificates: class, expiration, privileges, temporary disqualifications.
CA.I.A.K4	Documents required to exercise commercial pilot privileges.
CA.I.A.K5	Part 68 BasicMed privileges and limitations.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
CA.I.A.R1	Failure to distinguish proficiency versus currency.
CA.I.A.R2	Flying unfamiliar airplanes, or operating with unfamiliar flight display systems, and avionics.
Skills	The applicant demonstrates the ability to:
CA.I.A.S1	Apply requirements to act as PIC under Visual Flight Rules (VFR) in a scenario given by the evaluator.

I. Preflight Preparation

Task	B. Airworthiness Requirements
References	14 CFR parts 39, 43, 91; FAA-H-8083-2, FAA-H-8083-25
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with airworthiness requirements, including airplane certificates.
Knowledge	The applicant demonstrates understanding of:
<i>CA.I.B.K1</i>	General airworthiness requirements and compliance for airplanes, including:
<i>CA.I.B.K1a</i>	a. Certificate location and expiration dates
<i>CA.I.B.K1b</i>	b. Required inspections and airplane logbook documentation
<i>CA.I.B.K1c</i>	c. Airworthiness Directives and Special Airworthiness Information Bulletins
<i>CA.I.B.K1d</i>	d. Purpose and procedure for obtaining a special flight permit
<i>CA.I.B.K2</i>	Pilot-performed preventive maintenance.
<i>CA.I.B.K3</i>	Equipment requirements for day and night VFR flight, to include:
<i>CA.I.B.K3a</i>	a. Flying with inoperative equipment
<i>CA.I.B.K3b</i>	b. Using an approved Minimum Equipment List (MEL)
<i>CA.I.B.K3c</i>	c. Kinds of Operation Equipment List (KOEL)
<i>CA.I.B.K3d</i>	d. Required discrepancy records or placards
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>CA.I.B.R1</i>	Inoperative equipment discovered prior to flight.
Skills	The applicant demonstrates the ability to:
<i>CA.I.B.S1</i>	Locate and describe airplane airworthiness and registration information.
<i>CA.I.B.S2</i>	Determine the airplane is airworthy in a scenario given by the evaluator.
<i>CA.I.B.S3</i>	Apply appropriate procedures for operating with inoperative equipment in a scenario given by the evaluator.

I. Preflight Preparation

Task	C. Weather Information
References	14 CFR part 91; FAA-H-8083-25; AC 00-6, AC 00-45, AC 00-54; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with weather information for a flight under VFR.
Knowledge	The applicant demonstrates understanding of:
CA.I.C.K1	Sources of weather data (e.g., National Weather Service, Flight Service) for flight planning purposes.
CA.I.C.K2	Acceptable weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight.
CA.I.C.K3	Meteorology applicable to the departure, en route, alternate, and destination under VFR in Visual Meteorological Conditions (VMC) to include expected climate and hazardous conditions such as:
CA.I.C.K3a	a. Atmospheric composition and stability
CA.I.C.K3b	b. Wind (e.g., crosswind, tailwind, windshear, mountain wave, etc.)
CA.I.C.K3c	c. Temperature
CA.I.C.K3d	d. Moisture/precipitation
CA.I.C.K3e	e. Weather system formation, including air masses and fronts
CA.I.C.K3f	f. Clouds
CA.I.C.K3g	g. Turbulence
CA.I.C.K3h	h. Thunderstorms and microbursts
CA.I.C.K3i	i. Icing and freezing level information
CA.I.C.K3j	j. Fog/mist
CA.I.C.K3k	k. Frost
CA.I.C.K3l	l. Obstructions to visibility (e.g., smoke, haze, volcanic ash, etc.)
CA.I.C.K4	Flight deck displays of digital weather and aeronautical information.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
CA.I.C.R1	Factors involved in making the go/no-go and continue/divert decisions, to include:
CA.I.C.R1a	a. Circumstances that would make diversion prudent
CA.I.C.R1b	b. Personal weather minimums
CA.I.C.R1c	c. Hazardous weather conditions to include known or forecast icing or turbulence aloft
CA.I.C.R2	Limitations of:
CA.I.C.R2a	a. Onboard weather equipment
CA.I.C.R2b	b. Aviation weather reports and forecasts
CA.I.C.R2c	c. Inflight weather resources
Skills	The applicant demonstrates the ability to:
CA.I.C.S1	Use available aviation weather resources to obtain an adequate weather briefing.
CA.I.C.S2	Analyze the implications of at least three of the conditions listed in K3a through K3l above, using actual weather or weather conditions in a scenario provided by the evaluator.
CA.I.C.S3	Correlate weather information to make a competent go/no-go decision.

I. Preflight Preparation

Task	<i>D. Cross-Country Flight Planning</i>
References	14 CFR part 91; FAA-H-8083-2, FAA-H-8083-25; Navigation Charts; Chart Supplements; AIM; NOTAMs
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with cross-country flights and VFR flight planning.
Knowledge	The applicant demonstrates understanding of:
<i>CA.I.D.K1</i>	Route planning, including consideration of different classes and special use airspace (SUA) and selection of appropriate and available navigation/communication systems and facilities.
<i>CA.I.D.K2</i>	Altitude selection accounting for terrain and obstacles, glide distance of the airplane, VFR cruising altitudes, and the effect of wind.
<i>CA.I.D.K3</i>	Calculating:
<i>CA.I.D.K3a</i>	a. Time, climb and descent rates, course, distance, heading, true airspeed, and groundspeed
<i>CA.I.D.K3b</i>	b. Estimated time of arrival to include conversion to universal coordinated time (UTC)
<i>CA.I.D.K3c</i>	c. Fuel requirements, to include reserve
<i>CA.I.D.K4</i>	Elements of a VFR flight plan.
<i>CA.I.D.K5</i>	Procedures for activating and closing a VFR flight plan.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
<i>CA.I.D.R1</i>	Pilot.
<i>CA.I.D.R2</i>	Aircraft.
<i>CA.I.D.R3</i>	Environment (e.g., weather, airports, airspace, terrain, obstacles).
<i>CA.I.D.R4</i>	External pressures.
<i>CA.I.D.R5</i>	Limitations of air traffic control (ATC) services.
<i>CA.I.D.R6</i>	Improper fuel planning.
Skills	The applicant demonstrates the ability to:
<i>CA.I.D.S1</i>	Prepare, present, and explain a cross-country flight plan assigned by the evaluator including a risk analysis based on real-time weather, to the first fuel stop.
<i>CA.I.D.S2</i>	Apply pertinent information from appropriate and current aeronautical charts, Chart Supplements; NOTAMs relative to airport, runway and taxiway closures; and other flight publications.
<i>CA.I.D.S3</i>	Create a navigation plan and simulate filing a VFR flight plan.
<i>CA.I.D.S4</i>	Recalculate fuel reserves based on a scenario provided by the evaluator.