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# Flight Instructor Airplane ACS

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## Effective May 31, 2024

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FAA-S-ACS-25


U.S. Department
of Transportation

**Federal Aviation
Administration**

# Flight Instructor for Airplane Category
# Airman Certification Standards

**November 2023**

# Flight Instructor Airplane ACS

## Significant Changes:
Risk Management in every task

**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***

| | |
|---|---|
| **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. |

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## Significant Changes:

FOI has some titles regrouped

***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.

***Task E. Elements of Effective Teaching in a Professional Environment***

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

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## Significant Changes:
## Sport Pilot and BasicMed inclusions

***Task A. Pilot Qualifications***

*References:* *14 CFR parts 61, 68, 91; AC 60-28, AC 68-1; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM*

**Objective:** To determine the applicant understands pilot training and qualification requirements for different levels of pilot certificate including student pilot, sport pilot, recreational pilot, private pilot, commercial pilot, and flight instructor; 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.III.A.K1* | Certification, currency, and recordkeeping requirements, including training and logbook entries. |
| *AI.III.A.K2* | Privileges and limitations of pilot certificates and ratings at student pilot, sport, recreational, private, commercial, and flight instructor levels. |
| *AI.III.A.K3* | Medical certificates: class, expiration, privileges, temporary disqualifications, and operations under BasicMed. |
| *AI.III.A.K4* | Documents pilots must possess to exercise privileges of the specified certificate(s) and rating(s). |

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## Significant Changes:
## Weather Theory

***Task C. Weather Information***

*References:* *14 CFR part 91; AC 91-92; AIM; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-25, FAA-H-8083-28*

**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.*

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## Significant Changes:
## Weather Theory

| | |
|---|---|
| *AI.III.C.K3* | Meteorology applicable to the departure, en route, alternate, and destination under visual flight rules (VFR) in Visual Meteorological Conditions (VMC), including expected climate and hazardous conditions such as: |
| *AI.III.C.K3a* | a. Atmospheric composition and stability |
| *AI.III.C.K3b* | b. Wind (e.g., windshear, mountain wave, factors affecting wind, etc.) |
| *AI.III.C.K3c* | c. Temperature and heat exchange |
| *AI.III.C.K3d* | d. Moisture/precipitation |
| *AI.III.C.K3e* | e. Weather system formation, including air masses and fronts |
| *AI.III.C.K3f* | f. Clouds |
| *AI.III.C.K3g* | g. Turbulence |
| *AI.III.C.K3h* | h. Thunderstorms and microbursts |
| *AI.III.C.K3i* | i. Icing and freezing level information |
| *AI.III.C.K3j* | j. Fog/mist |
| *AI.III.C.K3k* | k. Frost |
| *AI.III.C.K3l* | l. Obstructions to visibility (e.g., smoke, haze, volcanic ash, etc.) |
| *AI.III.C.K4* | Flight deck instrument displays of digital weather and aeronautical information. |

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## Significant Changes:

XC Flight Plan can be electronic – Explaining and demonstrating

***Task I. Navigation and Cross-Country Flight Planning***

*References: 14 CFR part 91; AIM; Chart Supplements; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-25, NOTAMs; VFR Navigation Charts*

**Objective:** To determine the applicant understands navigation and cross-country flight planning, can apply that knowledge, manage associated risks, demonstrate appropriate skills, and provide effective instruction.

***Note:*** *Preparation, presentation, and explanation of a computer-generated flight plan is an acceptable option.*

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## Significant Changes:
Weight and balance moved into performance and limitations

***Task F. Performance and Limitations***

*References: FAA-H-8083-1, FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-25; POH/AFM*

**Objective:** To determine the applicant understands aircraft performance and limitations, 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.F.K1* | Elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance. |
| *AI.II.F.K2* | Factors affecting performance, including: |
| *AI.II.F.K2a* | a. Atmospheric conditions |
| *AI.II.F.K2b* | b. Pilot technique |
| *AI.II.F.K2c* | c. Airplane configuration |
| *AI.II.F.K2d* | d. Airport environment |
| *AI.II.F.K2e* | e. Loading and weight and balance |
| *AI.II.F.K3* | Weight and balance terms, including: basic empty weight, maximum gross weight, arm, moment, reference datum, center of gravity (CG) and CG limits, and useful load. |
| *AI.II.F.K4* | Methods for computing CG. |
| *AI.II.F.K5* | Aerodynamics. |

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## Significant Changes:

Principles of Flight now includes Forces acting on an airplane

***Task D. Principles of Flight***

*References: FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-23, FAA-H-8083-25; POH/AFM*

**Objective:** To determine the applicant understands aerodynamics appropriate to the desired instructor certificate, 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.D.K1* | Airfoil design characteristics. |
| *AI.II.D.K2* | Airplane stability, maneuverability and controllability. |
| *AI.II.D.K3* | Turning tendency (e.g., torque, p-factor, spiraling slipstream, and gyroscopic precession). |
| *AI.II.D.K4* | Forces acting on an airplane. |
| *AI.II.D.K5* | Load factors in airplane design. |
| *AI.II.D.K6* | Wingtip vortices and appropriate precautions. |

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## Significant Changes:

Applicants can use previously developed lesson plans from their library.

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

***Note:*** *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. Previously developed lesson plans from the instructor applicant's library may be used.*

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## Significant Changes:

Slow Flight has two methods that can be chosen

**Area of Operation X. Slow flight, Stalls, and Spins**

***Note:*** *For single-engine, the evaluator must select Task A or B; Task C, D, or E; Task F, G, or H; and Task I. For multiengine the evaluator must select Task A and Task C, D, or E.*

***Task A. Maneuvering During Slow Flight***

*References: AC 61-67; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-25; POH/AFM*

| **Skills:** | The applicant demonstrates and simultaneously explains how to: |
|---|---|
| *AI.X.A.S1* | Clear the area. |
| *AI.X.A.S2* | Select an entry altitude that allows the Task to be completed no lower than 1,500 feet above ground level (AGL) (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES). |
| *AI.X.A.S3* | Establish and maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., aircraft buffet, stall horn, etc.). |

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## Significant Changes:

Slow Flight has two methods that can be chosen

***Task B. Demonstration of Flight Characteristics at Various Configurations and Airspeeds (ASEL and ASES)***

*References: AC 61-67; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-25; POH/AFM*

**Objective:** To determine the applicant understands flight characteristics and power required at different airspeeds and configurations appropriate to the make and model of airplane flown, 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.*

# Flight Instructor Airplane ACS

## Significant Changes:

Slow Flight has two methods that can be chosen

| | |
|---|---|
| **Skills:** | The applicant demonstrates and simultaneously explains how to: |
| *AI.X.B.S1* | Conduct and explain the procedure, manage the associated risk, and fly the airplane, while maintaining altitude ±100 feet, airspeed +5/-0 knots, heading ±10°, and specified bank angle ±5°, as appropriate. |
| *AI.X.B.S2* | Select an altitude that allows the maneuver to be performed no lower than 1,500 feet above ground level (AGL). |
| *AI.X.B.S3* | Clear the area. |
| *AI.X.B.S4* | Clean configuration demonstration: |
| *AI.X.B.S4a* | a. Establish and maintain design/operating maneuvering speed appropriate to the airplane's weight while describing pitch, power, and trim inputs to maintain altitude and airspeed, then; |
| *AI.X.B.S4b* | b. With gear and flaps retracted (as applicable), slow the airplane to, and maintain, best glide speed (or as specified by evaluator), noting the power setting required, then; |
| *AI.X.B.S4c* | c. Continue to slow the airplane to, and maintain, an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power would result in an immediate stall, and maintain that airspeed in level flight, noting the airspeed and power setting required, ~~while~~, |
| *AI.X.B.S4d* | d. Verbally acknowledging stall warning indications, then; |
| *AI.X.B.S4e* | e. Without changing power setting, lower the pitch attitude and accelerate to a faster airspeed until reestablishing the airplane in level flight, noting the new airspeed and amount of altitude lost, then; |
| *AI.X.B.S4f* | f. Return to normal cruise flight at the altitude and heading specified by the evaluator |

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## Significant Changes:

Slow Flight has two methods that can be chosen

| | |
|---|---|
| *AI.X.B.S5* | Landing configuration demonstration. |
| *AI.X.B.S5a* | a. Establish and maintain design/operating maneuvering speed appropriate to the airplane's weight while describing pitch, power, and trim inputs to maintain altitude and airspeed, then; |
| *AI.X.B.S5b* | b. Slow the airplane to, and maintain, the appropriate limiting airspeeds and fully extend the landing gear and flaps (as appropriate), then; |
| *AI.X.B.S5c* | c. With gear and flaps fully extended (as applicable), slow the airplane to, and maintain, reference landing speed (or as specified by the evaluator), noting the power setting required, then; |
| *AI.X.B.S5d* | d. With gear and flaps fully extended, continue to slow the airplane to, and maintain, an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power would result in an immediate stall, and maintain that airspeed in level flight, noting the airspeed and power setting required, while; |
| *AI.X.B.S5e* | e. Verbally acknowledging stall warning indications, then; |
| *AI.X.B.S5f* | f. Without changing power setting, lower the pitch attitude and accelerate to a faster airspeed until reestablishing the airplane in in level flight, noting the new airspeed and amount of altitude lost, then; |
| *AI.X.B.S5g* | g. Return to normal cruise flight at the altitude and heading specified by the evaluator |

# Flight Instructor Airplane ACS

## Significant Changes:

Secondary Stall must be a Full Stall Demonstration

***Task H. Secondary Stall Demonstration (ASEL, ASES)***

*References: AC 61-67; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-25; POH/AFM*

| **Skills:** | The applicant exhibits the skill to: |
|---|---|
| *AI.X.H.S1* | Clear the area. |
| *AI.X.H.S2* | Select an entry altitude that allows the Task to be completed no lower than 3,000 feet above ground level (AGL). |
| *AI.X.H.S3* | Enter a stall in a specified configuration and exceed the critical angle of attach a second time during the recovery. |
| *AI.X.H.S4* | Recover promptly and appropriately after a secondary stall occurs. |
| *AI.X.H.S5* | Describe and demonstrate conditions that lead to a secondary stall for future avoidance. |
| *AI.X.H.S6* | Analyze and correct common errors related to this Task. |

# Flight Instructor Airplane ACS

## Significant Changes:

The DPE can now test FOI on Renewal/Reinstatements

**Flight Instructor 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.

| Required Area of Operation | Airplane Single-Engine | Airplane Multiengine |
|---|---|---|
| I | ** | ** |
| II | C,K, and 1 other Task | C,K,P, and 1 other Task |
| | | |

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

## A/O II – Technical Subject Areas

# Task E – Aircraft Flight Controls and Operation of Systems – Used to be two separate tasks

## A/O II – Technical Subject Areas

Task H – Navigation and Radar Services now includes Transponder Mode(s), A, C and S.  Also testing on ADS-B is required.

# A/O II – Technical Subject Areas

## Task J – 14 CFR and Publications
## Now includes INFOs and SAFOs

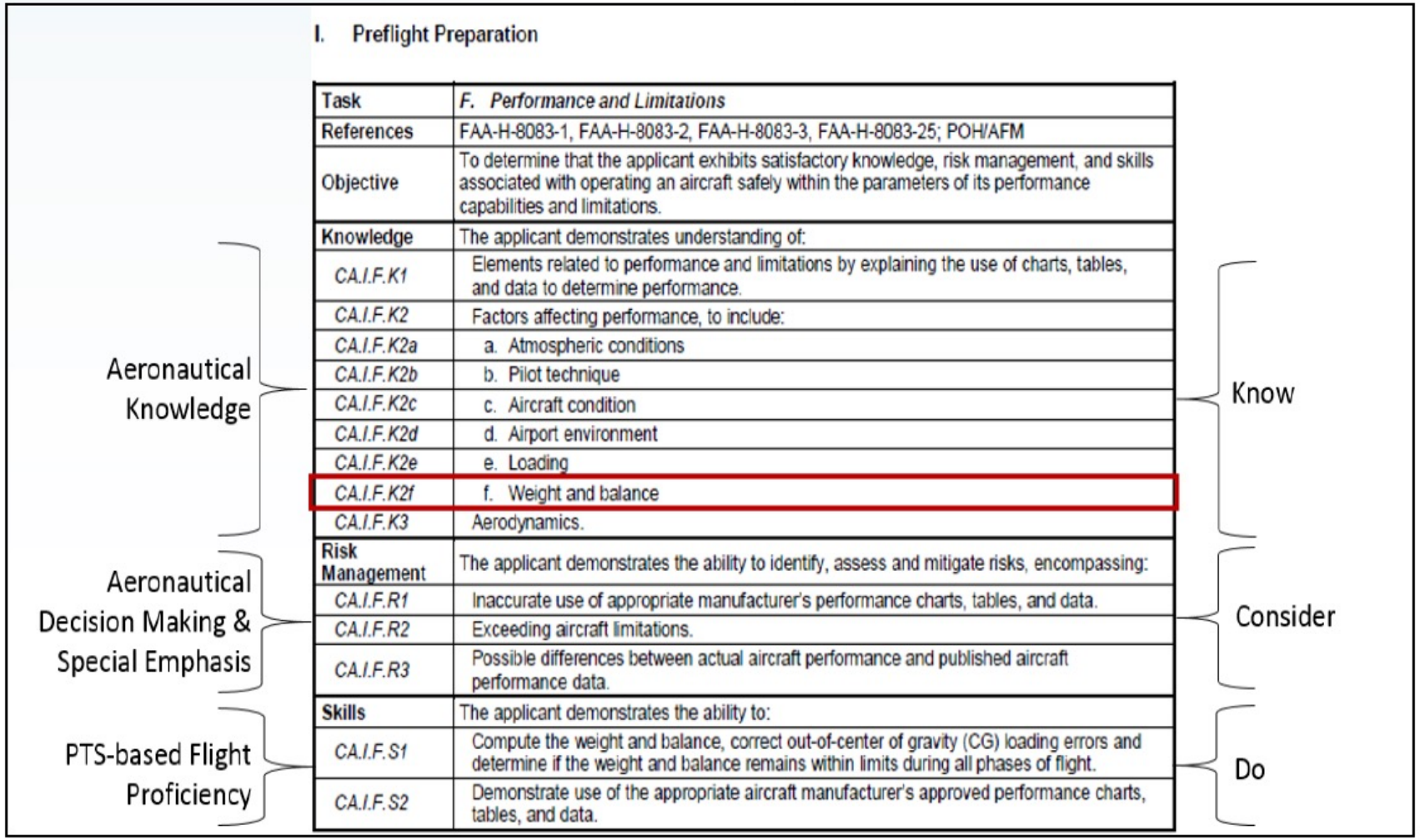
# A/O II – Technical Subject Areas

## Task K – Endorsement and Logbook Entries
Now includes SFAR and Class B endorsements and requirements for CFI renewal and Reinstatements

# A/O II – Technical Subject Areas

## Task N and M – High Altitude Operations – Supplemental Oxygen and Pressurization are separate tasks

# Flight Instructor Airplane ACS



I. Preflight Preparation

| Task | *F. Performance and Limitations* |
|---|---|
| References | FAA-H-8083-1, FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-25; POH/AFM |
| Objective | To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with operating an aircraft safely within the parameters of its performance capabilities and limitations. |
| **Knowledge** | The applicant demonstrates understanding of: |
| *CA.I.F.K1* | Elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance. |
| *CA.I.F.K2* | Factors affecting performance, to include: |
| *CA.I.F.K2a* | a. Atmospheric conditions |
| *CA.I.F.K2b* | b. Pilot technique |
| *CA.I.F.K2c* | c. Aircraft condition |
| *CA.I.F.K2d* | d. Airport environment |
| *CA.I.F.K2e* | e. Loading |
| *CA.I.F.K2f* | f. Weight and balance |
| *CA.I.F.K3* | Aerodynamics. |
| **Risk Management** | The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing: |
| *CA.I.F.R1* | Inaccurate use of appropriate manufacturer's performance charts, tables, and data. |
| *CA.I.F.R2* | Exceeding aircraft limitations. |
| *CA.I.F.R3* | Possible differences between actual aircraft performance and published aircraft performance data. |
| **Skills** | The applicant demonstrates the ability to: |
| *CA.I.F.S1* | Compute the weight and balance, correct out-of-center of gravity (CG) loading errors and determine if the weight and balance remains within limits during all phases of flight. |
| *CA.I.F.S2* | Demonstrate use of the appropriate aircraft manufacturer's approved performance charts, tables, and data. |



**Example from Commercial Pilot Airplane ACS**
**CA.I.F.K2f**

**CA** = Commercial Pilot Airplane (applicable ACS)
**I** = Preflight Preparation (Area of Operation)
**F** = Performance & Limitations (Task)
**K2f** = Weight & Balance (Task element)

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