Using the ACS
Airman Certification Standards

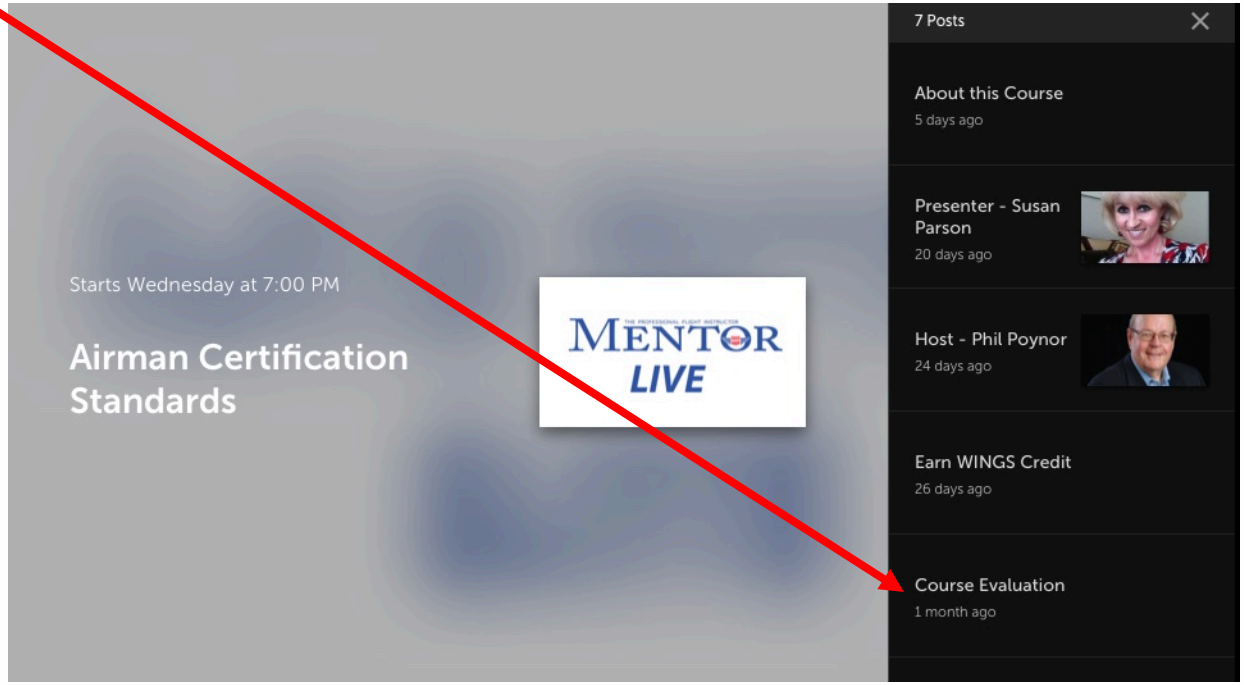
NAFI MentorLIVE

Susan Parson, FAA

November 15, 2017

FAA WINGS Course Link

Course Evaluation



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Introducing Susan Parson

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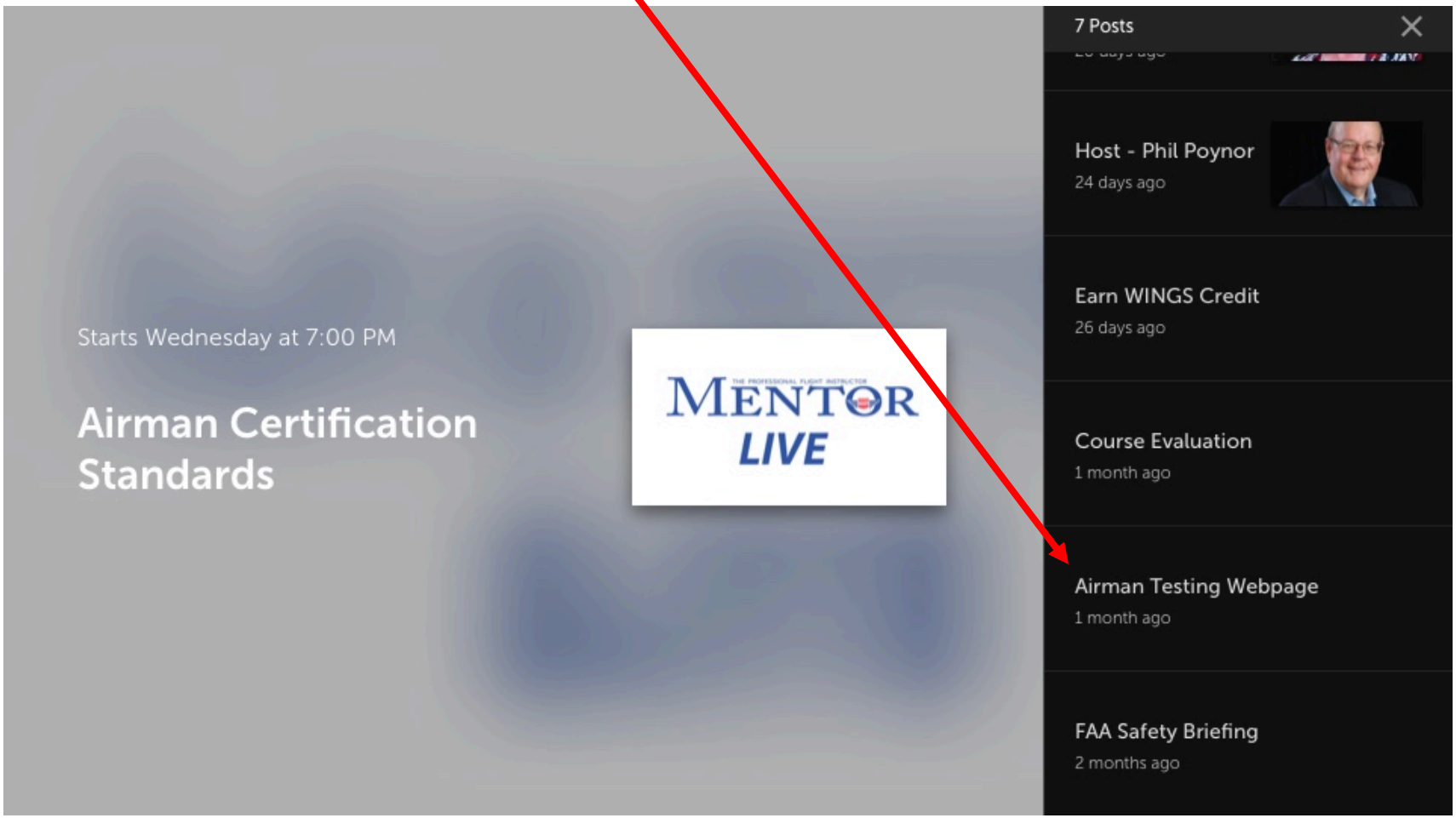
Overview – ACS Changes

- Why, what, who?
- What's new in 2017?
  - Private Pilot Airplane – revised
  - Instrument Airplane rating – revised
  - Commercial Pilot Airplane – new
  - Modification of Slow Flight/Stall Tasks
- How do I use the ACS?
- What's next?
  - ATP & AMT
  - Instructor
  - Rotorcraft/Powered Lift
- Resources

Resources

- Airman Testing Web Page
  - http://www.faa.gov/training_testing/testing/
  - http://www.faa.gov/training_testing/testing/acs/
- FAASafety.gov – ALC-449
  - www.faasafety.gov
- Safety Alert for Operators – 17009
  - https://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safos/
- ACS Focus Team
  - 9-AVS-ACS-Focus-Team@FAA.gov

Airman Testing Web Page



Houston, we have a problem…

2011 Explosion

Ill-advised changes to Fundamentals of Instructing knowledge exam led to skyrocketing failure rate.

Aviation training community demanded action to address fundamental flaws in FAA certification testing, which drives the way industry conducts aviation training.

Why Change?

Longstanding systemic flaws

For each airman certificate or rating, 14 CFR lists required areas of *aeronautical knowledge* and *flight proficiency*.

- FAA developed the PTS to provide practical test performance metrics for flight proficiency in each Area of Operation and Task.
- Each PTS includes a lengthy list of largely undefined "special emphasis" areas.

There has never been a corresponding set of defined "KTS" (knowledge test standards) metrics for the aeronautical knowledge elements tested via "the written" exam.


U.S. Department of Transportation
Federal Aviation Administration

FAA-S-8081-14A

PRIVATE PILOT

Practical Test Standards

for

AIRPLANE
(SEL, MEL, SES, MES)

August 2002

Why change?

- ACS started as a way to fix knowledge testing.
- FAA and industry partners determined the need for a systematic approach that would:

- Provide clear standards for aeronautical knowledge
- List specific behaviors for risk management and ADM
- Consolidate overlapping tasks in the PTS
- Tie the many “special emphasis” items to knowledge and skill
- Connect the standards for knowledge, risk management, and skill to guidance (H-series handbooks), to knowledge test questions, and the practical test

What is the ACS?

Definition & integration of elements = comprehensive standard

Task	*Task A. Steep Turns*
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with steep turns.

Aeronautical knowledge

Knowledge	The applicant demonstrates understanding of:
PA.V.A.K1	Purpose of steep turns.
PA.V.A.K2	Aerodynamics associated with steep turns, to include:
PA.V.A.K2a	a. Coordinated and uncoordinated flight
PA.V.A.K2b	b. Overbanking tendencies
PA.V.A.K2c	c. Maneuvering speed, including impact of weight changes
PA.V.A.K2d	d. Accelerated stalls
PA.V.A.K2e	e. Rate and radius of turn
PA.V.A.K3	Altitude control at various airspeeds.

Know

Aeronautical decision-making & special emphasis

Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.V.A.R1	Failure to divide attention between airplane control and orientation.
PA.V.A.R2	Collision hazards, to include aircraft, terrain, obstacles and wires.
PA.V.A.R3	Low altitude maneuvering/stall/spin.
PA.V.A.R4	Distractions, loss of situational awareness, and/or improper Task management.
PA.V.A.R5	Failure to maintain coordinated flight.

Consider

PTS-based flight proficiency

Skills	The applicant demonstrates the ability to:
PA.V.A.S1	Clear the area.
PA.V.A.S2	Establish the manufacturer's recommended airspeed or, if not stated, a safe airspeed not to exceed V_A.
PA.V.A.S3	Roll into a coordinated 360° steep turn with approximately a 45° bank.
PA.V.A.S4	Perform the Task in the opposite direction
PA.V.A.S5	Maintain the entry altitude ±100 feet, airspeed ±10 knots, bank and ±5°; and roll out on the entry heading, ±10°.

Do

What is the ACS?

I. Preflight Preparation

ACS coding system

Task	*Task D. Cross-Country Flight Planning*
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:
PA.I.D.K1	Route planning, to include consideration of special use airspace and selection of appropriate navigation/communication systems and facilities.
PA.I.D.K2	Altitude selection accounting for terrain and obstacles, glide distance of aircraft, VFR cruising altitudes, and the effect of wind.
PA.I.D.K3	Calculating:
PA.I.D.K3a	a. Time, climb and descent rates, course, distance, heading, true airspeed, and groundspeed
PA.I.D.K3b	b. Estimated time of arrival to include conversion to universal coordinated time (UTC)
PA.I.D.K3c	c. Fuel requirements, to include reserve
PA.I.D.K4	Elements of a VFR flight plan.
PA.I.D.K5	Procedures for activating and closing a VFR flight plan.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.D.R1	Pilot.
PA.I.D.R2	Aircraft.
PA.I.D.R3	Environment (e.g., weather, airports, airspace, terrain, obstacles).
PA.I.D.R4	External pressures.
PA.I.D.R5	Limitations of air traffic control (ATC) services.
PA.I.D.R6	Improper fuel planning.
Skills	The applicant demonstrates the ability to:
PA.I.D.S1	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.
PA.I.D.S2	Apply pertinent information from appropriate and current aeronautical charts, chart supplements; NOTAMs relative to airport, runway and taxiway closures; and other flight publications.
PA.I.D.S3	Create a navigation log and simulate filing a VFR flight plan.
PA.I.D.S4	Recalculate fuel reserves based on a scenario provided by the evaluator.

The ACS assigns a unique code to each element of knowledge, risk management, & skill

PA.I.D.K4

PA = Private Pilot Airplane (*applicable ACS*)

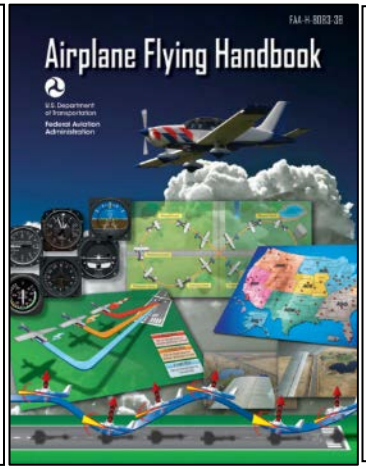
I = Preflight Preparation (*Area of Operation*)

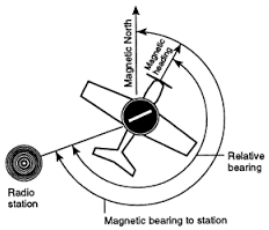
D = Cross-Country Flight Planning (*Task*)

K4 = Elements of a VFR Flight Plan (*Task Element*)

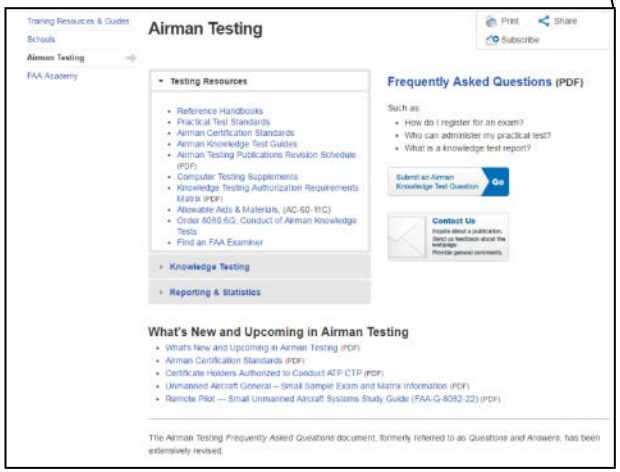
Airman Certification System

Changes to Regulations, Policies, Procedures





No more test questions on fixed card ADF



ACS codes enable continuous alignment

Standards* Guidance Test Questions Public Data

**The ACS is the single-source set of certification standards for both the knowledge exam and practical test.*

It integrates and connects certification standards for

- *Knowledge*
- *Risk management*
- *Skill*

Other Certificates / Ratings

Who created the ACS?

ACS arises from extensive FAA/industry collaboration

- Industry-led development – the ACS has been developed, refined, and tested through three consecutive aviation training industry groups with diverse representation.
- Public comment - the FAA established several dockets for the industry groups to receive public comments on the ACS.
- Prototyping - the FAA and its industry partners conducted ACS prototype activities to test and refine the ACS for private pilot (airplane) and instrument rating (airplane).

What's New?

June 2017:

- First version of ACS for Commercial Pilot – Airplane
- Updates to ACS for Private Pilot Airplane certificate and Instrument-Airplane Rating:
  - Incorporated corrections and changes suggested by stakeholders
  - Streamlined presentation by consolidating certain task elements
  - Standardized phrasing and sequence of certain task elements
- Modified Slow Flight and Stalls Area of Operation in Private and Commercial Airplane ACS.
- Documents published to the FAA website's Airman Testing page with an effective date of June 12, 2017.

What's the Story on Slow Flight?

Maneuvering During Slow Flight in an Airplane

Continuum of reducing aircraft speed and energy state of the aircraft:

Normal flight operations:

Slow flight - Operation at the bottom of the normal flight regime -- develops the notion that the stall warning device indicates an abnormal situation that needs to be addressed.

Abnormal flight operations:

Flight between the stall warning and the stall (up to the critical angle of attack). Part of stall prevention training is to respond to the warning and return to normal flight. Maneuvering flight in this area is not tested under the ACS.

Emergency flight operations:

Full stall and recovery training includes slowing/loading to the break in the stall through the full recovery. The testing standard for stall recovery is appropriately separate from the slow flight standard.

Please see FAA-H-8083-3B - Airplane Flying Handbook Chapter 4 - https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook/

How do I use the ACS?

- Read the entire document!
- Lengthy notes in individual PTS Tasks have been integrated into the appropriate Appendix.
- The ACS also places introductory material from the PTS in specifically focused appendices.
  - Some have been updated.

Appendix Table of Contents

How do I use the ACS?

Area of Operation

I. Preflight Preparation

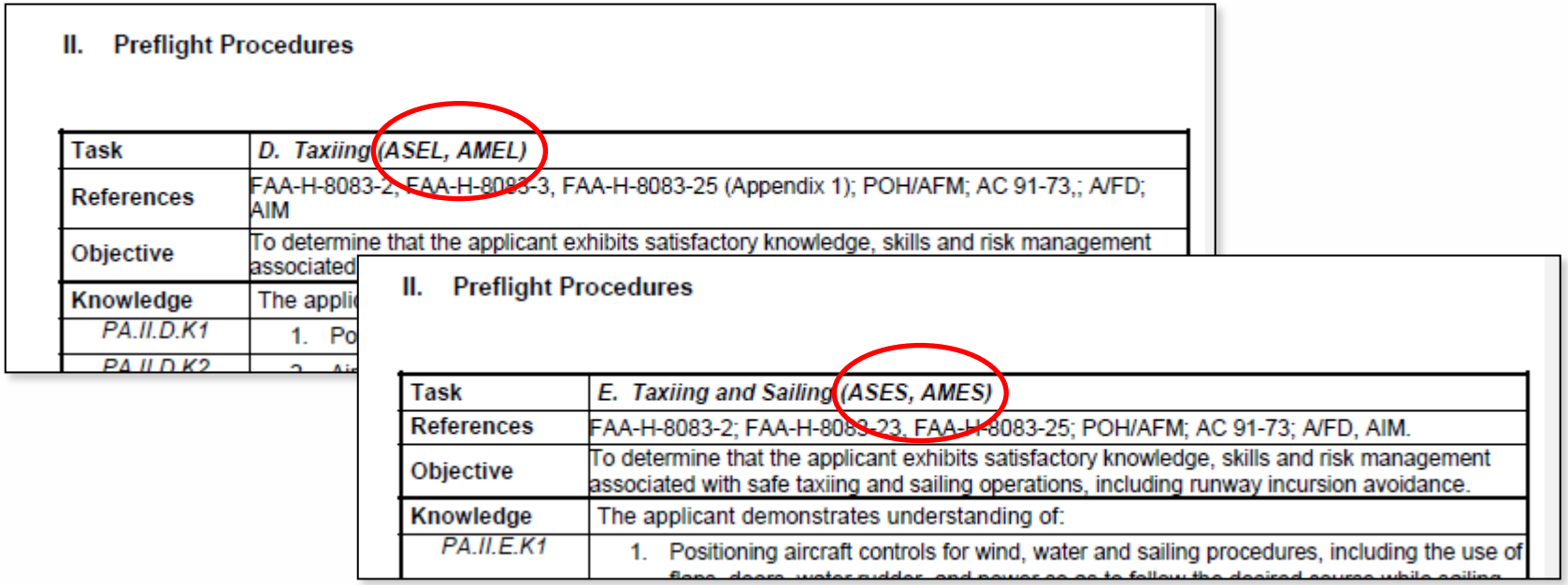
Task References

Elements

Task	*Task E. National Airspace System*
References	14 CFR parts 71, 91, 93; FAA-H-8083-2; Navigation Charts; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with the National Airspace System (NAS) operating under VFR as a private pilot.
Knowledge	The applicant demonstrates understanding of:
PA.I.E.K1	Types of airspace/airspace classes and associated requirements and limitations.
PA.I.E.K2	Charting symbology.
PA.I.E.K3	Special use airspace (SUA), special flight rules areas (SFRA), temporary flight restrictions (TFR), and other airspace areas.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.E.R1	Various classes of airspace.
Skills	The applicant demonstrates the ability to:
PA.I.E.S1	Explain the requirements for basic VFR weather minimums and flying in particular classes of airspace, to include SUA, SFRA, and TFR.
PA.I.E.S2	Correctly identify airspace and operate in accordance with associated communication and equipment requirements.

How do I use the ACS?

A Task within an Area of Operation applies to all classes in the category – in this case, the airplane category – unless the Task title includes a limitation.



II. Preflight Procedures

Task	*D. Taxiing (ASEL, AMEL)*
References	FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-25 (Appendix 1); POH/AFM; AC 91-73,; A/FD; AIM
Objective	To determine that the applicant exhibits satisfactory knowledge, skills and risk management associated
Knowledge	The appli
PA.II.D.K1	1. Po

II. Preflight Procedures

Task	*E. Taxiing and Sailing (ASES, AMES)*
References	FAA-H-8083-2; FAA-H-8083-23, FAA-H-8083-25; POH/AFM; AC 91-73; A/FD, AIM.
Objective	To determine that the applicant exhibits satisfactory knowledge, skills and risk management associated with safe taxiing and sailing operations, including runway incursion avoidance.
Knowledge	The applicant demonstrates understanding of:
PA.II.E.K1	1. Positioning aircraft controls for wind, water and sailing procedures, including the use of

The evaluator's Plan of Action must include all Areas of Operation and Tasks that apply to the category and class of the aircraft brought to the test.

How do I use the ACS?

If the Task includes sub-elements, the evaluator may select an appropriate sub-element to assess.

I. Preflight Preparation

Task	*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:
PA.I.F.K1	Elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance.
PA.I.F.K2	Factors affecting performance to include:
PA.I.F.K2a	a. Atmospheric conditions
PA.I.F.K2b	b. Pilot technique
PA.I.F.K2c	c. Aircraft condition
PA.I.F.K2d	d. Airport environment
PA.I.F.K2e	e. Loading
PA.I.F.K2f	f. Weight and balance
PA.I.F.K3	Aerodynamics.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.F.R1	Inaccurate use of manufacturer's performance charts, tables and data.
PA.I.F.R2	Exceeding aircraft limitations.
PA.I.F.R3	Possible differences between actual aircraft performance and published aircraft performance data.
Skills	The applicant demonstrates the ability to:
PA.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.
PA.I.F.S2	Demonstrate use of the appropriate aircraft manufacturer's approved performance charts, tables and data.

How do I use the ACS?

Evaluator's Plan of Action must include:

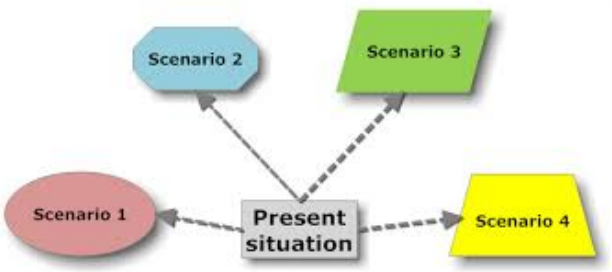
- *At least* one Knowledge Element
- *At least* one Risk Management Element
- *All* Skill Elements from required Tasks
- All subjects missed on the knowledge test

  – The evaluator may use Task Elements from missed knowledge test subjects to meet the minimum requirement for one Knowledge and one Risk management element.

  – The evaluator has the discretion to select additional elements if the knowledge test report or the applicant's response to questions indicates weakness in a given Task.

How do I use the ACS?

As with the PTS, the evaluator's Plan of Action should combine Tasks and Task Elements to create an efficient, scenario-based test.



The ACS should not make either the oral portion or the flight portion of the practical test any longer than it was with the PTS.

Using ACS Codes

I. Preflight Preparation

Task	*Task D. Cross-Country Flight Planning*
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:
PA.I.D.K1	Route planning, to include consideration of special use airspace and selection of appropriate navigation/communication systems and facilities.
PA.I.D.K2	Altitude selection accounting for terrain and obstacles, glide distance of aircraft, VFR cruising altitudes, and the effect of wind.
PA.I.D.K3	Calculating:
PA.I.D.K3a	a. Time, climb and descent rates, course, distance, heading, true airspeed, and groundspeed
PA.I.D.K3b	b. Estimated time of arrival to include conversion to universal coordinated time (UTC)
PA.I.D.K3c	c. Fuel requirements, to include reserve
PA.I.D.K4	Elements of a VFR flight plan.
PA.I.D.K5	Procedures for activating and closing a VFR flight plan.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.D.R1	Pilot.
PA.I.D.R2	Aircraft.
PA.I.D.R3	Environment (e.g., weather, airports, airspace, terrain, obstacles).
PA.I.D.R4	External pressures.
PA.I.D.R5	Limitations of air traffic control (ATC) services.
PA.I.D.R6	Improper fuel planning.
Skills	The applicant demonstrates the ability to:
PA.I.D.S1	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.
PA.I.D.S2	Apply pertinent information from appropriate and current aeronautical charts, chart supplements; NOTAMs relative to airport, runway and taxiway closures; and other flight publications.
PA.I.D.S3	Create a navigation log and simulate filing a VFR flight plan.
PA.I.D.S4	Recalculate fuel reserves based on a scenario provided by the evaluator.

ACS coding system

The ACS assigns a unique code to each element of knowledge, risk management, & skill

PA = Private Pilot Airplane (*applicable ACS*)

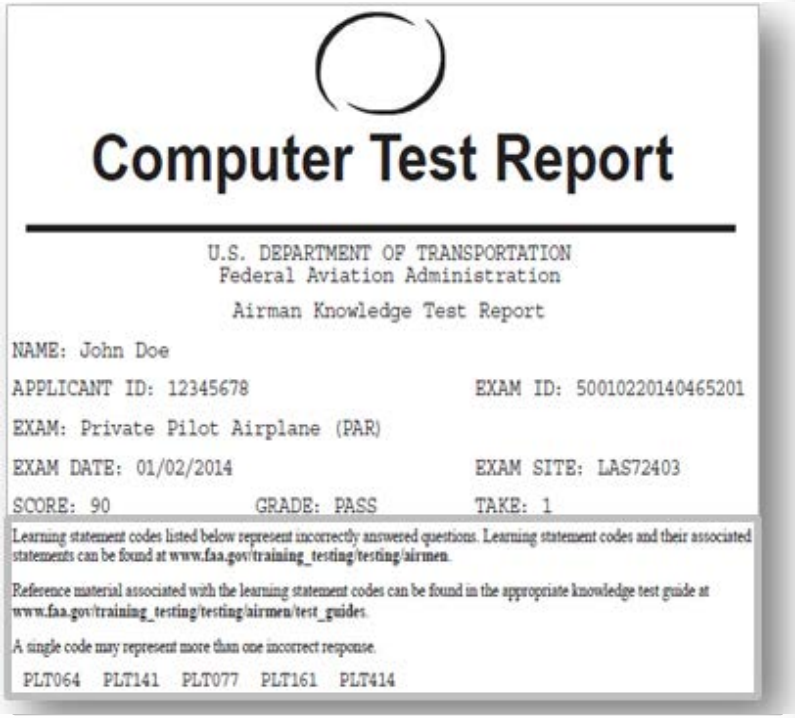
I = Preflight Preparation (*Area of Operation*)

D = Cross-Country Flight Planning (*Task*)

K4 = Elements of a VFR Flight Plan (*Task Element*)

Using ACS Codes

Current State



Computer Test Report

U.S. DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

Airman Knowledge Test Report

NAME: John Doe

APPLICANT ID: 12345678 EXAM ID: 50010220140465201

EXAM: Private Pilot Airplane (PAR)

EXAM DATE: 01/02/2014 EXAM SITE: LAS72403

SCORE: 90 GRADE: PASS TAKE: 1

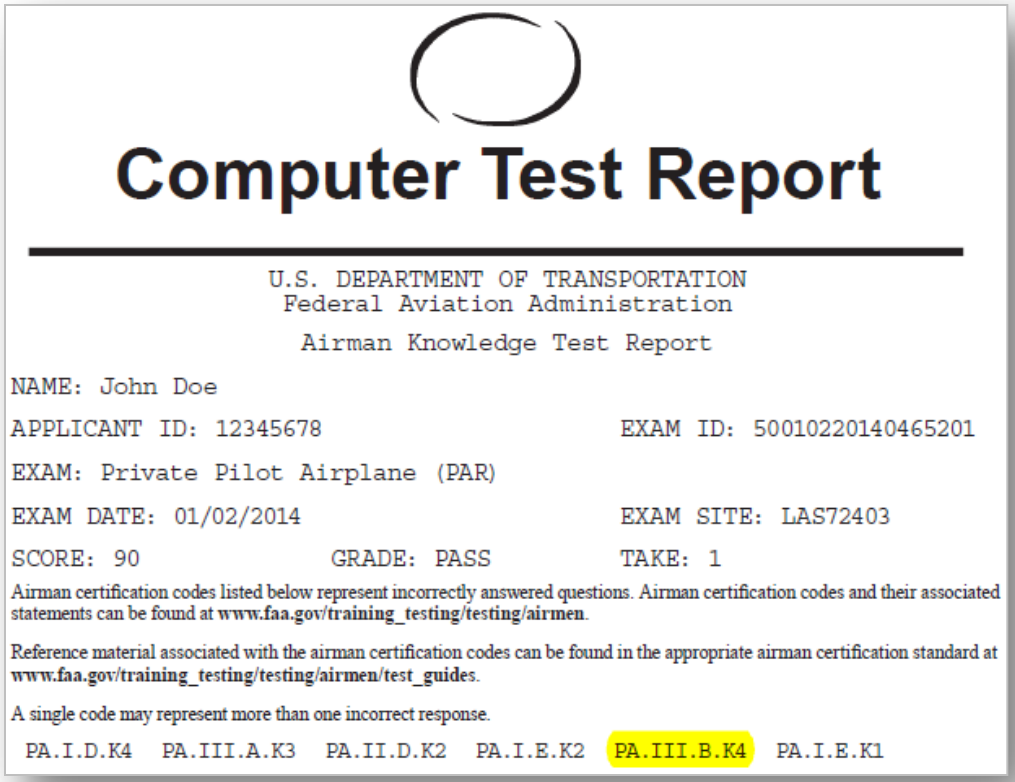
Learning statement codes listed below represent incorrectly answered questions. Learning statement codes and their associated statements can be found at www.faa.gov/training_testing/testing/airmen.

Reference material associated with the learning statement codes can be found in the appropriate knowledge test guide at www.faa.gov/training_testing/testing/airmen/test_guides.

A single code may represent more than one incorrect response.

PLT064 PLT141 PLT077 PLT161 PLT414

Future State



Computer Test Report

U.S. DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

Airman Knowledge Test Report

NAME: John Doe

APPLICANT ID: 12345678 EXAM ID: 50010220140465201

EXAM: Private Pilot Airplane (PAR)

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SCORE: 90 GRADE: PASS TAKE: 1

Airman certification codes listed below represent incorrectly answered questions. Airman certification codes and their associated statements can be found at www.faa.gov/training_testing/testing/airmen.

Reference material associated with the airman certification codes can be found in the appropriate airman certification standard at www.faa.gov/training_testing/testing/airmen/test_guides.

A single code may represent more than one incorrect response.

PA.I.D.K4 PA.III.A.K3 PA.II.D.K2 PA.I.E.K2 PA.III.B.K4 PA.I.E.K1

Using ACS Codes

There is no one-to-one correlation between LSC (PLT) codes, which are anchored in a variety of reference documents, and ACS codes, which are unique to ACS task elements. It is thus not possible to provide a cross-reference, but instructors and evaluators can still benefit from the ACS coding system. Here's how:

- Use the Learning Statement Code Reference Guide to associate the missed knowledge PLT code(s) on the Airman Knowledge Test Report with a subject area. For example:
  - PLT003 Calculate aircraft performance – CG
- Perform a word search in the ACS, and use the results to retrain/retest the applicant's knowledge in the context of specific Tasks.

I. Preflight Preparation

Task	*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:
PA.I.F.K1	Elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance.
PA.I.F.K2	Factors affecting performance to include:
PA.I.F.K2a	a. Atmospheric conditions
PA.I.F.K2b	b. Pilot technique
PA.I.F.K2c	c. Aircraft condition
PA.I.F.K2d	d. Airport environment
PA.I.F.K2e	e. Loading
PA.I.F.K2f	f. Weight and balance
PA.I.F.K3	Aerodynamics.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.F.R1	Inaccurate use of manufacturer's performance charts, tables and data.
PA.I.F.R2	Exceeding aircraft limitations.
PA.I.F.R3	Possible differences between actual aircraft performance and published aircraft performance data.
Skills	The applicant demonstrates the ability to:
PA.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.
PA.I.F.S2	Demonstrate use of the appropriate aircraft manufacturer's approved performance charts, tables and data.

What's Next for the ACS?

In development:

Airline Transport Pilot (Airplane)

Instructor (Airplane)

Aircraft Mechanic Certificate with Airframe and/or Powerplant ratings

FAA & ACS Working Group members will jointly determine priority for development of ACS in additional categories/classes and certificates/ratings.

ATP ACS

Challenges:

- Certification vs Type Rating
- ATP Certification Training Program
- Standards for certification (not training)
- Moving the Notes to Appendices

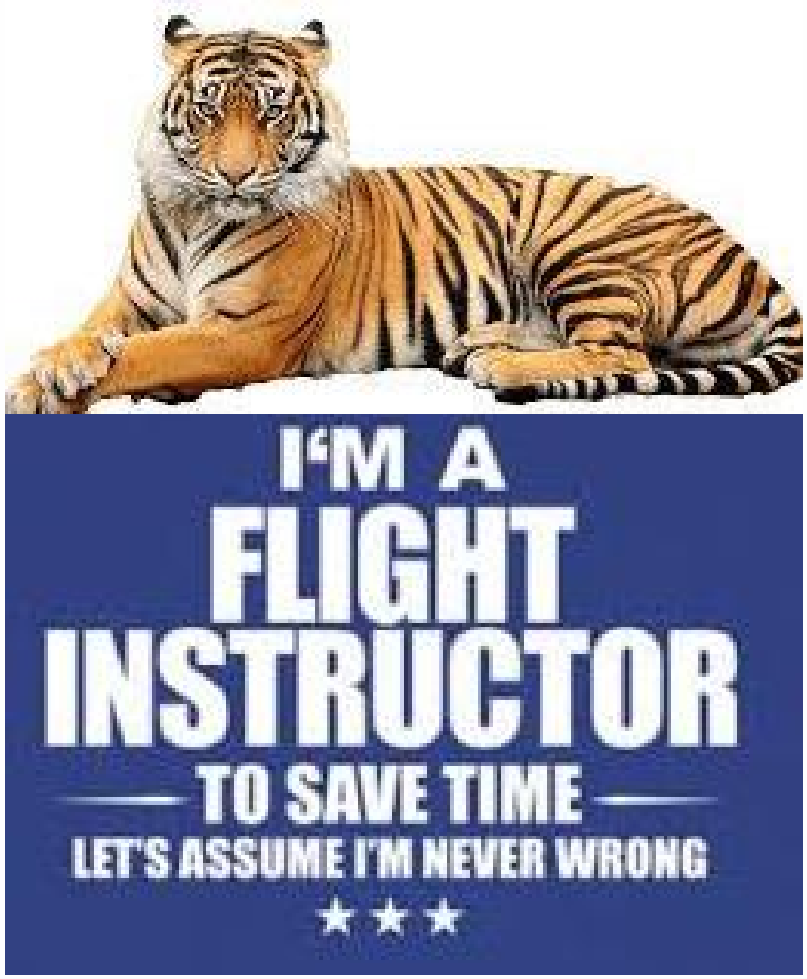
Status:

- FAA has developed the initial draft
- ACS WG Industry representatives will review
- Public comment opportunity

Instructor ACS

Challenges:

- Make it practical!
- Structure – “different breed of cat”
- Risk management – teach AND do



Status

- ACS WG completing initial draft
- FAA/Industry team will review
- “Tabletop” prototype ahead
- Public comment opportunity

Instructor ACS – Sneak Preview

Instructor ACS

Section 1 – Fundamentals of Instructing
Section 2 – Ground Instructor
Section 3 – Flight Instructor – Airplane

I. AOO – Fundamentals of Instructing
II. AOO – Technical Subject Areas
III. AOO - Preflight Preparation
IV. AOO – Preflight Lesson on a Maneuver to be Performed in Flight
V. AOO – Preflight Procedures
VI. AOO – Airport & Seaplane Base Operations
VII. AOO – Takeoffs, Landings, & Go-Arounds
VIII. AOO – Fundamentals of Flight
IX. AOO – Performance Maneuvers
X. AOO – Ground Reference Maneuvers
XI. AOO – Slow Flight, Stalls, & Spins
XII. AOO – Basic Instrument Maneuvers
XIII. AOO – Emergency Procedures
XIV. AOO – Multiengine Operations (to be developed)
XV. AOO – Postflight Procedures

Instructor ACS

AOO		Objective	Knowledge	Risk Management	Skill
I	Fundamentals of Instructing (Tasks A to F)	To determine that the applicant understands the elements of *BLANK* and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.	The applicant demonstrates understanding of:	The applicant demonstrates the ability to identify and mitigate the risks arising from:	The applicant demonstrates the ability to:

AOO		Objective	Knowledge	Risk Management	Skill
II	Technical Subject Areas (Tasks A to O)	To determine that the applicant understands the elements of *BLANK* and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.	The applicant demonstrates instructional knowledge by describing and explaining: -- Some "IAW referenced Task"	The applicant demonstrates the ability to identify and mitigate the risks arising from: -- Some (e.g., B,C) are "intentionally left blank" -- Some (e.g., D) aligned with wording in CAX -- Some (e.g., F) "IAW referenced Task"	The applicant demonstrates the ability to: A/B/D/E/F/G/H/J/K/L/M/N/O Deliver instruction on *BLANK* in accordance with the referenced Task C - Prepare simulated logbook entries… I - Provide a pre-takeoff briefing…

IV	Preflight Lesson (Task A)	Same	Same	Same	Deliver instruction on the selected maneuver, using teaching methods and aids that incorporate K1 through K3 above as appropriate.

V	Preflight Procedures (Tasks A to F)	Same	Same	Same *Elements as noted in the Referenced Task R2 Instructional risks associated with *BLANK*.	The applicant demonstrates the ability to: **S1**: Demonstrate and simultaneously explain *BLANK* as noted in the referenced Task. **S2**: Analyze and correct simulated common errors related to *BLANK*, to include those stipulated in Kxx through Kxx above.

Instructor ACS - FOI

AOO		Objective	Knowledge	Risk Management	Skill
I	Fundamentals of Instructing (Tasks A to F)	To determine that the applicant understands the elements of *BLANK* and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.	The applicant demonstrates understanding of:	The applicant demonstrates the ability to identify and mitigate the risks arising from:	The applicant demonstrates the ability to:

Task C: The Teaching Process

Reference: *FAA-H-8083-9A.*

Objective: To determine that the applicant exhibits instructional knowledge of the teaching process by describing:

1. Preparation of a lesson.
2. Organization of material.
3. Training delivery methods:
   a. Lecture method.
   b. Guided discussion method.
   c. Computer-assisted learning method.
   d. Demonstration-performance method.
   e. Drill and practice method.
4. Problem based learning.
5. Instruction aids and training technologies.

Task F: Techniques of Flight Instruction

Reference: *FAA-H-8083-9A.*

Objective: To determine that the applicant exhibits instructional knowledge of instructor responsibilities and professionalism by describing:

1. Obstacles in learning during flight instruction.
2. Demonstration-performance training delivery.
3. Positive exchange of controls.
4. Sterile cockpit.
5. Use of distractions.
6. Integrated flight instruction.
7. Assessment of piloting ability.
8. Aeronautical decision making.

Task	***Task C. Teaching Process and Methods*** PTS I.C, F
References	FAA-H-8083-9A
Objective	To determine that the applicant understands the elements of the teaching process and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates understanding of:
AI.I.C.K1	Essential teaching skills, to include:
AI.I.C.K1a	a. Various methods of presentation (e.g., lecture, discussion, scenario).
AI.I.C.K1b	b. Organization of content.
AI.I.C.K1c	c. Recognition and accommodation of differences in learning style.
AI.I.C.K1d	d. Importance of communicating the "why" and "how" as well as the "what."
AI.I.C.K1e	e. Response to learner questions.
Risk Management	The applicant demonstrate the ability to identify and mitigate the risks arising from:
AI.I.C.R1	Failure to use effective teaching methods.
Skills	The applicant demonstrates the ability to:
AI.I.C.S1	Prepare an instructional plan of action using teaching methods and materials appropriate for Task and learner characteristics in a scenario specified by the evaluator, to include:
AI.I.C.S1b	a. Aeronautical knowledge ground lesson applicable for a classroom.
AI.I.C.S1c	b. Maneuver ground lesson for an individual pilot in training.
AI.I.C.S1d	c. Maneuver introduction for a flight lesson.

Instructor ACS

Skills	The applicant demonstrates the ability to:
AI.I.F.S1	Use scenario-based training (SBT) to demonstrate, teach, and assess risk management and ADM skills in the context of a Task and scenario specified by the evaluator.
AI.I.F.S2	Identify, assess, and mitigate risks commonly associated with providing flight instruction through maintaining:
AI.I.F.S2a	a. Awareness and oversight of the learner's actions, with timely intervention or mitigation as needed.
AI.I.F.S2b	b. Awareness of the learner's cognitive/physiological state, with timely action to mitigate anxiety, fatigue, etc.
AI.I.F.S2c	c. Overall situational awareness while delivering flight instruction, to include continuous awareness of the aircraft's dynamic state and navigation position as well as vigilance for unexpected events in the training environment.
AI.I.F.S3	Model and teach safety practices, to include maintaining:
AI.I.F.S3a	a. Collision avoidance while simultaneously providing instruction.
AI.I.F.S3b	b. A "sterile cockpit" as appropriate.
AI.I.F.S3c	c. Coordinated flight.
AI.I.G.S3d	d. Positive exchange of flight controls.

Instructor ACS

AOO	Objective	Knowledge	Risk Management	Skill
Task M: Logbook Entries and Certificate Endorsements References: 14 CFR part 61, AC 61-65. II Objective. To determine that the applicant exhibits instructional knowledge of the elements related to logbook entries and certificate endorsements, describing: 1. Required logbook entries for instruction given. 2. Required student pilot certificate endorsements, including appropriate logbook entries. 3. Preparation of a recommendation for a pilot practical test, including appropriate logbook entry for: a. Initial pilot certification. b. Additional pilot certification. c. Additional aircraft qualification. 4. Required endorsement of a pilot logbook for the satisfactory completion of the required FAA flight review. 5. Required flight instructor records.	To determine that the applicant understands the elements of *BLANK* and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.	The applicant demonstrates instructional knowledge by describing and explaining: -- Some (e.g., D) "IAW referenced Task"	The applicant demonstrates the ability to identify and mitigate the risks arising from: -- Some (e.g., B,C) are "intentionally left blank" -- Some (e.g., D) aligned with wording in CAX -- Some (e.g., F) "IAW referenced Task"	The applicant demonstrates the ability to: Deliver instruction on *BLANK* in accordance with the referenced Task C - Prepare simulated logbook entries. I - Provide a pre-takeoff briefing…

Technical Subject Areas (Tasks A to O)

Task	*Task C: Endorsements and Logbook Entries* PTS II.M
References	14 CFR part 61, AC 61-65
Objective	To determine that the applicant understands the elements of logbook entries and endorsements and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
AIA.II.C.K1	Required logbook entries for instruction given.
AIA.II.C.K2	Required student pilot solo endorsements and appropriate logbook entries.
AIA.II.C.K3	Other required pilot logbook endorsements (e.g., tailwheel, high performance).
AIA.II.C.K4	Preparation of a recommendation for a pilot practical test, to include appropriate logbook entry and relevant certificate/rating application for:
AIA.II.C.K4a	a. Initial pilot certification
AIA.II.C.K4b	b. Additional pilot certification
AIA.II.C.K4c	c. Additional aircraft qualification
AIA.II.C.K5	Required endorsement of a pilot logbook for the satisfactory completion of the required FAA flight review.
AIA.II.C.K6	Required flight instructor records.
Risk Management	The applicant demonstrate the ability to teach and manage the risks arising from:
AI.II.C.R1	[Intentionally left blank]
Skills	The applicant demonstrates the ability to:
AIA.II.C.S1	Prepare simulated logbook entries and endorsements required for at least two of the events specified in K1-K5 above.

Instructor ACS

VII. Takeoffs, Landings, and Go-Arounds

Note: *The examiner must select at least two takeoff and two landing Tasks.*

Task A: Normal and Crosswind Takeoff and Climb (ASEL and ASES)

References: FAA-H-8083-3, FAA-H-8083-23, FAA-S-8081-12, FAA-S-ACS-6; POH/AFM.

Objective: To determine that the applicant:

1. Exhibits instructional knowledge of the elements of a normal and crosswind takeoff and climb by describing:
   a. Procedures before taxiing onto the runway or takeoff area to ensure runway incursion avoidance. Verify ATC clearance/no aircraft on final at non-towered airports before entering the runway, and ensure correct takeoff runway positioning of the airplane with consideration for other aircraft, surface conditions, and wind.
   b. Normal and crosswind takeoff and lift-off procedures.
   c. Difference between a normal and a glassy-water takeoff (ASES).
   d. Proper climb attitude, power setting, and airspeed (V_Y).
   e. Proper use of checklist.
2. Exhibits instructional knowledge of common errors related to a normal and crosswind takeoff and climb by describing:
   a. Improper runway incursion avoidance procedures.
   b. Improper use of controls during a normal or crosswind takeoff.
   c. Inappropriate lift-off procedures.
   d. Improper climb attitude, power setting, and airspeed (V_Y).
   e. Improper use of checklist.
3. Demonstrates and simultaneously explains a normal or a crosswind takeoff and climb from an instructional standpoint.
4. Analyzes and corrects simulated common errors related to a normal or a crosswind takeoff and climb.

VII. Takeoffs, Landings, and Go-Arounds

Note: The evaluator must select at least two Takeoff and two Landing Tasks from Area of Operation VII, Takeoffs, Landings, and Go-Arounds.

For each of the following Tasks included in this Area of Operation, refer to the descriptions contained in either the CAX ACS or the PAR ACS document as indicated:

*Referenced Task Knowledge, Skill and Risk Management elements when noted will be preceded by an AIA for Instructor Airplane, **i.e. AIA.CA.IV.A.K3 = Appropriate aircraft configuration**

Task	***Task A. Normal Takeoff and Climb*** PTS VII.A
Foundational ACS	Refer to the Commercial Pilot ACS, Task IV.A., Normal Takeoff and Climb
Objective	To determine that the applicant understands the elements of normal takeoff and climb and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
*	Normal takeoff and climb as noted in the referenced Task.
AIA.VII.A.K2	Common errors related to normal takeoff and climb encompassing:
AIA.VII.A.K2a	a. Improper use of takeoff performance data and limitations
AIA.VII.A.K2b	b. Improper use of checklist
AIA.VII.A.K2c	c. Improper runway incursion avoidance procedures
AIA.VII.A.K2d	d. Improper use of controls during a normal or crosswind takeoff
AIA.VII.A.K2e	e. Inappropriate lift-off procedures
AIA.VII.A.K2f	f. Improper climb attitude, power setting, and airspeed (V_Y)
AIA.VII.A.K2g	g. Failure to confirm instrument indications (proper power, oil pressure, fuel flow, airspeed alive) prior to rotation
AIA.VII.A.K2h	h. Failure to maintain directional control
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
*	Elements of normal takeoff and climb as noted in the referenced Task.
AIA.VII.A.R2	Instructional risks associated with normal takeoff and climb.
Skills	The applicant demonstrates the ability to:
*	Demonstrate and simultaneously explain a normal takeoff and climb as noted in the referenced Task.
AIA.VII.A.S2	Analyze and correct simulated common errors related to normal takeoff and climb, to include those stipulated in K2a through K2g above.

Rotorcraft and Powered Lift

FAA & ACS Working Group members will jointly determine priority for development of ACS in additional categories/classes and certificates/ratings.

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Title	Publication Date	Change Date	Status
Commercial Pilot — Airplane Airman Certification Standards (FAA-S-ACS-7, Changes 1 & 2) (PDF)	June 2017	6/12/2017	Effective June 12, 2017
Instrument Rating Airman Certification Standards (FAA-S-ACS-8A) (PDF)	June 2017	n/a	Effective June 12, 2017
Private Pilot - Airplane Airman Certification Standards (FAA-S-ACS-6A, Change 1) (PDF)	June 2017	6/12/2017	Effective June 12, 2017
Remote Pilot – Small Unmanned Aircraft Systems Airman Certification Standards (FAA-S-ACS-10) (PDF)	July 2016	n/a	Effective August 29, 2016

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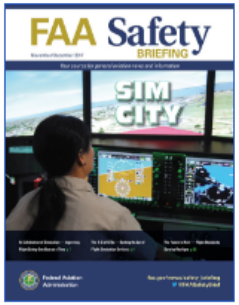

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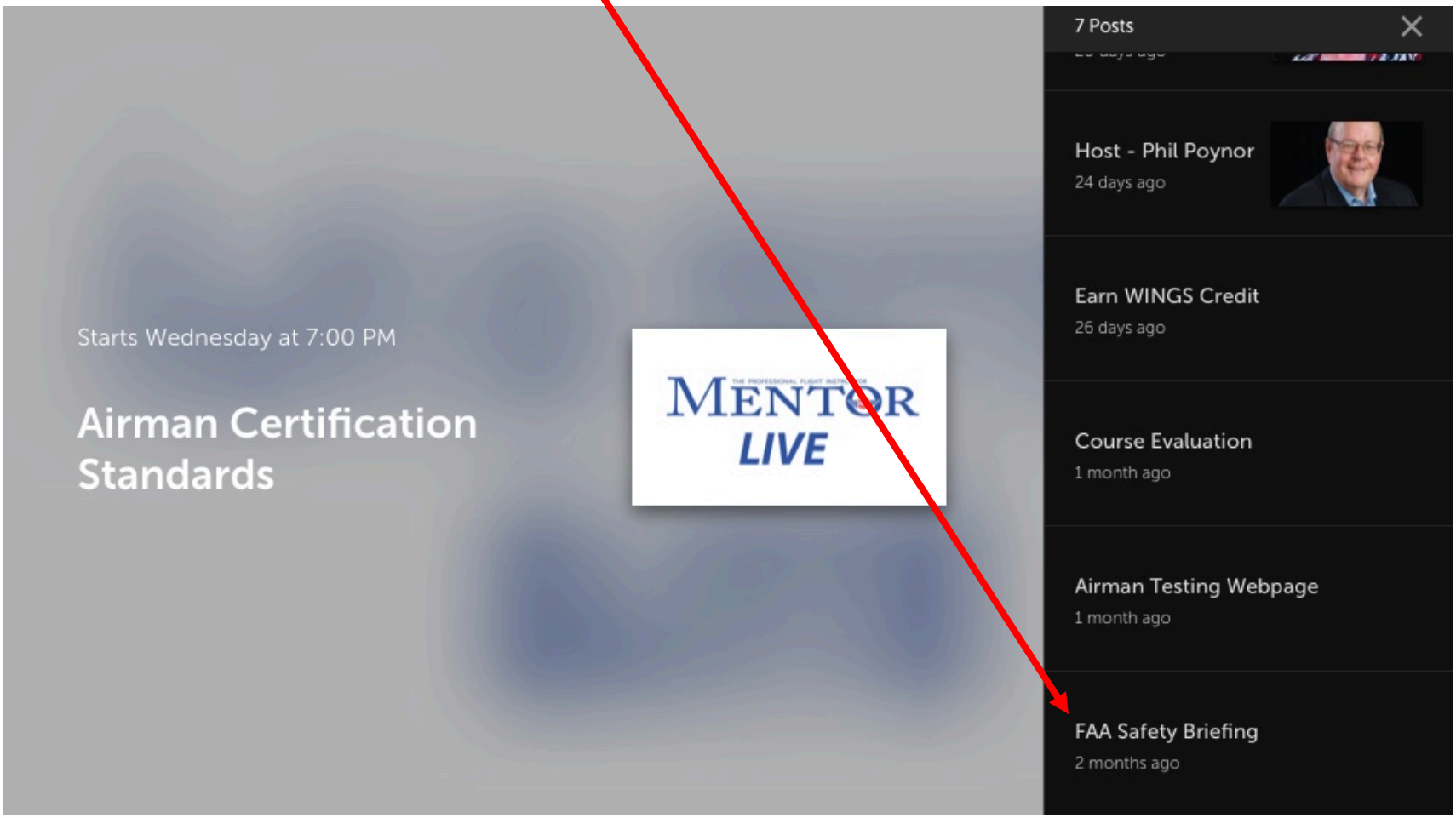

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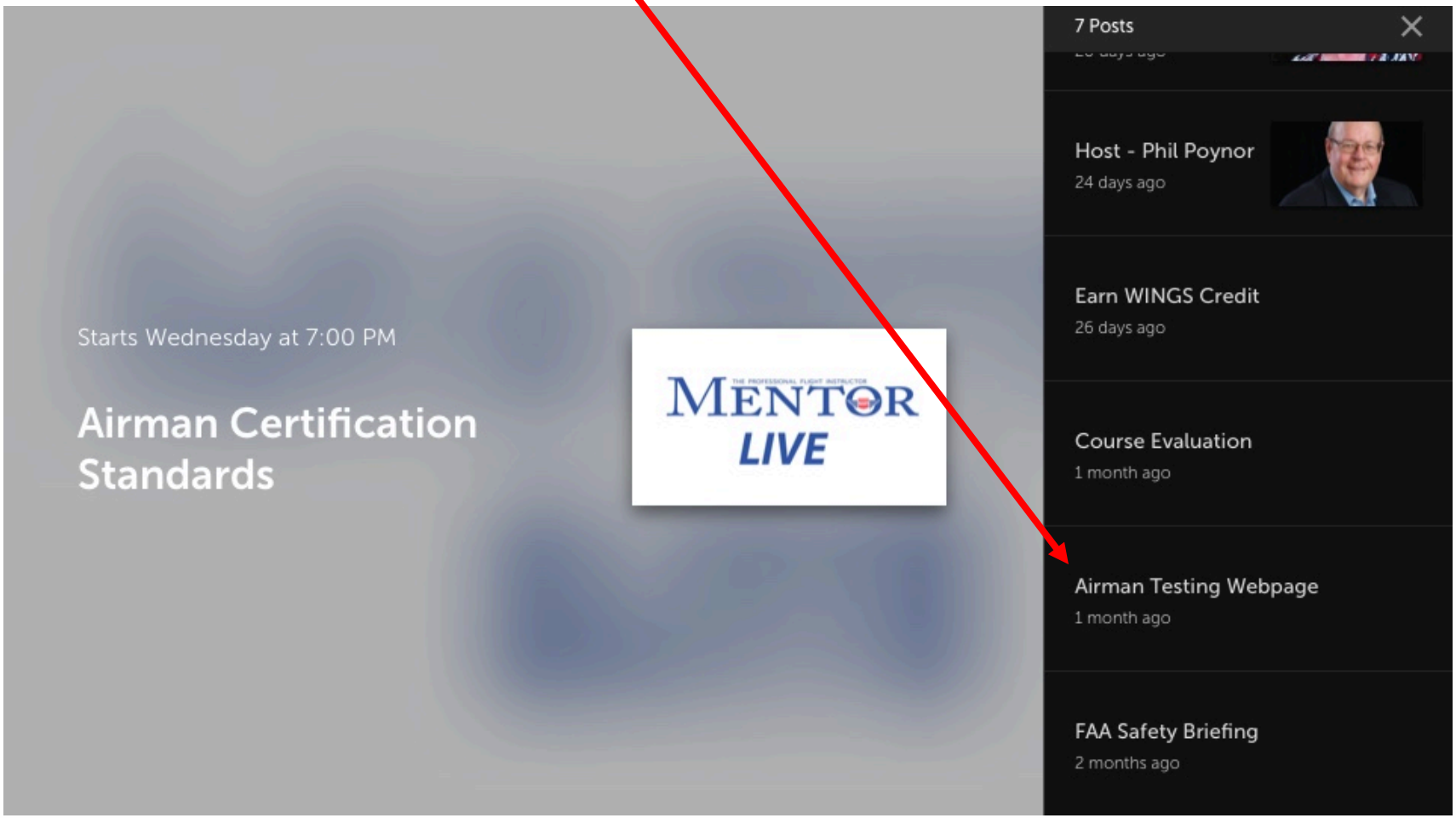

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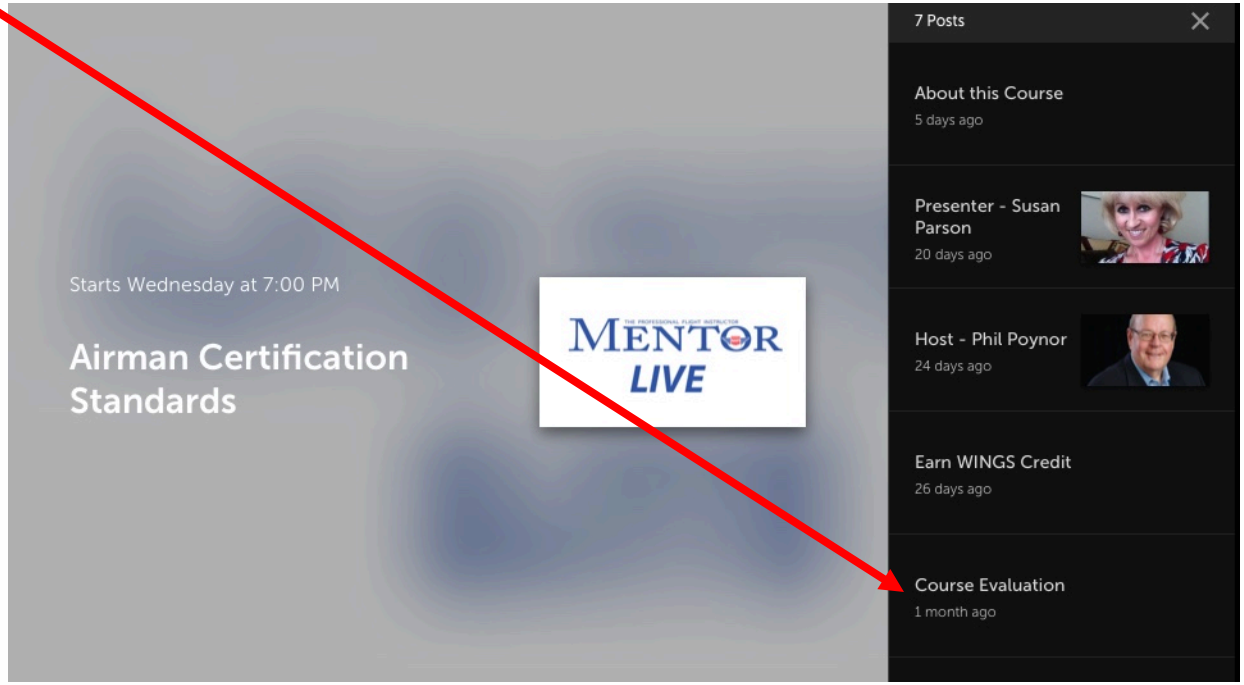

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