

Unit 1 (GROUND) Aerodynamics

Lesson Objective

The flight instructor candidate will develop instructional level knowledge of aerodynamics including the four forces of flight, maneuvering flight, aerodynamics stalls and load factor.

Preparation

- PHAK (FAA-H-8083-25C) – Chapter 5: Aerodynamics of Flight
- AFH (FAA-H-8083-3C) – Chapter 5: Maintaining Aircraft Control: Upset Prevention and Recovery Training
- Advisory Circular 61-67C (with Change 1 & 2) Stall and Spin Awareness Training
- Air Safety Institute: Stall and Spin Accidents: Keep the Wings Flying

Content

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| ☐ Lift | ☐ Stalls |
| ☐ Drag | ☐ Accident Analysis |
| ☐ Thrust | ☐ Stall Entries |
| ☐ Weight | ☐ Angle of Attack Indicator |
| ☐ Climbing Flight | ☐ Load Factor |
| ☐ Descending Flight | ☐ Velocity vs G Diagram |
| ☐ Turning Flight | ☐ Teaching Stalls |

Completion Standards

- ☐ The flight instructor candidate can explain the aerodynamic concepts that apply to maneuvering flight and stall awareness.

Date_____	Student Name_____	Student Signature_____
Aircraft ID_____	Instructor Name_____	Instructor Signature_____
Complete _____	Discussion Time (1.0) _____	Flight Time (0) _____

Unit 2 (FLIGHT) Slips, Skids and Stalls

Lesson Objective

The flight instructor candidate will develop instructional level proficiency in demonstrating a variety of stalls and stall awareness exercises.

Content

Preflight Discussion

- ☐ Review stall recovery procedure
- ☐ Review spin recovery procedure
- ☐ PAVE/CARE/TEAM

Flight Training

- ☐ Rudder Coordination Exercises
 - ☐ Rolling from bank to bank
 - ☐ Rolling from bank to bank in a climb
 - ☐ Bank without turning
- ☐ Minimum Controllable Airspeed
 - ☐ Straight and Level
 - ☐ Level Turns
 - ☐ Straight Climbs
 - ☐ Straight Descents
 - ☐ Use of Distractions
- ☐ Power Off Stall
 - ☐ Straight Ahead
 - ☐ Left Turn
 - ☐ Right Turn
- ☐ Power On Stall
 - ☐ Straight Ahead
 - ☐ Left Turn
- ☐ Right Turn
- ☐ Simulated Engine Failure with Turnback
- ☐ Forward Slip
 - ☐ Straight Ahead
 - ☐ Slipping Turns
- ☐ Skidding Turns
- ☐ Cross Controlled Stalls
 - ☐ Slipping Stalls
 - ☐ Skidding Stalls
- ☐ Stalls during Go-Arounds
- ☐ Elevator Trim Stall
- ☐ Secondary Stall
- ☐ Accelerated Stall
- ☐ Falling Leaf (rudder stall exercise)
- ☐ One Turn Spin (Instructor Demo)
- ☐ Power Off 180 Approach and Landing

Completion Standards

- ☐ The flight instructor candidate demonstrates instructional proficiency while demonstrating stalls and stall awareness exercises.

Date_____	Student Name_____	Student Signature_____
Aircraft ID_____	Instructor Name_____	Instructor Signature_____
Complete _____	Discussion Time (0.5) _____	Flight Time (1.5) _____

Unit 3 (GROUND) Spin Aerodynamics

Lesson Objective

The flight instructor candidates will develop instructional knowledge on spin aerodynamics, spin entries, spin recoveries and the spin characteristic of common GA training airplanes.

Preparation

- 14 CFR 61.183(i) - Eligibility requirements (*Flight Instructors other than Flight instructors with a Sport Pilot Rating*)
- 14 CFR 91.303 – Aerobatic Flight
- 14 CFR 91.307 – Parachutes and parachuting
- Flight Instructor ACS: Area of Operation X. Task I. Spin Awareness and Spins
- Spin Characteristics of Cessna Models 150, A150, 152, A152, 172, R172 & 177

Content

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|---|---|
| ☐ Causes of a Spin | ☐ Effect of controls in a spin |
| ☐ Spin Recognition | ☐ Spin Recovery Procedures |
| ☐ Spin vs Spiral | ○ PARE |
| ☐ Phases of the Spin | ○ BEGGS |
| ○ Incipient | ○ Aircraft Specific |
| ○ Developed | ☐ CG Ranges |
| ○ Recovery | ☐ Aircraft Spin Certification Requirements |
| ☐ Load Factor during spin and recovery | ☐ Aircraft-specific Spin Testing, Certification and Recovery |
| ☐ Orientation during a spin | ☐ Airmen Spin Training |
| ☐ Instrument indications during a spin | |

Completion Standards

- ☐ The flight instructor candidate can explain spin aerodynamics, spin entries, spin recoveries and the spin characteristics of common GA training airplanes.

Date_____	Student Name_____	Student Signature_____
Aircraft ID_____	Instructor Name_____	Instructor Signature_____
Complete _____	Discussion Time (1.0) _____	Flight Time (0) _____

Unit 4 (FLIGHT) Spin Orientation

Lesson Objective

The flight instructor candidate will develop confidence in executing the spin recovery procedure

Content

Preflight Discussion

- ☐ Review stall recovery procedure
- ☐ Review spin recovery procedure
- ☐ PAVE/CARE/TEAM

Flight Training

- ☐ Incipient Spins - Left and Right
 - Prevention
 - Entry
 - Recovery
- ☐ Two Turn Spins – Left and Right
- ☐ Spin Orientation and Dynamics
 - ☐ Phases
 - ☐ Modes
 - ☐ Pitch, Roll, Yaw
- ☐ Power Off 180 Approach and Landing

Completion Standards

- ☐ The flight instructor candidate demonstrates proficiency in recovering from incipient spins.

Date_____	Student Name_____	Student Signature_____
Aircraft ID_____	Instructor Name_____	Instructor Signature_____
Complete _____	Discussion Time (0.5) _____	Flight Time (1.5) _____

Unit 5 (FLIGHT) Instructional Proficiency

Lesson Objective

The flight instructor candidate will demonstrate instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures

Content

Preflight Discussion

- ☐ Flight instructor candidate presents Spin Aerodynamics ground lesson
- ☐ PAVE/CARE/TEAM

Flight Training

- ☐ Spin Phases with Recoveries
 - Incipient Spins and Recoveries
 - Developed Spins and Recoveries
- ☐ Spin Recovery Instruction Practice
- ☐ Skidding Turn Spin Entries
- ☐ Power On Spin Entries (Go-around/Departure Climb profile)
- ☐ Spin-to-Spiral Transitions
- ☐ Power Off 180 Approach and Landing

Completion Standards

- ☐ The flight instructor candidate demonstrates instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures

Date_____	Student Name_____	Student Signature_____
Aircraft ID_____	Instructor Name_____	Instructor Signature_____
Complete _____	Discussion Time (1.0) _____	Flight Time (1.0) _____