

Lesson 28. Steep turns and steep spiral

Ground 0.8 hr | Dual 1.5 hr | ACS AI.IV.A, AI.IX.A, AI.IX.B

CFI CANDIDATE		DATE	SUPERVISING INSTRUCTOR	
AIRCRAFT	N41459 Warrior	Ground only	FLIGHT TIME	GROUND TIME

OBJECTIVE

The candidate teaches steep turns and the steep spiral from the right seat. At the end they can explain load factor and the overbanking tendency to a Student in terms the Student can feel, fly both maneuvers to commercial tolerance while narrating, and catch the specific error each maneuver produces before it becomes a recovery.

These two maneuvers are together because they are the same lesson in aerodynamics seen twice. Both are steep, both punish an unattended pitch, and in both the airplane will do something the Student did not ask for if they stop flying it for a moment.

LESSON STEPS: THE ELEMENTS, IN TEACHING ORDER

Check each element as it is taught. Leave anything not done blank. Sign once at the bottom.

- Load factor in a level turn, taught so a Student can feel it rather than compute it
FAA-H-8083-3C, aerodynamics
- Overbanking tendency, and why it appears where it does
FAA-H-8083-3C
- Steep turns: entry, the pitch and power that hold altitude, and the rollout lead
AI.IX.A
- The stall speed increase with bank, taught as the reason for the airspeed limit
AI.IX.A
- Steep spiral: a constant-radius gliding descent around a point in a wind
AI.IX.B
- Engine management in a prolonged glide, and clearing the engine
AI.IX.B
- The steep spiral as the shape of an emergency descent over a chosen field
AI.XII.B
- Teaching a maneuver where the Student's instinct is exactly wrong
AI.IV.A

COMPLETION STANDARDS

- The candidate delivers the preflight ground lesson on steep turns and the steep spiral, covering all seven items of the brief, and explains load factor and its effect on stall speed without using arithmetic the Student has to do in the airplane.
- The candidate flies steep turns in both directions to commercial pilot tolerances from the right seat while narrating continuously, and does not go silent through either roll-in or either rollout.
- The candidate flies a steep spiral to commercial pilot tolerances, maintaining a constant radius around the point through at least the number of turns the current AI.IX.B task requires, and clears the engine at the interval they briefed.
- The candidate talks the Simulated Student through a steep turn in which altitude is lost, and directs a reduction in bank before any change in pitch.
- The candidate names the overbanking tendency as the cause when the Simulated Student's bank increases, rather than only directing a correction.
- The candidate takes the flight controls using the three-way exchange, out loud, in both directions, including at least once when the airplane was not offered.
- The candidate delivers a critique naming the error, its probable cause, and the correction for at least two of the errors flown.
- The candidate delivers a self-critique before hearing the instructor's.

Standard 4 is the one to be strict about. "Bank first, then pitch" is a sentence that has to be available in the second it is needed, and a

candidate who gets there after a pause has not yet got it. Falling short does not block lesson 29. No proficiency gate (Decision 9). It triggers policy/REMEDIATION-VISIBILITY.md.

DEBRIEF AND SIGN-OFF

Critique: the error, its probable cause, and the correction. Candidate self-critique first.

Sign once for the whole lesson. Elements left unchecked above were not taught this session.

SUPERVISING INSTRUCTOR SIGNATURE / INITIALS

DATE