

Private Pilot Airmen Certification Standards					
Maneuver	Speed	Tolerance	Altitude	Tolerance	Heading
Normal Takeoff	V _Y	+10/-5kts			Aligned
Normal Landing	POH	+10/-5kts	TD Point	+400'	Aligned
Soft-Field Takeoff	V _X or V _Y	V _X +10/-5kts	V _Y +10/-5kts		
Soft-Field Landing	POH	+10/-5kts			Aligned
Short-Field Takeoff	V _X -> V _Y	V _X +10/-5kts	V _Y +10/-5kts		-----
Short-Field Landing	POH	+10/-5kts	TD Point	+200'	Aligned
Go-Around	V _X or V _Y	+10/-5kts			
Pattern Altitude		+/-10kts	Pattern Alt	+/-100'	
Rectangular Course	Selected	+/-10kts	600-1000 AGL	+/-100'	
S-Turns	Selected	+/-10kts	600-1000 AGL	+/-100'	
Turns Around a Point	Selected	+/-10kts	600-1000 AGL	+/-100'	
Power-Off Stall	Approach		1,500 AGL	Recover at Full Stall	+/-10°
Power-On Stall	V _R		1,500 AGL	Recover at Full Stall	+/-10°
Slow Flight	0-10 Horn	+10/-0kts	1,500 AGL	+/-100'	+/-10°
Steep Turns	< V _A	+/-10kts	Bank +/-5°	+/-100'	+/-10°
Straight & Level	Selected	+/-10kts	Selected	+/-200'	+/-20°
Turn to a Heading	Selected	+/-10kts	Selected	+/-200'	+/-10°
Constant A/S Climb	Selected	+/-10kts	Selected	+/-200'	+/-20°
Constant A/S Descent	Selected	+/-10kts	Selected	+/-200'	+/-20°
Unusual Att Recovery	Stabilized		Stabilized		Stabilized
Emergency Approach	V _G	+/-10kts			
Emergency Descent	30°- 45° bank, Speed +0/-10 kts, POH Guidance				
Commercial Pilot Airmen Certification Standards					
Maneuver	Speed	Tolerance	Altitude	Tolerance	Heading
Normal Takeoff	V _Y	+5/-5kts			Aligned
Normal Landing	POH	+5/-5kts	TD Point	+200'	Aligned
Soft-Field Takeoff	V _X or V _Y	V _X +5/-5kts	V _Y +5/-5kts		
Soft-Field Landing	POH	+5/-5kts			Aligned
Short-Field Takeoff	V _X -> V _Y	V _X +5/-0kts	V _Y +5/-5kts		-----
Short-Field Landing	POH	+5/-0kts	TD Point	+100'	Aligned
Power-Off 180°			TD Point	+200'	Aligned
Go-Around	V _X or V _Y	+10/-5kts			
Pattern Altitude		+/-10kts	Pattern Alt	+/-100'	
Chandelle	< V _A	MCA	Selected	Max Gain	+/-10°
Lazy 8	V _A	+/-10kts	1,500 AGL	+/-100'	+/-10°
Steep Spiral		+/-10kts	3 X 360 Turns		+/-10°
8's on Pylons			Pivotal		40° Bank Max
Power-Off Stall	Approach		1,500 AGL	Recover at Horn or Buffet	+/-10°
Power-On Stall	V _R		1,500 AGL	Recover at Horn or Buffet	+/-10°
Accelerated Stall	Vs+20 kts		3,000 AGL	Recover at Horn or Buffet	
Slow Flight	MCA	+5/-0kts	1,500 AGL	+/-50'	+/-10°
Steep Turns	< V _A	+/-10kts	Bank +/-5°	+/-100'	+/-10°

Emergency Approach	V _G	+/-10kts			
Emergency Descent	30°- 45° bank, Speed +/-10 kts, POH Guidance				