Slow Flight

UPPER AIRWORK – 1500 FT AGL OR HIGHER

Objective:

To establish, maintain, and maneuver the airplane while coordinated at speeds and configurations required for takeoffs, landings, and go-arounds.

1	**Perform CRAAC Checklist** **C**learing Turns – **R**eference Point – **A**irspeed/**A**ltitude – **C**onfiguration
2	**Power** Carb heat ON – Mixture rich – Power 1500 RPM while holding back pressure to maintain altitude
3	**Configuration** Confirm airspeed in white arc, add full flaps in increments
4	**Pitch** Apply pitch to maintain an airspeed just above stall speed at all times
5	**Power** Adjust as needed to maintain selected altitude
6	**Maneuver (as directed by DPE)** Two 90° coordinated turns at 10° bank; altitude changes
7	**Recover** Throttle full, maintain altitude and heading while pitching for Vy (73 kts), reduce flaps incrementally back to 0°, establish straight and level

ACS Standards:

Airspeed: -0 kts/+10 kts

Altitude: ±100 ft

Heading: ±10°

Power Off Stall

UPPER AIRWORK – 1500 FT AGL OR HIGHER

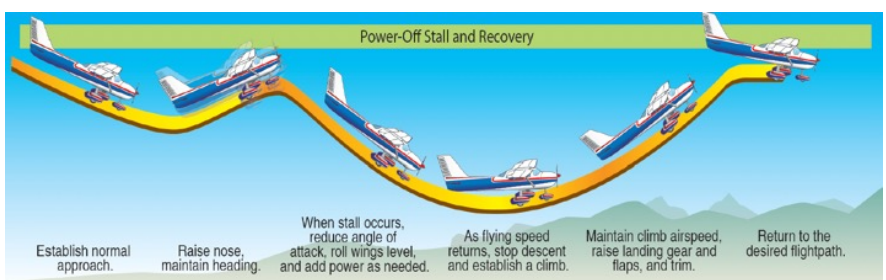
Objective:

To familiarize the pilot with the conditions that produce stalls during landing. Recovery must be made no less than 1500 AGL.

1	**Perform CRAAC Checklist** **C**learing Turns – **R**eference Point – **A**irspeed/**A**ltitude – **C**onfiguration
2	**Power** Carb heat ON – Mixture rich – Power 1500 RPM while holding back pressure to maintain altitude
3	**Configuration** Confirm airspeed in white arc, add full flaps in increments
4	**Pitch** Apply pitch to maintain an airspeed of 55 kts
5	**Power** After established in slow flight, reduce power to 1500 RPM
6	**Pitch** Reduce pitch to obtain a 500 fpm decent, pull power to idle, increase pitch to stall horn and buffet
7	**Recover** Reduce angle of attack while increasing power to full and turning off carb heat, pitch for Vx (60 kts) and 20° flaps immediately, at Vx and positive rate of climb, remove all flaps on notch at a time

ACS Standards:

Heading: ±10°



Power On Stall

UPPER AIRWORK – 1500 FT AGL OR HIGHER

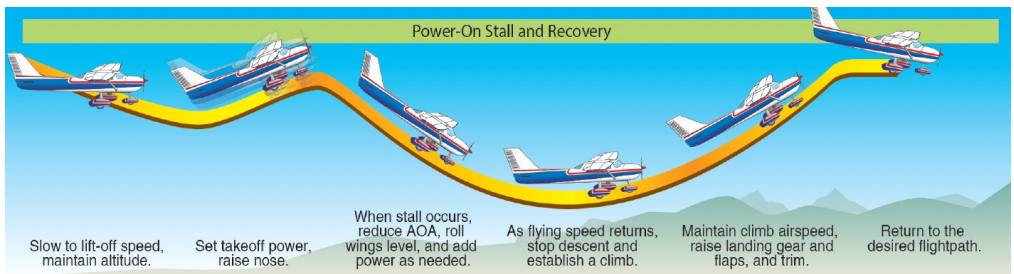
Objective:

To familiarize the pilot with the conditions that produce stalls during take off. Recovery must be made no less than 1500 AGL.

1	**Perform CRAAC Checklist** **C**learing Turns – **R**eference Point – **A**irspeed/**A**ltitude – **C**onfiguration
2	**Power** Carb heat ON – Mixture rich – Power 1500 RPM while holding back pressure to maintain altitude
3	**Pitch** Apply pitch to maintain altitude while reducing airspeed to Vr (55 kts)
4	**Power** Apply full power and increase pitch to stall horn and buffet
5	**Recover** Reduce angle of attack, pitch for Vx (60 kts) and verify positive rate of climb, return to straight and level flight

ACS Standards:

Heading: ±10°



Steep Turns

UPPER AIRWORK – 1500 FT AGL OR HIGHER

Objective:

To complete two 360° turns with proper control technique using 45° of bank while maintaining altitude, coordination, orientation, and division of attention.

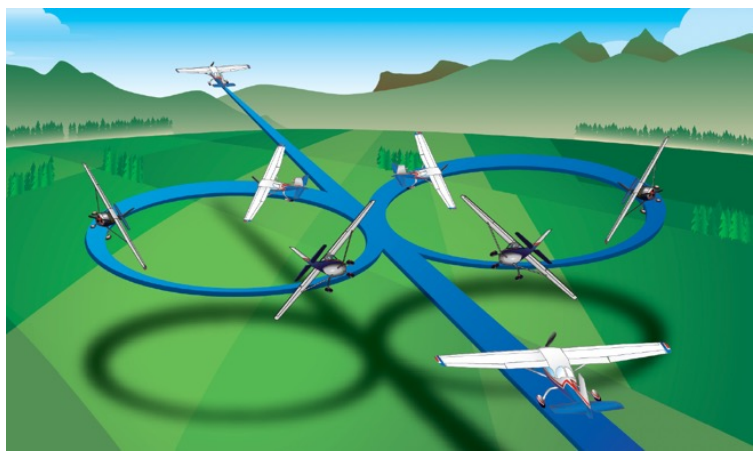
1	**Perform CRAAC Checklist** **C**learing Turns – **R**eference Point – **A**irspeed/**A**ltitude – **C**onfiguration
2	**Power** 2300 to 2400 RPM to maintain straight and level at 95 kts
3	**Attitude** Initiate a left-hand coordinated level turn at 45° of bank while adjusting back pressure to maintain altitude
4	**Rollout** Reduce bank angle 10° before target rollout heading, roll out on target heading straight and level
5	**Attitude** Initiate a right-hand coordinated level turn at 45° of bank while adjusting back pressure to maintain altitude
6	**Rollout** Reduce bank angle 10° before target rollout heading, roll out on target heading straight and level

ACS Standards:

Airspeed: ±10 kts

Altitude: ±100 ft

Heading: ±10°



Emergency

UPPER AIRWORK – 1500 FT AGL OR HIGHER

Objective:

Recognize and react to an emergency to safeguard life and minimize damage.

Engine Failure

1	**Perform ABCD Checklist** **A**irspeed – Best Glide (65 kts) **B**est Place to Land – Into wind, free from obstructions **C**hecklist – Complete Engine Failure Checklist **D**eclare – Announce “Mayday” on appropriate frequencies
2	**Memory Items** Primer in and locked, Master on, Mags on both, Carb heat on, Mixture rich, Fuel on Both
3	**Land** Maintain best glide until landing assured, apply flaps as necessary

Engine Fire

1	**Memory Items – Remove Fuel to Fire** Mixture to idle/cut off, Fuel to off, Master off
2	**Extinguish Fire** Pitch for, and attain 100 kts to extinguish fire
3	**Perform ABCD Checklist** **A**irspeed – Best Glide (65 kts) **B**est Place to Land – Into wind, free from obstructions **C**hecklist – Complete Engine Fire Checklist **D**eclare – Announce “Mayday” on appropriate frequencies
4	**Land** Maintain best glide until landing assured

Turns Around A Point

LOWER AIRWORK – 800 to 1000 FT AGL

Objective:

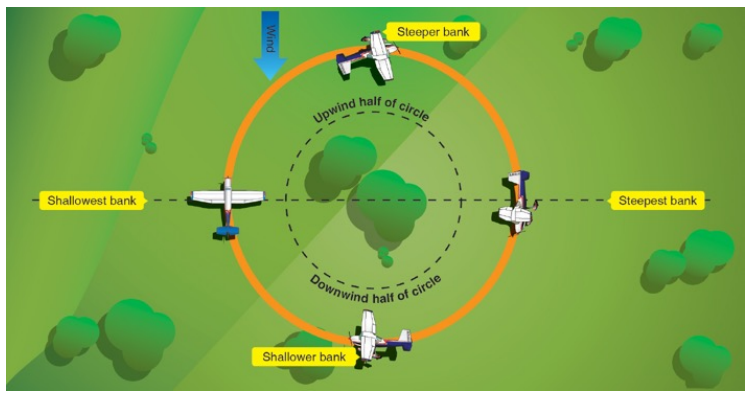
To maintain a circular ground track with a uniform radius from a point while correcting for wind drift and maintaining altitude.

1	**Perform CRAAC Checklist** **C**learing Turns – **R**eference Point – **A**irspeed/**A**ltitude – **C**onfiguration
2	**Power** 2300 to 2400 RPM to maintain straight and level at 95 kts
3	**Entry** Downwind ¼ to ½ mile to the right of point
4	**Turn** Begin turn when abeam the point
5	**Bank** Adjust bank to maintain a constant radius from the point; 45° bank maximum
6	**Continue** Continue until a full 360° turn has been made around the point
7	**Exit** Exit on the downwind where maneuver was begun while establishing straight and level flight

ACS Standards:

Airspeed: ±10 kts

Altitude: ±100 ft



S-Turns Across A Road

LOWER AIRWORK – 800 to 1000 FT AGL

Objective:

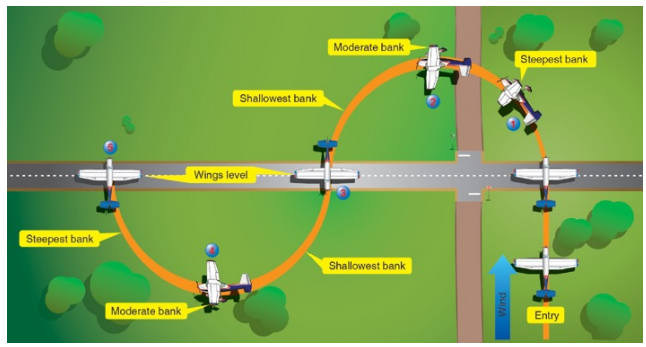
To maintain a ground track with ground references while correcting for wind drift and maintaining altitude.

1	**Perform CRAAC Checklist** **C**learing Turns – **R**eference Point – **A**irspeed/**A**ltitude – **C**onfiguration
2	**Power** 2300 to 2400 RPM to maintain straight and level at 95 kts
3	**Entry** Downwind to a road that is perpendicular to the wind
4	**Turn** Begin turn when directly over the road
5	**Bank** Adjust bank to maintain ¼ mile semi-circle from road; 45° bank maximum
6	**Continue** Continue until a 180° semi-circle has been made to end perpendicular directly over the road; Complete an additional 180° semi-circle in the opposite direction to end perpendicular directly over the road
7	**Exit** Exit on the downwind while establishing straight and level flight

ACS Standards:

Airspeed: ±10 kts

Altitude: ±100 ft



Soft Field Landing

Objective:

To safely and accurately transition the airplane from descending flight to touchdown on the main wheels on soft or rough fields.

1	**Perform Before Landing Checklist** Lights on, carb heat on, power to 1500 RPM, mixture as required, fuel on both, seats, seatbelts, doors and windows
2	**Final Approach** Apply full flaps, maintain 65 kts with pitch and glideslope with power
3	**Touchdown** Land as softly on main landing gear as slowly as possible
4	**Roll Out** Maintain back pressure to remove weight on nose gear, maintain directional control with rudder, slow without using brakes

ACS Standards:

Airspeed: +10 kts/-5 kts

Heading: Aligned With Runway

Short Field Landing

Objective:

To safely and accurately transition the airplane from descending flight to touchdown on the main wheels over a 50 foot obstacle and stop in the shortest distance possible.

1	**Perform Before Landing Checklist** Lights on, carb heat on, power to 1500 RPM, mixture as required, fuel on both, seats, seatbelts, doors and windows
2	**Final Approach** Apply full flaps, maintain 65 kts with pitch and glideslope with power
3	**Touchdown** Land on main landing gear on centerline
4	**Roll Out** Maintain back pressure, *apply maximum braking while maintaining directional control with rudder *State you are using maximum braking – do not actually perform

ACS Standards:

Airspeed: +10 kts/-5 kts

Touch Down Point: -0 ft/+200 ft

Heading: Aligned With Runway

Soft Field Takeoff

Objective:

To set and maintain an attitude where the airplane will lift-off at the slowest possible speed then transition into ground effect before climbing.

1	**Flaps** Set to 10°
2	**Taxi Out** Apply full back pressure to remove weight from nose gear, do not use brakes after take off clearance has been obtained
3	**Rotation** Reduce back pressure while accelerating, lift off at slowest possible airspeed
4	**Ground Effect** Relax back pressure to maintain ground effect (15-25 ft above runway) and accelerate to Vx (60 kts)
5	**Climb** Maintain Vx (60 kts) while climbing away, once clear of 50 ft obstacle, retract flaps and pitch for Vy (73 kts)

ACS Standards:

Airspeed: +10 kts/-5 kts

Heading: Aligned With Runway

Short Field Takeoff

Objective:

To get the airplane airborne in the shortest distance possible and climb to clear obstacles where takeoff area is limited.

1	**Flaps** No flaps necessary
2	**Taxi Out** Line up on runway as to use all available runway and come to a stop on centerline
3	**Line Up** Apply full braking while increasing power to full, check power set and made, engine instruments in the green
4	**Rotations** Release brakes, accelerate to Vx (60 kts) and rotate
5	**Climb** Maintain Vx (60 kts) while climbing away, once clear of 50 ft obstacle, pitch for Vy (73 kts)

ACS Standards:

Airspeed: +10 kts/-5 kts

Heading: Aligned With Runway