

## Safety Briefing

- Seatbelts
- Air vents
- Fire extinguisher
- Egress
- Talking
- Your questions

## Takeoff Briefing

- Engine failure on takeoff, 1000 ft decision altitude

## Slow Flight

- Clearing turns
- Full flaps
- 55 knots
- Pitch for airspeed, power for altitude
- Large actions required

## Power Off Stall

- 2000ft AGL minimum
- Clearing turns
- Landing configuration (flaps 2 or 3, 65 knots)
- Pull power
- Hold altitude
- After break, full power and gain airspeed
- Ditch flaps 3
- Gain altitude
- Ditch flaps (70-80 knots)
- Not necessary to recover to original altitude

## Power On Stall

- 2000ft AGL minimum
- Clearing turns
- Takeoff configuration (no flaps, 60 knots)
- Full power, right rudder
- Pitch up hard
- After break, nose down and gain airspeed
- Gain altitude
- Not necessary to recover to original altitude

## Steep Turns

- 1500ft AGL minimum
- Clearing turns
- Verbalize starting altitude
- Add a bit of power as rolling into it, add rudder into turn
- Hold 45°
- Take out additional power as rolling out of it, add rudder into rollout
- Repeat in opposite direction

## Turns Around a Point

- 1000ft AGL
- Clearing turns
- Verbalize starting altitude
- Enter with wind behind
- Maintain constant distance from point
- Don't need to hold point on wingtip
- Don't need to be wings level at intersections

## **S-Turns**

- 1000ft AGL
- Clearing turns
- Verbalize starting altitude
- Enter with wind behind
- Maintain constant distance from centerline
- Wings should be level at intersections

## **Normal Takeoff**

- No flaps
- Rotate at 60 knots
- Climb at 79 knots

## **Normal Landing**

- Flaps 2
- Target numbers
- Touchdown after numbers
- After touchdown, brake as needed

## **Short Field Takeoff**

- Flaps 2
- Full power, hold brakes
- Rotate at 52 knots and hold
- Clear obstacle
- As accelerating, ditch flaps and climb at 79 knots

## **Short Field Landing**

- Flaps 3
- Target grass before runway
- Touchdown on/after numbers
- After touchdown, full pitch up and hard brakes

## **Soft Field Takeoff**

- Taxi with back pressure
- Flaps 2
- Don't stop going onto runway
- Raise nose as soon as possible
- Once airborne, stay in ground effect
- As accelerating, ditch flaps and climb at 79 knots

## **Soft Field Landing**

- Flaps 3
- Touchdown as soft as possible
- Ditch flaps
- Hold nose off as long as possible
- No brakes

## ENGINE FAILURE

- Airspeed 73 knots
- Best field
  - Pick reasonable option not necessarily directly in front
- Checklist
  - Fuel selector
  - Magneton
  - Primer
  - Throttle
  - Mixture
  - Fuel pump
  - Carb heat
- Communicate
  - 121.5 Mhz
  - Squawk 7700
  - ELT
- Commit
  - Ignition off
  - Master switch off
  - Fuel selector off
  - Mixture cut-off

## ENGINE FIRE

- Get on the ground ASAP without exceeding redline
- Cutoff fuel
  - Fuel selector off
  - Mixture cut-off
  - Fuel pump off
  - Heater/defroster off
- Communicate
  - 121.5 Mhz
  - Squawk 7700
  - ELT

## CABIN ELECTRICAL FIRE

- Get on the ground ASAP without exceeding redline
- Cutoff fuel
  - Master switch off
  - Heater off
  - Open vents

## WINGTIP FIRE

- Get on the ground ASAP without exceeding redline
- Raise wing during descent
- Cutoff fuel
  - Navigation/anti-collision lights off
  - Master switch off

## ENGINE START FIRE

- Continue cranking engine over
- Mixture cutoff
- Throttle full
- Fuel cutoff

## V Speeds

Label	Description	Knots
$V_{s0}$	Dirty stall speed	44
$V_{s1}$	Clean stall speed	50
$V_x$	Best climb angle speed	63
$V_g$	Best glide speed	73
$V_y$	Best climb rate speed	79
$V_a(1531 \text{ lb})$	Maneuvering speed	88
$V_{fe}$	Max flap extension speed	103
$V_a(2325 \text{ lb})$	Maneuvering speed	111
$V_{no}$	Normal operations speed (max rough air speed)	126
$V_{ne}$	Never exceed speed	160

## Cloud Clearance

Altitude	Type of Airspace	Flight Visibility	Cloud Clearance
10,000 MSL	E	5 statute miles	1,000 below 1,000 above 1 sm horizontal
Below 10,000 MSL	C	3 statute miles	500 below 1,000 above 2,000 horizontal
	D		
	E		
	B	3 statute miles	Clear of clouds
1,200 AGL or higher	G (night)	3 statute miles	500 below 1,000 above 2,000 horizontal
	G (day)	1 statute mile	500 below 1,000 above 2,000 horizontal
Below 1,200 AGL	G (night)	3 statute miles	500 below 1,000 above 2,000 horizontal
	G (day)	1 statute mile	Clear of clouds