NORMAL TAKEOFF AND CLIMB	
OBJECTIVE	The normal takeoff is one in which the airplane is headed directly into the wind or the wind is very light, and the takeoff surface is firm with no obstructions along the takeoff path, and is of sufficient length to permit the airplane to gradually accelerate to normal climbing speed (V_Y).
ELEMENTS	1. Checklist complete 2. Taxi into takeoff position 3. Full throttle (2700 RPM) 4. Check engine instruments 5. "Airspeed alive" 6. Rotate at 65 mph 7. Hold approximately 5° nose up 8. Accelerate to and climb out at V_Y 9. Gear up (positive rate) (no remaining runway) 10. At 1000' AGL, accelerate to $V_{Y\text{-}CRUISE}$ and 25"/2500 RPM 11. Complete the ATO Checklist 12. Cruise Climb
COMMON ERRORS	1. Improper runway incursion avoidance procedures 2. Improper use of controls during a normal takeoff 3. Inappropriate lift-off procedures 4. Improper climb attitude, power setting, and airspeed (V_Y) 5. Improper use of checklist

CROSSWIND TAKEOFF AND CLIMB	
OBJECTIVE	The crosswind takeoff technique is used to maintain proper ground track while departing a firm or a soft runway. This involves the correct use of aileron/rudder cross control.
ELEMENTS	1. Note wind direction and speed 2. Checklist complete 3. Taxi into takeoff position 4. Deflect ailerons into wind – use rudder as required for directional control 5. Full throttle 6. Check engine instruments 7. "Airspeed alive" 8. As speed builds reduce aileron and vary rudder inputs to maintain proper directional control 9. Rotate at 65 mph 10. Hold approximately 5° nose up 11. Accelerate to and climb out at V_Y 12. Gear up (positive rate) (no remaining runway) 13. See Normal Takeoff
COMMON ERRORS	1. Improper runway incursion avoidance procedures 2. Improper use of controls during a crosswind takeoff 3. Inappropriate lift-off procedures 4. Improper climb attitude, power setting, and airspeed (V_Y) 5. Improper use of checklist

SHORT-FIELD TAKEOFF AND MAX PERFORMANCE CLIMB	
OBJECTIVE	Taking off and climbing from fields where the takeoff area is restricted by obstructions requires that the pilot operate the airplane at the limit of its takeoff capabilities. The pilot must use all available runway, correctly configure the airplane, develop maximum available horsepower before brake release, rotate at the correct speed, climb at V_X to clear the obstacle, accelerate to V_Y then cycle gear up.
ELEMENTS	1. Checklist complete (flaps 25°) 2. Taxi into takeoff position (use all available runway) 3. Hold brakes 4. Full throttle 5. Check engine instruments 6. Release brakes 7. "Airspeed alive" 8. Rotate to lift off at 65 mph 9. Maintain V_X attitude and airspeed until obstacle cleared 10. Gear up (positive rate) 11. Flaps up at or after 200' AGL 12. Accelerate to V_Y 13. See Normal Takeoff
COMMON ERRORS	1. Improper runway incursion avoidance procedures 2. Improper use of controls during a short-field takeoff 3. Inappropriate lift-off procedures 4. Improper initial climb attitude, power setting, and airspeed (V_X) to clear obstacle 5. Improper use of checklist

SOFT-FIELD TAKEOFF AND CLIMB	
OBJECTIVE	Takeoffs and climbs from soft fields require the use of the operational techniques for getting the airplane airborne as quickly as possible to eliminate drag caused by tall grass, soft sand, mud, snow, etc., and may or may not require climbing over an obstacle. These same techniques are also useful on a rough field where it is advisable to get the airplane off the ground as soon as possible to avoid damaging the landing gear.
ELEMENTS	1. Checklist complete (flaps 25°) 2. Taxi into position with a smooth turn while maintaining full aft elevator 3. Apply full throttle without stopping aircraft 4. Reduce backpressure as aircraft accelerates to keep nose wheel just clear of the ground 5. Lift off at lowest possible airspeed 6. Maintain aircraft in ground effect until reaching V_Y 7. Pitch to V_Y attitude (approximately 5°) 8. Gear up (positive rate) 9. Flaps up at 200' AGL 10. See Normal Takeoff *Note: Soft field takeoff with an obstacle – accelerate in ground effect to V_X attitude and airspeed until obstacle is cleared*
COMMON ERRORS	1. Improper runway incursion avoidance procedures 2. Improper use of controls during a soft-field takeoff 3. Inappropriate lift-off procedures 4. Improper climb attitude, power setting, and airspeed (V_X or V_Y) 5. Improper use of checklist

NORMAL APPROACH AND LANDING	
OBJECTIVE	This type of approach and landing involves the use of techniques for what is considered a normal situation; that is, when engine power is available, the wind is light or the final approach is made directly into the wind, the final approach path has no obstacles, and the landing surface is firm and of ample length to gradually bring the airplane to a stop.
ELEMENTS	1. Approach checklist completed before entering downwind 2. Slow to 110 mph on downwind 3. Midfield, gear down "Three green", perform landing checklist, establish 100 mph 4. Abeam threshold, 10° flaps, begin descent at 15" MP 5. Prop full forward 6. At 45° point, turn base establish 90 mph, flaps 25° 7. On final begin point progressive deceleration to 80 mph, flaps 40° (85 mph, flaps 25°) 8. Adjust pitch and power to maintain 3° GP so as to be stabilized at V_{REF} no lower than 400' AGL, GUMPS 9. Maintain aiming point with pitch/power corrections until approaching round out 10. Reduce power to idle above threshold 11. Flare airplane so that main gear contacts the runway first 12. Maintain directional control and lower nose wheel before braking
COMMON ERRORS	1. Improper use of landing performance data and limitations 2. Failure to establish approach and landing configuration 3. Failure to establish and maintain a stabilized approach 4. Inappropriate removal of hand from throttle 5. Improper procedure during roundout and touchdown 6. Poor directional control after touchdown 7. Improper use of brakes 8. Failure to ensure receipt and acknowledgement of landing clearance 9. Failure to review airport diagram for runway exit SA to avoid a runway incursion after landing

CROSSWIND APPROACH AND LANDING	
OBJECTIVE	Many runways or landing areas are such that landings must be made while the wind is blowing across rather than parallel to the landing direction. Therefore, all pilots should be prepared to cope with these situations when they arise. The same basic principles and factors involved in normal, soft, or maximum performance approach and landing apply to crosswind approach and landings. Only the additional techniques required for correcting wind drift are discussed here.
ELEMENTS	1. Establish appropriate approach configuration (normal, soft field, short-field) 2. Maintain alignment with centerline using crab into wind 3. Transition to wing-low method prior to touchdown 4. Round out and flare while maintaining wing-low into crosswind 5. As aircraft slows increase aileron deflection into the wind 6. Opposite rudder deflection rudder is required to maintain directional control
COMMON ERRORS	1. Improper use of landing performance data and limitations 2. Failure to establish approach and landing configuration 3. Failure to establish and maintain a stabilized approach 4. Inappropriate removal of hand from throttle 5. Improper procedure during roundout and touchdown 6. Poor directional control after touchdown 7. Improper use of brakes 8. Failure to ensure receipt and acknowledgement of landing clearance 9. Failure to review airport diagram for runway exit SA to avoid a runway incursion after landing

SLIP TO A LANDING	
OBJECTIVE	This technique is used to land on a runway during crosswind conditions. It is typically employed before the flare, but can be accomplished during the flare as competency improves.
ELEMENTS	1. Establish on stabilized final approach 2. Lower upwind wing into the wind 3. Simultaneously apply opposite rudder to maintain runway centerline 4. Maintain drift with aileron 5. Maintain directional control with rudder 6. Flare as normal (or complete above during flare) 7. Optimally, land with upwind main gear touching first
COMMON ERRORS	1. Improper use of landing performance data and limitations 2. Failure to establish approach and landing configuration at appropriate time or in proper sequence 3. Failure to maintain a stabilized slip 4. Inappropriate removal of hand from throttle 5. Improper procedure during transition from slip to the touchdown 6. Poor directional control after touchdown 7. Improper use of brakes

GO-AROUND/REJECTED LANDING	
OBJECTIVE	Regardless of the height above the ground at which it is begun, a safe go around may be accomplished if an early decision is made, a sound plan is followed, and the procedure is performed properly.
ELEMENTS	1. Prop full forward 2. Full throttle 3. Pitch up for and accelerate to V_Y 4. Flaps 25° 5. Reduce control force by trimming nose down 6. Positive rate of climb – gear up 7. Maneuver to the side of runway 8. Retract remaining flaps above 200’ AGL 9. Pitch to approximately 5° nose up 10. Continue with Normal Takeoff Profile *Note: Steps 1, 2 and 3 are completed simultaneously*
COMMON ERRORS	1. Failure to recognize a situation where a go-around/rejected landing is necessary 2. Hazards of delaying a decision to go-around/rejected landing 3. Improper power application 4. Failure to control pitch attitude 5. Failure to compensate for torque effect 6. Improper trim procedure 7. Failure to maintain recommended airspeeds 8. Improper wing flaps or landing gear retraction procedure 9. Failure to maintain proper track during climb-out 10. Failure to remain well clear of obstructions and other traffic

SHORT-FIELD APPROACH AND LANDING	
OBJECTIVE	This short field operation requires the use of a procedures and techniques for the approach and landing at fields which have a relatively short landing area or where an approach must be made over obstacles which limits the available landing area.
ELEMENTS	1. Specify touchdown point on downwind 2. Normal pattern 3. Stabilize final descent at 75 mph (no wind airspeed) no lower than 400’ AGL 4. Maintain aiming point with pitch/power corrections until approaching round out 5. Perform final check no lower than 400’ AGL 6. Reduce throttle during flare 7. Maintain directional control and lower nose wheel before braking 8. Retract flaps to 0° and apply brakes (simulate maximum braking for training) *Note: Flaps down for max aerodynamic braking on contaminated surfaces*
COMMON ERRORS	1. Improper use of landing performance data and limitations 2. Failure to establish approach and landing configuration at appropriate time or in proper sequence 3. Failure to establish and maintain a stabilized approach 4. Improper procedure in use of power, wing flaps, and trim 5. Inappropriate removal of hand from throttle 6. Improper procedure during roundout and touchdown 7. Poor directional control after touchdown 8. Improper use of brakes

SOFT-FIELD APPROACH AND LANDING	
OBJECTIVE	The approach for a soft field is similar to a normal or short field approach depending on field selection. The major difference between the techniques is that during the soft field landing, the airplane is held 1 to 2 feet off the surface as long as possible to dissipate the forward speed to touch down at the minimum forward speed at the minimum rate of descent. The final approach speed for short field landings is equally appropriate to soft field landings, but there is no reason for a steep angle of descent unless obstacles are present in the approach path.
ELEMENTS	1. Specify touchdown point on downwind 2. Normal pattern (longer downwind if combined with short-field technique) 3. Adjust pitch and power to maintain 3° GP so as to be stabilized at V_{REF} no lower than 400’ AGL 4. Perform final check no lower than 400’ AGL 5. Maintain aiming point with pitch/power corrections until approaching round out 6. During landing flare adjust pitch/power (approximately 11”MP) for minimum sink rate 7. Touchdown at slowest possible airspeed with nose-high pitch attitude 8. Lower nose gently to surface and taxi clear of runway with full aft elevator
COMMON ERRORS	1. Improper use of landing performance data and limitations 2. Failure to establish approach and landing configuration at appropriate time or in proper sequence 3. Failure to establish and maintain a stabilized approach 4. Failure to consider the effect of wind and landing surface 5. Improper procedure in use of power, wing flaps, and trim 6. Inappropriate removal of hand from throttle 7. Improper procedure during roundout and touchdown 8. Failure to hold back elevator pressure after touchdown 9. Closing the throttle too soon after touchdown 10. Poor directional control after touchdown 11. Improper use of brakes

POWER OFF 180° ACCURACY APPROACH AND LANDING	
OBJECTIVE	This type of approach and landing involves the use of techniques to further develop judgment in estimating distances and glide ratios without power available in order to touchdown on a preselected landing spot.
ELEMENTS	1. Approach checklist completed before entering downwind 2. Slow to 110 mph 3. Specify touchdown point on downwind 4. On downwind establish 110 mph, level, landing checklist completed 5. Abeam landing point, reduce power to idle, establish 105 mph, descent trim 6. Turn base at pilot's discretion based on altitude and wind conditions, flaps as necessary 7. Adjust pitch, flaps and airspeed as necessary to reach the desired landing spot. 8. Gear down when landing is assured 9. Flare airplane so that main gear contacts the runway first 10. Maintain directional control and lower nose wheel before braking
COMMON ERRORS	1. Failure to establish approach and landing configuration at proper time or in proper sequence 2. Failure to identify the key points in the pattern 3. Failure to establish and maintain a stabilized approach 4. Failure to consider the effect of wind and landing surface 5. Improper use of power, wing flaps, or trim 6. Improper procedure during roundout and touchdown 7. Failure to hold back elevator pressure after touchdown 8. Poor directional control after touchdown 9. Improper use of brakes

STEEP TURNS	
OBJECTIVE	This maneuver consists of a turn in either direction using a bank steep enough to cause an over banking tendency during which maximum turning performance is attained and relatively high load factor imposed.
ELEMENTS	1. Clearing turns 2. Reduce throttle to 18"MP/2400 RPM to obtain 115 mph 3. Establish bank of 45° or 50° as appropriate 4. Adjust pitch, bank and power as necessary to maintain altitude and airspeed (approximately 20"MP) 5. After completing a 360° turn, roll wings level and immediately start a steep turn in the opposite direction. Adjust pitch, bank and power as necessary to maintain altitude and airspeed. 6. Time roll out so that wings reach level flight on entry heading (1/2 bank angle leadout)
COMMON ERRORS	1. Improper pitch, bank, and power coordination during entry and rollout 2. Uncoordinated use of flight controls 3. Improper procedure in correcting altitude deviations 4. Loss of orientation

STEEP SPIRAL	
OBJECTIVE	Perform a continuous gliding turn, during which a constant radius around a point on the ground is maintained similar to turns around a point. The radius should be such that the steepest bank will not exceed 60°. This maneuver will improve pilot techniques for power-off turns, wind drift control, planning, orientation and division of attention.
ELEMENTS	1. Clearing turns 2. Select ground reference point and altitude sufficient to continue through a series of at least 3 - 360° turns (3,000' AGL or higher) 3. Establish 105 mph power off-glide and gear-up. After stabilizing airspeed and descent, adjust throttle slightly forward to achieve 2000 RPM. This is done to keep the RPM out of the placarded "Avoid Continuous Operations" band and prevent engine damage. 4. Abeam reference point, establish power-off gliding turn 5. Maintain 105 mph glide and constant turn radius about reference point not to exceed 60° angle of bank 6. Clear engine each 1,000' – upwind to minimize drift 7. Recover at or above 1,500' AGL on entry heading
COMMON ERRORS	1. Improper pitch, bank, yaw, and power coordination during entry or completion 2. Uncoordinated use of flight controls 3. Improper planning and lack of maintenance of constant airspeed and radius 4. Failure to stay oriented to the number of turns and the rollout heading

CHANDELLE	
OBJECTIVE	This maneuver is a climbing turn beginning from approximately straight-and-level flight, and ending at the completion of 180° turn in a wings-level, nose-high attitude at the minimum controllable airspeed. The maneuver demands that the maximum flight performance of the aircraft be obtained; that is the plane should gain the most altitude possible for the given degree of bank and power setting without stalling.
ELEMENTS	1. Clearing turns 2. Power to 18"MP/2400 RPM to establish 115 mph 3. Roll into immediate 30° bank in either direction 4. Begin pitch towards approximately 11° while increasing power to full throttle 5. Continue pitch towards approximately 11° until reaching 90° of turn 6. After 90° of turn begin reducing bank while maintaining approximately 11° of pitch 7. At 180°, wings level at approximately 5 mph above stall 8. Recover to cruise while maintaining final altitude
COMMON ERRORS	1. Improper pitch, bank, and power coordination during entry or completion 2. Uncoordinated use of flight controls 3. Improper planning and timing of pitch and bank attitude changes 4. Factors related to failure in achieving maximum performance 5. A stall during the maneuver

LAZY EIGHTS	
OBJECTIVE	To develop the pilot's feel for varying control forces, and the ability to plan and remain oriented while maneuvering the plane with positive accurate control.
ELEMENTS	1. Clearing turns 2. Establish 115 mph (18"MP/2400 RPM) 3. Begin slowly pitching up and banking to obtain maximum pitch up and approximately 15° bank at the 45° point 4. Passing 45° point, bank slowly increasing to approximately 30°, pitch decreasing, passing through level flight attitude at the 90° point 5. Passing 90° point, both bank and pitch decreasing to maximum pitch down and approximately 15° bank at the 135° point 6. Passing 135° point, bank still decreasing while adjusting pitch to arrive at 180° point with 0° pitch and 0° bank at the entry altitude and entry airspeed 7. Perform maneuver in opposite direction
COMMON ERRORS	1. Poor selection of reference points 2. Uncoordinated use of flight controls 3. Unsymmetrical loops resulting from poorly planned pitch and bank attitude changes 4. Inconsistent airspeed and altitude at key points 5. Loss of orientation 6. Excessive deviation from reference points

RECTANGULAR COURSE	
OBJECTIVE	The Rectangular Course is a training maneuver in which the ground track of the airplane is equidistant from all sides of the selected rectangular area on the ground. Like other ground track maneuvers, one of the objectives is to develop division of attention between the flight path and ground references while controlling the airplane and watching for other aircraft in the vicinity. Another objective is to develop recognition of drift toward or away from a line parallel to the intended ground track. This will be helpful in recognizing drift toward or from an airport runway during various legs of the airport traffic pattern.
ELEMENTS	1. Selects a square or rectangular field near an area where an emergency landing can be made 2. Clearing turns 3. Enters 45° to the downwind leg at 115 mph (28"MP/2400 RPM) at an altitude of 1,000' AGL 4. Maintains a flight path positioned outside the field boundaries just far enough that they may be easily observed from either pilot seat by looking out the side of the airplane (¼ to ½ mile) 5. Applies adequate wind drift correction during straight and turning flight to maintain a constant ground track around the rectangular reference area 6. Exits at the completion of at least one full circuit
COMMON ERRORS	1. Poor planning, orientation, or division of attention 2. Uncoordinated use of flight controls 3. Improper correction for wind drift 4. Failure to maintain selected altitude or airspeed 5. Selection of a ground reference where there is no suitable emergency landing area within gliding distance

S-TURNS ACROSS A ROAD	
OBJECTIVE	S-Turns are used to develop pilot's ability to compensate for drift during turns along a selected reference on the ground. The maneuver consists of crossing a road at a 90° angle and beginning a series of 180° turns of equal radius in opposite directions, re-crossing the road at a 90° angle, just as each 180° turn is completed.
ELEMENTS	1. Clearing turns 2. Establish 115 mph (28"MP/2400 RPM) 3. Select a road where a safe landing can be made if required, and enter downwind at 800 ft 4. Apply wind drift correction and bank angle to track a constant radius 180° turn back towards the road using approximately but not to exceed 45° of bank 5. At 180° of turn and over road, begin maneuver in opposite direction 6. Depart maneuver on entry heading
COMMON ERRORS	1. Faulty entry procedure 2. Poor planning, orientation, or division of attention 3. Uncoordinated use of flight controls 4. Improper correction for wind drift 5. An unsymmetrical ground track 6. Failure to maintain selected altitude or airspeed 7. Selection of a ground reference line where there is no suitable emergency landing area within gliding distance

TURNS AROUND A POINT	
OBJECTIVE	The turns around a point is a proficiency maneuver used to help the pilot develop the ability to control the aircraft while dividing attention between flight path and traffic, while maintaining a constant radius around a reference point and using an angle of bank no greater than 45°. Drift control must be maintained throughout the entire maneuver.
ELEMENTS	1. Clearing turns 2. Establish 115 mph (18"MP/2400 RPM) 3. Select a ground reference point near an area where an emergency landing can be made. 4. Enter downwind of selected point at 800' AGL 5. Maintain constant altitude and radius around point while adjusting bank and drift correction using approximately 45° of bank at the steepest point of the turn 6. Depart maneuver on entry heading
COMMON ERRORS	1. Faulty entry procedure 2. Poor planning, orientation, or division of attention 3. Uncoordinated use of flight controls 4. Improper correction for wind drift 5. Failure to maintain selected altitude or airspeed 6. Selection of a ground reference point where there is no suitable emergency landing area within gliding distance

EIGHTS ON PYLONS	
OBJECTIVE	This training maneuver also involves flying the airplane in circular paths, alternately left and right, in the form of a figure 8 around two selected pylons. In this case no attempt is made to maintain a constant turn radius. Instead, the plane is flown at such an altitude and airspeed that the line parallel to the aircraft's lateral axis and extending from the pilot's eye appears to pivot on each of the pylons.
ELEMENTS	1. Clearing turns 2. Establish 115 mph (18"MP/2400 RPM) 3. Select suitable pylons perpendicular to wind-line in unpopulated areas with an emergency landing site within glide distance 4. Enter at 45° to downwind at pivotal altitude *NOTE: 115 mph = 882' pivotal altitude* 5. Abeam first pylon bank toward the pylon 6. Maintain correct lateral axis position (reference line on pylon) *Pylon forward – control forward – reduce bank angle* *Pylon rearward – controls rearward – increase bank angle* 7. After completing turn on first pylon allow 3-5 seconds of straight and level, then roll toward second pylon 8. After completing turn around second pylon, depart on entry heading
COMMON ERRORS	1. Faulty entry procedure 2. Poor planning, orientation, and division of attention 3. Uncoordinated use of flight controls 4. Use of an improper "line-of-sight" reference 5. Application of rudder alone to maintain "line-of-sight" on the pylon 6. Improper planning for turn entries and rollouts 7. Improper correction for wind drift between pylons 8. Selection of pylons where there is no suitable emergency landing area within gliding distance

MANEUVERING DURING SLOW FLIGHT	
OBJECTIVE	To develop pilots sense of feel and ability to use the controls correctly, and to improve proficiency in performing maneuvers in which very low airspeeds are required.
ELEMENTS	1. Clearing turns 2. Perform the maneuver no lower than 1,500' AGL 3. Reduce power to 15"MP/2400 RPM 4. Apply back pressure on the elevator to reduce airspeed and maintain altitude, TRIM CONSTANTLY 5. Gear down 6. Slowly lower flaps to 40° 7. 65-70 mph, add power to ≈20"MP to maintain altitude 8. Use pitch attitude to control airspeed 9. Maintain directional control with outside visual references *10.* Practice gentle climbs, descents, and turns at constant airspeed ***RECOVER-*** 11. Prop full forward and full power 12. Reduce the angle of attack by lowering the nose and maintain altitude 13. Flaps 25° 14. Gear up 15. Retract remaining flaps and return to cruise
COMMON ERRORS	1. Failure to establish specified gear and flap configuration 2. Improper entry technique 3. Failure to establish and maintain the specified airspeed 4. Excessive variations of altitude and heading when a constant altitude and heading are specified 5. Uncoordinated use of flight controls 6. Improper correction for torque effect 7. Improper trim technique 8. Unintentional stalls 9. Inappropriate removal of hand from throttle

POWER-ON STALL	
OBJECTIVE	Power-on stall recoveries are practiced from straight climbs, and climbing turns with 20° of bank, to simulate an accidental stall occurring during takeoffs and departure climbs.
ELEMENTS	1. Clearing turns 2. Perform the maneuver no lower than 1,500’ AGL 3. Set power to 15”MP/2400 RPM 4. Gear down 5. Flaps 25° (if specified) 6. Prop full forward 7. Maintain level flight and reduce airspeed to V_R 8. Full power 9. Enter 15° banked turn (if specified) 10. Coordinate with rudder pressure 11. Set a nose-high pitch attitude that will allow the airspeed to decrease slowly and evenly (not abrupt) 12. Recognize and announce symptoms of approaching stall 13. Maintain wings level, ball centered 14. Stall the airplane ***RECOVER-*** 15. Release backpressure and slowly lower nose to horizon (minimal altitude loss, NONE is ideal) 16. As airspeed increases, pitch for V_X or V_Y and establish a positive rate of climb 17. Level off and recover to cruise
COMMON ERRORS	1. Faulty entry procedure 2. Poor planning, orientation, and division of attention 3. Uncoordinated use of flight controls 4. Use of an improper “line-of-sight” reference 5. Application of rudder alone to maintain “line-of-sight” on the pylon 6. Improper planning for turn entries and rollouts 7. Improper correction for wind drift between pylons 8. Selection of pylons where there is no suitable emergency landing area within gliding distance

POWER-OFF STALL	
OBJECTIVE	The practice of power-off stalls is usually performed with normal landing approach conditions in simulation of an accidental stall occurring during landing approaches. The stalls can be performed to either imminent or full stall conditions.
ELEMENTS	1. Clearing turns 2. Perform the maneuver no lower than 1,500’ AGL 3. Set power to 15”MP/2400 RPM 4. Gear down 5. Maintain altitude while airspeed decreases 6. Slowly lower flaps to 40° 7. Begin stabilized descent at approach speed (80 mph) 8. Level off at planned altitude 9. As airspeed decreases, recognize and announce symptoms of approaching stall 10. Stall the airplane ***RECOVER-*** 11. Full power 12. Reduce pitch slightly (minimal altitude loss, NONE is ideal) 13. As airspeed increases, flaps 25° 14. Establish climb attitude at V_X or V_Y 15. Retract gear with positive rate of climb 16. Retract remaining flaps as airspeed builds 17. Level off and recover to cruise
COMMON ERRORS	1. Failure to establish specified gear and flap configuration 2. Improper entry technique 3. Failure to establish and maintain the specified airspeed 4. Excessive variations of altitude and heading when a constant altitude and heading are specified 5. Uncoordinated use of flight controls 6. Improper correction for torque effect 7. Improper trim technique 8. Unintentional stalls 9. Inappropriate removal of hand from throttle

CROSS-CONTROLLED STALL	
OBJECTIVE	This is a simulation of a base-to-final approach turn where rudder is added in an effort to align the airplane with the runway and opposite aileron is used to maintain a constant angle of bank.
ELEMENTS	1. Clearing turns 2. Power idle 3. Gear down below V_{LE} 4. Prop full forward 5. Upon reaching stabilized final approach, establish into a 30° bank stabilized turn simulating a final approach turn 6. Add excessive rudder to "tighten" the turn, increasing opposite aileron to maintain bank 7. Maintain pitch that will induce a stall 8. Recognize and announce symptoms of approaching stall 9. Stall the airplane ***RECOVER-*** 10. Full power 11. Reduce control pressures to level flight attitude (coordinated) 12. Pitch to V_Y attitude (approximately 5°) 13. Gear up (positive rate) 14. Accelerate to V_Y 15. Level off and recover to cruise
COMMON ERRORS	1. Failure to establish selected configuration prior to entry 2. Failure to establish a cross-controlled turn and stall condition that will adequately demonstrate the hazards of a cross-controlled stall 3. Improper or inadequate demonstration of the recognition and recovery from a cross-controlled stall 4. Failure to present simulated student instruction that emphasizes the hazards of a cross-controlled condition in a gliding or reduced airspeed condition

ELEVATOR TRIM STALL	
OBJECTIVE	This maneuver will show the importance of making smooth power applications, overcoming strong trim forces and maintaining positive control of the airplane so as to hold safe flight attitudes, and using proper and timely trim techniques.
ELEMENTS	1. Clearing turns 2. Power idle 3. Gear down below V_{LE} 4. Flaps down below V_{FE} 5. Prop full forward 6. Trim for final approach (may require more aft trim) 7. Upon reaching 80 mph, smoothly apply full power 8. Recognize and announce symptoms of approaching stall 9. Stall the airplane ***RECOVER-*** 10. Full power 11. Reduce AOA with forward pressure 12. Slowly pitch to V_Y attitude (approximately 5°) while retracting flaps to 25° 13. Trim 14. Gear up (positive rate) 15. Retract remaining flaps slowly 16. Level off and recover to cruise
COMMON ERRORS	1. Failure to present simulated student instruction that adequately emphasizes the hazards of poor correction for torque and up-elevator trim during go-around and other maneuvers 2. Failure to establish selected configuration prior to entry 3. Improper or inadequate demonstration of the recognition of and the recovery from an elevator trim stall

SECONDARY STALL	
OBJECTIVE	This maneuver demonstrates the hazards of secondary stalls during normal stall recovery emphasizing the importance of using proper technique when recovering from a normal stall situation.
ELEMENTS	1. Clearing turns 2. Power to idle 3. Gear down below V_{LE} 4. Flaps down below V_{FE} 5. Prop full forward 6. Stabilize at 80 mph 7. Establish and maintain a landing pitch attitude that will induce a stall; initiate recovery without power followed by an immediate increase in pitch to 10° 8. Secondary stall should follow immediately after first stall indication 9. Upon reaching secondary stall simultaneously apply full power and reduce AOA 10. Pitch to V_Y attitude (approximately 5°) while retracting flaps to 25° 11. Gear up (positive rate) 12. Accelerating through V_X retract remaining flaps and accelerate to V_Y 13. Recover to cruise
COMMON ERRORS	

ACCELERATED MANEUVER STALL	
OBJECTIVE	This maneuver will show the importance of making smooth power applications, overcoming strong trim forces and maintaining positive control of the airplane so as to hold safe flight attitudes, and using proper and timely trim techniques.
ELEMENTS	1. Clearing turns 2. Perform the maneuver no lower than 3,000’ AGL 3. Establish 115 mph (18”MP/2400 RPM) 4. Enter 45° bank in either direction 5. Maintain bank angle and slowly but positively increase backpressure 6. Recognize and announce symptoms of approaching stall 7. Stall the airplane ***RECOVER-*** 8. Reduce backpressure 9. Return to level flight attitude 10. Level off and recover to cruise
COMMON ERRORS	1. Failure to establish proper configuration prior to entry 2. Improper or inadequate demonstration of the recognition of and recover from an accelerated maneuver stall 3. Failure to present simulated student instruction that adequately emphasizes the hazards of poor procedures in recovering from an accelerated stall