

Lesson One

Aerodynamics of the Multi-Engine

1. Differential Thrust
2. VMC
3. Factors Affecting VMC
4. Feathering prop and drag reduction
5. Why bank into the good engine?

Multiengine Performance

1. Climb capability on one engine
2. Accelerate Stop
3. Accelerate Go
4. Weight and balance calculation

Dual Flight

1. Normal start, taxi, run-up
2. Normal takeoff, climb, cruise
3. Steep turns
4. Slow flight
5. Demonstrated single engine procedures
6. Normal landings

Lesson Two

Systems

1. Constant speed propellers
2. Landing gear
 - a. Squat switch
 - b. Emergency extension
3. Cabin heating
4. Fuel system
5. Electrical system
6. Anti-ice systems
7. Autopilot system

Dual Flight

1. Normal Departure
2. Steep turns
3. Slow flight
4. Power on & off stalls
5. Engine failure
6. Drag demonstration
7. Air-start
8. VMC demonstration
9. Simulated single engine landing

Lesson Three

Procedures

1. Short field operations
2. Instrument multi-engine procedures
 - a. non-precision profile
 - b. single engine non-precision profile
 - c. precision profile
 - d. single engine precision profile

Dual Flight

1. Short field take off
2. VMC demonstration
3. Air-start
4. Non-precision approach
 - a. missed approach
 - b. hold
5. Single engine non-precision approach

Lesson Four

Procedures

1. Emergency descent
2. Aborted take off
3. Engine failure prior to rotation

Dual Flight

1. Short field take off
2. VMC Demo
3. Airstart
4. Emergency descent
5. Precision approach
6. Single engine precision approach
7. Simulated engine failure at V1