

Ground Reference Maneuvers- Rectangular Course

Conditions: Dual /VFR

Objective: Introduce Rectangular Course to help develop the ability to control the airplane while dividing attention between a ground reference, the flight path, and the cockpit. Illustrate the effect wind has while trying to fly a uniform traffic pattern and explain how to compensate for it.



Notes & Comments

Completion Standards

- Adheres to recommended safety precautions, clears the area, and select suitable emergency landing spot
- Understands the objective of a rectangular course and the affects of wind
- Divides attention between the outside & inside of the plane
- Holds altitude within 200ft and maintains a consistent ground track.
- Uses Checklists

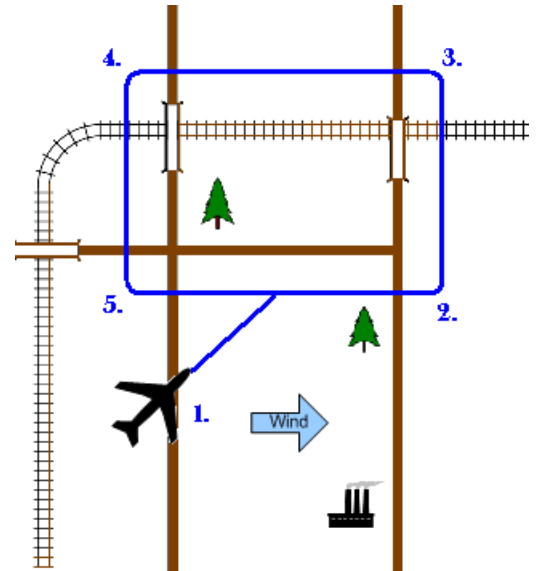
Air Echo Alpha 51, LLC



Preparation for Flight & Preflight Discussion

20- Min

- Equipment
 - Headsets/ Weather Briefing
- The Crew (*Pilot*)
- The Airplane (*Plane*)
- The Operation
 - Where- Practice Area
 - Why – Ground Reference Maneuvers
 - Rectangular Course**
 - Simulated Traffic Pattern
 - Select a field enclosed by section lines or roads & a emergency landing point
 - Determine wind direction
 - 1. Enter maneuver @ a 45° angle on the downwind
 - 2. Downwind-Steepest bank (45°max), highest GS, turn > 90°
 - 3. Crosswind-Medium bank, turn < 90°
 - 4. Upwind-Shallowest bank, Lowest GS, turn < 90°
 - 5. Crosswind -Medium bank, turn > 90°
- The Environment
 - Review expected wind
 - Collision avoidance – clear the area



Ground Operations

15- Min

- Preflight Inspection (*Plane*)
- Engine Start-up
- Taxi
- Before Take-off Checks
- Normal Take-off / Landing

Ground Reference Maneuvers - Turns about a Point

20- Min

- Clear the area
 - Airspace – Class E or G
 - Altitude – 600 to 1000 AGL
 - Airspeed – Va or below
 - No Traffic
- Determine wind direction
 - Aircraft drift, lake ripples, smoke, dust
- Select a field enclosed by section lines or roads
- Determine Emergency landing spot
- Enter maneuver @ a 45° angle on the downwind
- Turn 2- Downwind, Steepest bank (45°max), highest GS, turn > 90°
- Turn 3- Crosswind, Medium bank, turn < 90°
 - Gentle transition between turns
- Turn 4- Upwind, Shallowest bank, Lowest GS turn < 90°
- Turn 5 –Crosswind, Medium bank, turn > 90°, Gentle transition between turns

Post Flight

15-Min

- Engine Shutdown
 - Use of Checklists
- Parking & Securing the Airplane
- Logbook Entry
- Review & Critique
- Next lesson, assignments