

BASIC PANS-OPS COURSE

CONVENTIONAL (NON-PRECISION APPROACH & PRECISION APPROACH)

Duration: 4 weeks (20 days)

Syllabus:

GENERAL CRITERIA

- 1) Categories of aircraft
- 2) Conversion of IAS to TAS
- 3) Units of measurement
- 4) Navigation system accuracy
- 5) Mountainous areas
- 6) Protection Areas
- 7) Minimum Obstacle Clearance (MOC)
- 8) Protection Area Width
- 9) Depiction of Obstacles and Spot Elevations

TERMINAL AREA FIXES

- 1) Types of Terminal Area Fixes
- 2) Fix Tolerance Area
- 3) System Use Accuracy
- 4) Fix Tolerance Areas-DME, VOR/DME, Overlapping a VOR/NDB,
- 5) Use of Fixes for Descent
- 6) Operational Application of Fixes
- 7) Stepdown Fixes

TURN AREA CONSTRUCTION

- 1) Types of Turns
- 2) Parameters for Turn Construction
- 3) Turn Calculations
- 4) Turn Area construction – Inner boundary and Outer Boundary
- 5) Wind Spiral
- 6) Bounding Circle

MINIMUM SECTOR ALTITUDE

- 1) Criteria
- 2) MOC
- 3) MSA sectors

HOLDING

- 1) Parameters
- 2) Area construction
- 3) Primary area and Buffer area
- 4) MOC
- 5) MOCA

ARRIVAL SEGMENT

- 1) Area construction
- 2) MOC
- 3) MOCA

INITIAL APPROACH SEGMENT

- 1) Types of Initial approach
- 2) Alignment, Area, Length & Descent gradient
- 3) MOC
- 4) MOCA/Procedure altitude
- 5) Initial approach - Reversal procedure
- 6) Entry
- 7) Reversal procedure parameters
- 8) Initial approach – Racetrack
- 9) Entry
- 10) Area Reduction

INTERMEDIATE APPROACH SEGMENT

- 1) Alignment, Area, Length & Descent gradient
- 2) MOC
- 3) MOCA/Procedure altitude
- 4) Intermediate segment within the reversal procedure

FINAL APPROACH SEGMENT

- 1) Alignment, Area, Length & Descent gradient
- 2) MOC
- 3) Datum for OCH
- 4) OCA
- 5) OCA adjustment
- 6) Visual Segment Surface (VSS)
- 7) Obstacle Clearance Surface (OCS)

MISSED APPROACH SEGMENT

- 1) Types of missed approach
- 2) Phases of Missed approach
- 3) Alignment, Area, Length & climb gradient
- 4) Missed Approach Point
- 5) Start of Climb
- 6) Straight Missed Approach
- 7) Turning Missed Approach – Turn at a point, Turn at an altitude
- 8) Turn parameters for turning missed approach

VISUAL CIRCLING

- 1) Parameters for construction
- 2) Circling area
- 3) MOC
- 4) OCA
- 5) Method of reducing OCA

DEPARTURE PROCEDURES

- 1) Beginning and end of departure procedure
- 2) MOC
- 3) Obstacle identification surface
- 4) Straight Departure
- 5) Turning Departure

PRECISION APPROACH - ILS

- 1) Standard conditions
- 2) Intermediate segment
- 3) Precision segment
- 4) Approach & Missed approach obstacles
- 5) OCH - Basic ILS surfaces
- 6) OCH - Obstacle Assessment surface
- 7) ILS OCH Adjustment
- 8) ILS Missed approach - Turn at an altitude
- 9) ILS missed approach - Turn at a point
- 10) LOC Only (GP-IN OP) procedure

PRACTICAL EXERCISE
