

PBN-OPS

(PERFORMANCE-BASED NAVIGATION OPERATIONS)

PILOT SPECIALTY COURSE SERIES

SUMMARY

Developed in response to significant changes in Performance Based Navigation, which resulted from the publication of ICAO PBN Manual Revision 004 (Doc 9613).

The material covers PBN concepts, and details the framework for the application of the RNAV and RNP Navigation Specifications to Airspace Concepts, operational requirements including Onboard Performance Monitoring and Receiver Autonomous Integrity Monitor with and without onboard Fault Detection and Exclusion, and contingency operations in Performance Airspace. Also included: the application of PBN to Terminal, Approach and Missed Approach Operations, including RNP Approach and RNP Approval Required applications.



TARGET POPULATION

Experienced Airline Pilots

Great for pilots equiring initial or recurrent training.



REGULATORY COMPLIANCE*

- ICAO / ASA / FAA / Transport Canada
- Maintains compliance with IOSA standards



DELIVERY MODE

100% online, self-guided



COURSE LENGTH

2 hours, 30 minutes

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LESSON 1: PBN Concepts

- Definitions of PBN elements
- General features of and differences between RNP and RNAV Navigation Specifications
- PBN Architecture
- Performance criteria for PBN airspace operations
- Receiver Autonomous Integrity Monitor (RAIM) description
- Common contingencies for abnormal operations in PBN Airspace

LESSON 2: PBN Airspace Applications

- The definition and application of Airspace Concepts
- The definition and application of Navigation Specifications within various Airspace Concepts
- The interrelationship between Navigation Specifications, NAVAID structure, and Navigation Applications
- Planned future enhancements to PBN

LESSON 3: Area Navigation (RNAV) Applications

- Area Navigation as it applies to the RNAV Navigation Specification
- Use of the RNAV Specification for Enroute, Terminal, Approach and Missed Approach Applications
- Specific information and requirements for RNAV 10, RNAV 5, RNAV 1 and 2, P-RNAV and B-RNAV
- Contingencies specific to RNAV Applications

LESSON 4: RNP Applications

- Area Navigation as it applies to the RNP Navigation Specification
- Performance Accuracy requirements for various RNP applications
- Specific information and requirements for RNP 10, RNP 4, RNP 2, RNP 1 and Advanced RNP
- RAIM requirements for PBN including Fault Detection and Exclusion Capabilities
- Required Navigation Accuracy and Actual Navigation Accuracy requirements and depiction within aircraft systems
- Contingencies specific to RNP Applications

LESSON 5: RNP APCH and RNP AR

- Approach criteria for the application of RNP Approach and RNP AR
- The use of vertical navigation (VNAV) during PBN compliant approaches
- Operating procedures for RNP APCH and RNP AR
- Additional requirements for operations in the approach and missed approach environments

*** REGULATORY COMPLIANCE:** This course is based on information contained in ICAO Doc 9613, Performance Based Navigation (PBN) Manual, 4th Edition. State Variations are mentioned where applicable but are not detailed. Operators are responsible for ensuring the correct application of State Variations within their approved PBN operations.

Operator remains responsible for obtaining approval from the regulatory authority.

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