

Training Catalogue

2021-2022

Global Coordinates is a New Delhi based company providing integrated solutions in the following areas:

- Conducting Aeronautical Study for the proposed extension of an existing or a new obstacle to establish whether it affects the safety or regularity of the aircraft or cause any deterioration of the OCA/OCH values.
- To assist Airport operators in obstacle monitoring and assessment in a GIS environment. Preparation of electronic Obstacle Charts as required by ICAO using specific chart symbols.
- Conducting trainings together with global partners

At Global Coordinates we are always looking into how to server our customers in a better way and for that reason we are bringing now this Instrument Flight Procedure Design training offering to India. The current situation makes us need to begin with virtual trainings to be delivered using well established conferencing systems (Zoom) and online training campus.

As the situation improves in 2022 we will explore the opportunity to bring face-to-face training and meet in person at the training facilities we designate for this purpose, we are always looking forward to meet each one of you in person.

This training catalogue includes courses related to Instrument Flight Procedure Design (PANS OPS) and it has options for aviation enthusiasts, managers, supervisor, flight engineers and for those that will be really getting into designing the different flight paths for the safe travels of aircrafts.

If you would like to know more about our training offering please free to contact us

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FLYGHT7, with whom we have partnered for these trainings is managed by Mr. Antonio Locandro.

Mr. Locandro has extensive PANS OPS knowledge including more than 16 years experience working with Geographic Information Systems and within Civil Aviation.

Throughout his career Mr. Locandro has participated in projects with ICAO Technical Cooperation Bureau (TCB) for Airport Obstacle Assessment, worked in a regional Air Navigation Service Provider in Latin America dealing with Aeronautical Charting, PANS OPS & Aeronautical Information Management and consulted for a UK based IFPD company gCAP Ltd for five years.

His training experience includes AIM and PANS OPS in different parts of the world including Central America, Guyana, Singapore and United Kingdom.

FLYGHT7 is a company focused on optimizing the delivery of high-performance instrument flight procedure design that enhances operational safety & increase airspace flexibility by leveraging data analytics that provides services regarding:

- Instrument Flight Procedure Design, Aeronautical Information Management (AIM) & training
- Aeronautical Charting including the provision of obstacle assessments and training
- Geographic Information Systems use and training
- Ad-hoc consulting

www.flyght7.com

Introduction to Instrument Flight Procedure Design (PANS-OPS)



Language: English

The course covers the key aspects of PANS-OPS ICAO Doc 8168 Volume II (Construction of Visual & Instrument Flight Procedures) and provides an overview of the essential areas & obstacle clearance requirements for the achievement of safe, regular instrument flight operations.

This is not a design course, but it is meant for participants to know what is involved in the procedure design process. It will provide a general understanding to managers, supervisors, safeguarding officers and anyone that may be involved in making sure the obstacle environment around the airport is not affected from potential obstructions including airline operation and performance engineers.



Course Duration: 40 hours

The course is typically conducted in 10 live-sessions of 4 hours each (half-days) delivered via Zoom and the online training campus containing additional resources and self-study activities to reinforce concepts. *



Learning Objectives

At the end of this course participants will have the general Instrument Flight Procedure Design (IFPD) background to understand what is involved in the design of procedures and safeguarding airports more effectively.



Pre-requisites

✦ General Aviation Knowledge



Content

- ✦ Obstacle Limitation Surfaces Overview
- ✦ Flight Procedure Design Process (Overview) based on DOC 9906 Quality Assurance Manual for Flight Procedure Design Volume 1 Flight Procedure
- ✦ Design Quality Assurance System
- ✦ Airspace Concept (ICAO DOC 9992 & EUROCONTROL documentation)
- ✦ Conventional Procedure Design Criteria
- ✦ PBN Procedure Design Criteria
- ✦ Advanced Procedure Design Criteria (RNP AR+APV)
- ✦ Ground and Flight Validation

The course includes both theoretical and practical aspects to solidify concepts, a final project based on a simulated airport environment is performed as well as quizzes and a theoretical assessment.

**This training can also be delivered as an on-campus 1 week (40 hours) course when travel restrictions ease*

PANS OPS General Criteria & Non-Precision Approach Design



Language: English

The course provides the essential knowledge on PANS-OPS ICAO Doc 8168 Volume II (Construction of Visual & Instrument Flight Procedures) and provides an overview of the protection areas and obstacle clearance requirements for the achievement of safe, regular instrument flight operations.



Course Duration: 80 hours

The course is typically conducted in 20 live-sessions of 4 hours each (half-days) delivered via Zoom and the online training campus containing additional resources and self-study activities to reinforce concepts. *



Learning Objectives

At the end of this course participants will have the general Instrument Flight Procedure Design (IFPD) background for the design of Conventional Procedures including ENR & STARs based on VOR



Pre-requisites

- ✦ General Aviation Knowledge
- ✦ Math knowledge about trigonometry and linear equations (required)



Content

- ✦ Introduction to PANS-OPS Vol II & General Design Criteria
- ✦ Terminal Area Fixes, Tolerances, Turn Protection and construction
- ✦ Review of all segments of procedure design
- ✦ Reversals and Racetrack Procedures
- ✦ Conventional Holding Procedures
- ✦ Non-Precision Approach Procedures
- ✦ Circling Approach (Visual Maneuvering)
- ✦ Minimum Sector Altitude (MSA)
- ✦ VOR and NDB criteria
- ✦ Visual Segment Surface (VSS)
- ✦ Charting Requirements

The course includes both theoretical and practical aspects to solidify concepts, a final project based on a simulated airport environment is performed as well as quizzes and a theoretical assessment.

**This training can also be delivered as an on-campus 2 week (80 hours) course when travel restrictions ease*

PANS OPS Conventional Departures (SIDs)



Language: English

The course provides the essential knowledge on PANS-OPS ICAO Doc 8168 Volume II (Construction of Visual & Instrument Flight Procedures) and provides an overview of the protection areas and obstacle clearance requirements for the achievement of safe, regular instrument flight operations with an emphasis on departures.



Course Duration: 40 hours

The course is typically conducted in 10 live-sessions of 4 hours each (half-days) delivered via Zoom and the online training campus containing additional resources and self-study activities to reinforce concepts. *



Learning Objectives

At the end of this course participants will have the general Instrument Flight Procedure Design (IFPD) background for the design of Conventional Procedures departures based on VOR and NDB



Pre-requisites

- ✦ General Aviation Knowledge
- ✦ PANS OPS General Criteria & Non-Precision Approach Design (PANSOPS-111) or equivalent



Content

- ✦ Introduction to PANS-OPS Vol II & General Design Criteria for departures
- ✦ Departure Areas
- ✦ SID with turn at an altitude
- ✦ SID with turn at a fix
- ✦ Omnidirectional departures
- ✦ Charting Requirements

The course includes both theoretical and practical aspects to solidify concepts, a final project based on a simulated airport environment is performed as well as quizzes and a theoretical assessment.

**This training can also be delivered as an on-campus 1 week (40 hours) course when travel restrictions ease*

Performance Based Navigation (PBN)



Language: English

The course explains Performance Based Navigation (PBN) and Required Navigation Performance (RNP). It includes information on the components which are required for the construction of Area Navigation (RNAV) instrument flight procedures based on the Global Navigation Satellite System (GNSS).



Course Duration: 80 hours

The course is typically conducted in 20 live-sessions of 4 hours each (half-days) delivered via Zoom and the online training campus containing additional resources and self-study activities to reinforce concepts. *



Learning Objectives

At the end of this course participants will have the general Instrument Flight Procedure Design (IFPD) background for Performance Based Navigation (PBN), RNAV and RNP including SIDs and STARs.



Pre-requisites

- ✔ PANS OPS General Criteria & Non-Precision Approach Design (PANSOPS-111) or equivalent
- ✔ PANS OPS Conventional Departures (PANSOPS-112) or equivalent



Content

- ✔ Performance Based Navigation (PBN) Overview
- ✔ RNAV & RNP General Criteria including stabilization distances & turn computations
- ✔ Differences between VOR/DME, DME/DME & GNSS procedures
- ✔ LNAV procedures (2D Approach)
- ✔ PBN Arrivals & Terminal Arrival Altitude (TAA)
- ✔ RNAV Holding Pattern
- ✔ RNAV Departures
- ✔ Baro-VNAV criteria
- ✔ Proposed Database coding
- ✔ Charting Requirements

The course includes both theoretical and practical aspects to solidify concepts, a final project based on a simulated airport environment is performed as well as quizzes and a theoretical assessment.

** This training can also be delivered as an on-campus 2 week (80 hours) course when travel restrictions ease*

PANS OPS Approach with Vertical Guidance (ILS & SBAS criteria)



Language: English

The course explains Performance Based Navigation (PBN) and Required Navigation Performance (RNP). It includes information on the components which are required for the construction of Area Navigation (RNAV) instrument flight procedures based on the Global Navigation Satellite System (GNSS).



Course Duration: 80 hours

The course is typically conducted in 20 live-sessions of 4 hours each (half-days) delivered via Zoom and the online training campus containing additional resources and self-study activities to reinforce concepts. *



Learning Objectives

At the end of this course participants will have the general Instrument Flight Procedure Design (IFPD) background applicable to ILS and SBAS, including the use of PBN transitions to the ILS



Pre-requisites

- ✦ PANS OPS General Criteria & Non-Precision Approach Design (PANSOPS-111) or equivalent
- ✦ Performance Based Navigation (PBN) (PANSOPS-221)



Content

- ✦ ILS Criteria
- ✦ Basic ILS, Obstacle Assessment Surfaces (OAS) and CRM criteria
- ✦ SBAS Criteria
- ✦ APV, CAT I and LP criteria
- ✦ PBN transition to the ILS
- ✦ FAS data block
- ✦ Proposed Database coding

The course includes both theoretical and practical aspects to solidify concepts, a final project based on a simulated airport environment is performed as well as quizzes and a theoretical assessment.

**This training can also be delivered as an on-campus 2 week (80 hours) course when travel restrictions ease*

PANS OPS Refresher



Language: English

The course covers the key aspects of PANS-OPS ICAO Doc 8168 Volume II (Construction of Visual and Instrument Flight Procedures) and provides an overview of the essential areas and obstacle clearance requirements for the achievement of safe, regular instrument flight operations. This is a course for fully trained procedure designers that wish to refresh their knowledge and keep current with latest PANS OPS developments



Course Duration: 40 hours

The course is typically conducted in 10 live-sessions of 4 hours each (half-days) delivered via Zoom and the online training campus containing additional resources and self-study activities to reinforce concepts. *



Learning Objectives

At the end of this course participants will refresh their knowledge on Instrument Flight Procedure Design (IFPD)



Pre-requisites

- ✦ Fully trained procedure designers



Content

- ✦ Latest criteria changes
- ✦ Reinforcing of criteria
- ✦ Stretch exercises
- ✦ Explanation of the most frequently asked questions about IFPD
- ✦ Open discussion for Questions & Answers

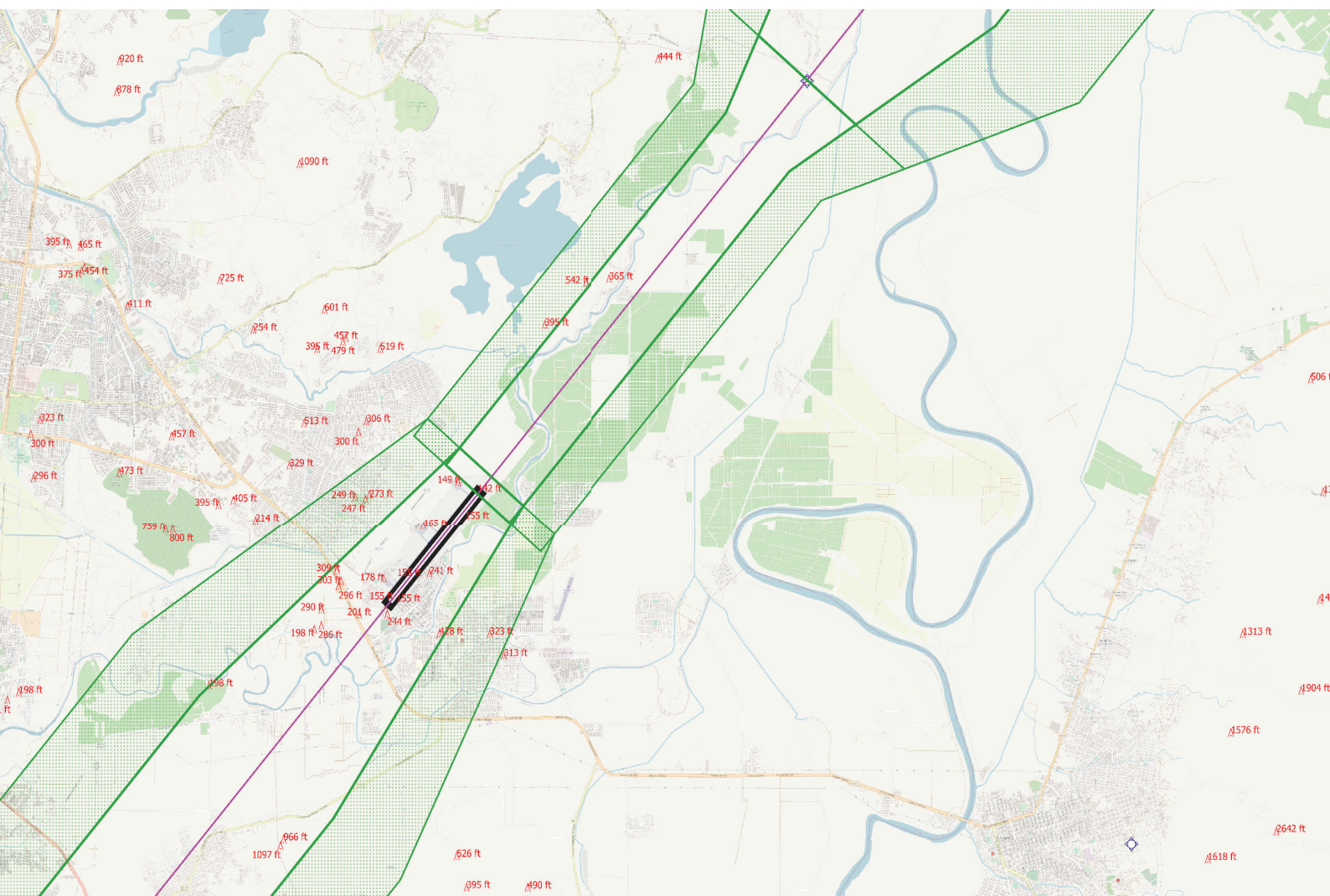
The course includes both theoretical and practical aspects to solidify concepts, a final project based on a simulated airport environment is performed as well as quizzes and a theoretical assessment.

**This training can also be delivered as an on-campus 1 week (40 hours) course when travel restrictions ease*



GlobalCoordinates

FLYGHT7



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