








Title:	<h1>Surveying with RTK Drone</h1>	Why Khagolam: <ul style="list-style-type: none"> • Specialize and Dedicated institute to geospatial technologies • Job oriented curriculum • Comprehensive training material • 100% placement assistance • Professional Trainers • Exposure to live projects • Convenient batch timings • Exposure to 3D GIS • Practice aptitude and interview rounds • Library facility
Duration & Fees Structure:	<p>5 Days</p> <p>50,000 INR, for resident Nationals of India, Nepal, Bhutan, Bangladesh, Sri Lanka and Maldives, & Myanmar.</p> <p>1,500 USD, For Non-Residents of India</p> <p>Instalments:</p> <p>5,000 on registration</p> <p>45,000 - before course start</p>	
Category:	<p>Value Addition Course / Job-Oriented Course</p>	
Prerequisites:	<ul style="list-style-type: none"> • Good knowledge of computers, surveying concepts and instruments • Experience in total station and DGPS surveying 	

<p>Who Should Attend?</p>	<ul style="list-style-type: none">  Land surveyors  Mapping professionals  Aerial agriculture surveyors  Forest Surveyors  Mining Surveyors
<p>Overview:</p>	<p>In India Drone are taking over on the traditional surveying methods like total station surveying. Drone Surveying save time and cost of project. Drones are being employ on many application like: Volume or earth work calculation in mining, change detections with LiDAR, Topographic Surveying of Roads, Dams, Bridges, 3D Modelling of archaeological, heritage site / monuments, power grid surveying, forest surveying and change detection, Fishery surveys, Thermals Surveys of Solar panels, to generate high accuracy cadastral maps and many more.</p> <p>Training will take you through advance aerial surveying concepts with Drone, aerial surveying, GNSS/GPS, Photogrammetry fundamental concepts with hand on exercise on, flight planning, simulation, data downloading, image processing using different photogrammetric software's, exploring output like DEM, DTM, Point Cloud, Point cloud editing, removing noise, ortho-photo editing and much more. This Drone Surveying course also covers very important concept and end to end workflow of RTK/PPK drone surveying. Complete field and office procedure explained with practical. You will processing PPK data and apply correction and use corrected / Fix PPK solution data in image processing with photogrammetric software.</p>
<p>You will learn:</p>	<p>Module1: Orientation on Drone Surveying</p> <ol style="list-style-type: none"> 1. Introduction to Drones, History of Drone/UAS/UAVs 2. Application of drone for Surveying & Mapping like Construction, Agricultural, Engineering Land Survey and Architecture uses 3. More on: Drone assembly, Safety, payload, battery life, Specs for good results 4. Regulations of DGCA and Drone license, registration in India 5. Flight planning with Drone Deploy, DJI App 6. Flight execution for data collection with GNSS module 7. Downloading and visualization of data 8. Processing data with Drone Deploy, Pix4D cloud 9. Analyzing Data, Contouring, DSM and Volumetric Measurement Calculation with Lowest Point and Best Fit Base Planes <p>Module2: Surveying with RTK/PPK Drone</p> <ol style="list-style-type: none"> 10. Fundamentals of GNSS RTK & PPK Surveying 11. Map accuracy: Relative vs. Absolute Accuracy Survey-Grade Accuracy, Factors that Improve Map Accuracy, Techniques of controlling errors 12. Employ GNSS RTK & PPK technologies in Drone Surveying 13. Consideration for hardware selections, payload, comparison of surveying drone and its accuracy 14. Consideration, planning strategies of GCP Check points in vertical and horizontal accuracies 15. Planning and estimation of drone surveying job 16. Use D-RTK 2 Mobile Station in Drone RTK Surveying and mapping

17. Explain what is NTRIP (Network Transport of RTCM via Internet Protocol)
18. NTRIP for configuring your GNSS base station and utilize own custom RTK network
19. End to End surveying workflow: RTK Flight & PPK Flight. Field and office procedures with practical exercise

Module3: Image processing and Photogrammetry

20. Introduction to aerial Photogrammetry, Aerial Triangulation
21. Overview of leading post processing software's
22. Post-processing RTK flight data
23. Post processing PPK flight data
24. Analyzing Data, Contouring, DSM and Volumetric Measurement Calculation with Lowest Point and Best Fit Base Planes

Tools & Skills:



DEMANDING TOOLS:

1. Pix4D
2. Drone Deploy
3. RTK Surveying Drone
4. Mobile GNSS Station

EMPLOYABLE SKILLS MEASURED:

1. DGCA UAV/Drone Policy
2. Coordinate System & Errors
3. Flight Planning
 - a. Alignments
 - b. Area
 - c. Modelling
4. Photogrammetry
5. Thermal Survey
6. GCP Collection & Planning Strategies
7. Flight Execution:
 - a. Static Mode
 - b. RTK Mode
 - c. PPK Mode
8. Post-processing
9. DEM Extraction
10. LiDAR Point Cloud Editing & Classification
11. Data interoperability (kml, dwg, CAD, shp)

Training Mode:

-  Online - Instructor Lead
-  ~~Classroom - Instructor Lead~~

How to Apply:

[Click here to know bank details and step by step registration process.](#)
[Register Online](#)

FAQ's:

- Q: What kind of drone will used for training?
A: DJI Phantom 4 RTK with GNSS base station
- Q: Dose fess includes accommodation and food
A: No. but we can help you to get nearest accommodation
- Q: Can I get a drone license of DGCA after completion of this course?
A: No. Course covers how and where to apply for DGCA license.
- Q: Can I get a drone pilot license from DGCA after completion of this course?
A: No. Course covers how and where to apply for DGCA drone pilot license. Drone pilot icense covers no aspect of surveying. It all about aviation rule and fundamentals of flying. KIG covers all about drone surveying you need know.

Last updated on: 22 March 2020