GIS & Drone One Day Workshop

Session 01 Agenda -Theory GIS & Remote Sensing

Sr. No	Topics	Time
1.	● Introduction about Spatialhawk ● Introduction to GIS & Remote Sensing ● Real World Applications ● Introduction to GIS Softwares ● Q & A Session	1.5 Hours
2.	● Fundamentals of GIS, Data Types, Data management, Co-ordinate systems, Introduction to Data Analysis. ● Q & A Session	1.5 Hours

Session 02 Agenda- Drone Theory and Flight Demo

Sr. No	Topics	Time
1.	● *Introduction to Drones:* Definition and classification of drones (UAVs, UAS), History and evolution of drone technology, Components of a drone: airframe, motor, battery, flight controller, sensors, Basic principles of flight and aerodynamics. ● *Types of Drones and Applications:* Multirotors (quadcopters, hexacopters, octocopters),Fixed-wing drones, Hybrid drones, Types of sensors ● *Applications in various fields*: Aerial photography and videography, Mapping and surveying, Agriculture and precision farming, Inspection and monitoring, Search and rescue, Delivery and logistics, Law enforcement and public safety ● *Drone Regulations and Safety:* regulations for drones, Local and state regulations, airspace classifications and restrictions, Pre-flight checks and safety protocols, Responsible drone operation and etiquette	1 Hours
2.	● *Aerial Data Acquisition and Analysis:* Introduction to drone cameras and sensors, Image and video capture techniques, Photogrammetry and 3D modelling, Data processing and analysis using GIS software, Creating maps, reports, and visualizations ● *Basic flight maneuvers*: takeoff, landing, hovering, forward flight, turns ● Obstacle avoidance and emergency procedures ● Practical flight exercises in a safe environment	3 Hours