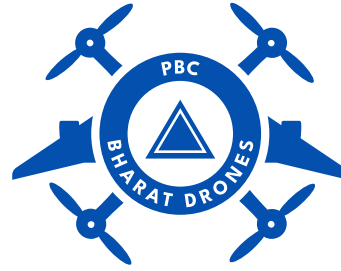




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Training & Management
Partner

Swami Keshwanand Rajasthan Agricultural University,
Bikaner

Remote Pilot Training Organization

Course Structure & Syllabus

Medium Class Rotorcraft RPAS (Drone)

in VLOS , <400 ft Condition

Duration: 5-7 Days



I. Theory Class

Module 1: Drone Regulations & Aviation Framework

- Drone Rules, 2021
- International Aviation Regulations
- Civil Aviation Requirements (CAR)
- AIPs & NOTAM
- Drone Classification & Categorization
- Type Certification
- Registration & De-registration
- Drone Operations
- Remote Pilot Certificate (RPC)
- Drone Insurance
- Operational Do's & Don'ts

Module 2: Principles of Flight

- Fundamentals of Flight
- Aerodynamics
- Take-off & Landing
- Flight Manoeuvres
- Circuit Patterns

Module 3: Airspace Management & Radio Telephony

- Air Traffic Control (ATC)
- Airspace Classification



- No Drone Zones
- Yellow Zone Operations
- Flight Planning
- Position & Altitude Reporting
- Collision Avoidance
- Radio Telephony Techniques

Module 4: Drone Operations & Aircraft Systems

Fixed Wing Drones

- Aircraft Types
- Components
- Flight Performance
- Navigation
- Mission Planning
- Applications

Rotorcraft Drones

- Drone Anatomy
- Drone Components
- Avionics & Communication Links
- Flight Performance
- Mission Planning
- Industrial & Agricultural Applications

Hybrid Drones

- Principles
- Types
- Applications
- Comparison with Fixed Wing & Rotorcraft



Module 5: Weather & Meteorology

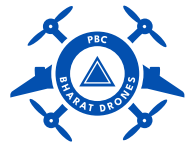
- Standard Atmosphere
- Air Pressure
- Temperature
- Wind
- Moisture & Cloud Formation
- Icing Effects
- Hazardous Weather
- METAR Interpretation
- Weather Effects on Drone Operations

Module 6: Drone Maintenance

- Drone Maintenance Procedures
- Flight Control System
- Ground Station
- Battery Maintenance
- Payload Maintenance
- Scheduled Servicing
- Fault Diagnosis
- Repair & Rectification

Module 7: Flight Safety & Risk Management

- Risk Assessment
- Threat & Error Management (TEM)
- Emergency Handling
- Loss of Communication (C2 Link)
- Fly-away Situations



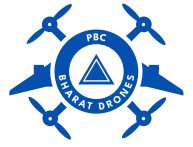
- Loss of Power
- Human Factors
- Pilot Incapacitation
- Fail-safe Systems

Module 8: Payload Operations

- Payload Types
- Installation
- Features
- Utilisation
- Operational Considerations

Module 9: Drone Data & Analysis

- Principles of Observation
- Image & Video Interpretation
- Introduction to Photogrammetry
- Drone Data Collection
- Data Analysis



II. SIMULATOR TRAINING

Simulator Exercises

- Simulator Familiarisation
- Flight Controls Check
- Pre-flight Procedures
- Take-off
- Cruise Flight
- Approach & Landing
- Post-flight Procedures
- Climbing & Descending
- Turns & Circuit Flying
- Figure of Eight Flying
- Gimbal Operations
- Night Flying
- Emergency Procedures
- Disorientation & Recovery



III. Practical Flying

Assembly & Maintenance

- Drone Assembly
- Drone Disassembly
- System Integration
- Propulsion System Integration
- Fault Identification
- Repair Documentation

Practical Flight Training

- RPAS Familiarisation
- Safety Briefing
- Aircraft Orientation
- Take-off & Landing
- Hovering
- Pitch, Roll & Yaw Controls
- Climbing & Descending
- Level Turns
- Square Circuit Flying
- Circular Flying
- Figure of Eight Flying
- Mission Planning
- Instrument Flying
- Autonomous Flight
- Night Flying
- Emergency Procedures



IV. Duration

Training Component	Duration
Theory	14 Hours
Simulator Training	3 Hours
Practical Training & Flying	4 Hours 30 Minutes
Assessments (Theory, Simulator & Practical)	As per DTC

V. Course Outcome

On successful completion of the programme and assessments, candidates become eligible for the DGCA-authorized Medium Class (Rotorcraft) Remote Pilot Certificate (RPC), enabling them to legally operate Medium Class Rotorcraft Drones under VLOS conditions in accordance with applicable DGCA regulations.

Contact

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