

DRONE OBSTACLE

1. EVENT OVERVIEW

- Date: - 11th October 2026
- Reporting Time: - 7 am to 8am
- Event Time: - 8 am to 1 pm
- Drone Obstacle is a skill-based drone navigation competition in which participants must pilot their drone through a series of obstacles within the designated course.
- The event consists of 5 progressive difficulty levels, with 2 obstacles at each level, making a total of 10 obstacles.
- Two identical courses will operate simultaneously, allowing two participants to fly at the same time.

2. PARTICIPATION

- Each college or institute is permitted to enter multiple separate teams for this event.
- Participation is allowed either individually or as a team.
- A team may consist of a maximum of 3 participants.
- Each official run will have one designated pilot.
- The pilot must be registered with the team before the run.
- Team members may assist with equipment preparation but may not operate the drone during the official run.

3. OBSTACLE STRUCTURE & DIFFICULTY LEVELS

The Drone Obstacle course consists of 5 progressive difficulty levels, with 2 obstacles at each level.

Each level is designed to test a different aspect of drone-piloting ability, with the difficulty increasing progressively from basic control to advanced precision and navigation.

LEVEL 1 — BASIC CONTROL

Obstacles 1 & 2

Focuses on:

- Basic drone movement
- Take-off and landing control
- Straight-line navigation
- Maintaining stable altitude
- Basic obstacle awareness

LEVEL 2 — DIRECTION CHANGE

Obstacles 3 & 4

Focuses on:

- Controlled directional changes
- Turning accuracy
- Left/right navigation
- Maintaining control while changing direction

LEVEL 3 — PRECISION NAVIGATION

Obstacles 5 & 6

Focuses on:

- Precise drone positioning
- Narrow passages
- Controlled altitude changes
- Improved hand-eye coordination

LEVEL 4 — ADVANCED NAVIGATION

Obstacles 7 & 8

Focuses on:

- Complex navigation patterns
- Multiple directional changes
- Continuous obstacle navigation
- Maintaining speed while controlling the drone accurately

LEVEL 5 — EXPERT CHALLENGE

Obstacles 9 & 10

Focuses on:

- High-precision control
- Complex obstacle sequences
- Quick decision-making
- Speed and accuracy
- Overall drone-piloting skill

DIFFICULTY PROGRESSION

Level 1 → Level 2 → Level 3 → Level 4 → Level 5

Basic Control → Direction Change → Precision → Advanced Navigation → Expert Challenge

Participants must complete the obstacles in the designated sequence. Failure to complete or bypass an obstacle will result in the applicable penalty according to the event's penalty system.

4. DRONE SPECIFICATIONS

The participating drone must satisfy the following requirements:

- Maximum diagonal motor-to-motor size: 5 inches
- Maximum propeller size: 10 inches
- Maximum take-off weight: 2 kg
- Maximum number of motors: 4
- Only assembled drones are permitted.
- Fully autonomous/pre-programmed flight is not permitted.
- The drone must be manually controlled by the registered pilot.
- The drone must be in safe operating condition.

The technical team reserves the right to reject any drone considered unsafe for the event.

5. EQUIPMENT TO BE BROUGHT BY PARTICIPANTS

Participants are responsible for bringing all equipment required to operate their drone.

Participants must bring:

- Drone
- Remote controller/transmitter
- Flight batteries
- Compatible charger
- Required cables/adapters
- Required FPV goggles/display, if applicable
- Spare propellers
- Basic tools required for minor repairs

Participants using drones requiring a smartphone, tablet, laptop, configuration software or other digital equipment must bring the required device themselves.

Organizers will provide:

- Two obstacle course setups
- Designated flying area
- Charging point/extension board
- Basic event infrastructure

Participants should not expect the organizers to provide replacement batteries, chargers, controllers, FPV goggles, spare parts or repair equipment.

6. PRE-FLIGHT INSPECTION

Every drone must pass the pre-flight inspection before entering the course.

The technical team will inspect the following:

Physical Safety: -

- Frame condition
- Propeller condition
- Motor mounting
- Battery condition
- Wiring and connectors
- Loose components
- Flight Controller mounting
- Propeller guards, if used

Functional Check: -

- Controller connection
- Control response
- Throttle response
- Motor response
- Arming/disarming
- FPV / camera system, where applicable

Safety Check: -

- Failsafe/emergency response
- Emergency disarm procedure
- Battery mounting and security
- Overall safe operating condition

A drone found to be unsafe will not be permitted to participate until the technical team approves it.

7. COURSE RULES

- The drone must follow the designated obstacle sequence.
- Participants must remain within the designated flying corridor.
- Crossing the course boundary will result in disqualification.
- Participants must not intentionally interfere with another participant or the course.
- A participant may not receive physical assistance with drone control during the official run.
- The drone must pass through/complete each designated obstacle.
- Bypassing an obstacle will attract a penalty.
- Touching an obstacle/gate will attract a penalty.
- Any unsafe flying may result in the run being stopped and/or disqualification.

8. PENALTY SYSTEM

Action	Penalty
Touching an obstacle / gate	+5 seconds
Bypassing an obstacle	+15 second
Crossing course boundary	Disqualification
Unsafe flying	Disqualification/run stop
Intentional interference	Disqualification
Unauthorized control assistance	Penalty / disqualification

Final Result Calculation

Final Time = Actual Completion Time + Penalty Time

The participant/team with the lowest valid final time will obtain the higher ranking.

9. BATTERY REPLACEMENT

- A maximum of 2 battery replacement attempts is permitted during a run.
- Battery replacement must be performed only in the designated area.
- The timer will continue during battery replacement.
- Participants are responsible for carrying their own spare batteries.
- Damaged or unsafe batteries will not be permitted.

10. SAFETY REGULATIONS

- Participants must follow all instructions given by the technical and safety team.
- Drones must not be flown outside the designated area.
- Participants must immediately disarm/land their drone when instructed by event officials.
- Any drone showing signs of dangerous malfunction must be grounded.
- Participants must not intentionally fly toward spectators, volunteers, judges or other participants.
- The event officials may stop a run whenever they consider the situation unsafe.

11. DOCUMENTATION

Participants must carry the following for verification:

- Valid College/University ID
- Government-issued photo ID
- Required College Approval Letter/NOC

Failure to produce the required documents may result in the participant being denied participation.

12. TIE-BREAKING

In case two participants/teams have the same final time:

- The participant/team with fewer penalties will be preferred.
- If still tied, the participant/team with fewer obstacle bypasses will be preferred.
- If the tie still remains, an additional deciding run may be conducted by the organizers.

13. JUDGE'S DECISION

The decision of the designated technical and judging panel regarding safety violations, penalties, disqualification and final results will be considered final.

Participants are expected to cooperate with judges, volunteers and technical officials throughout the event.

14. IMPORTANT PARTICIPANT NOTE

- Participants are responsible for the safe operation and proper functioning of their own equipment.
- The organizers provide the obstacle course and designated charging facility; participants must bring all other equipment necessary for operating their drone.
- Participants are advised to inspect and test their equipment before reporting for their official run.

15. FREQUENTLY ASKED QUESTIONS (FAQ)

Q1. Can I participate individually, or do I need a team?

You can participate individually or as a team. A team can have a maximum of 3 participants.

Q2. How many obstacles are there?

There are 10 obstacles in total, divided into 5 difficulty levels, with 2 obstacles at each level.

Q3. Can two participants fly at the same time?

Yes. Two identical courses will operate simultaneously, allowing two participants to fly at the same time.

Q4. What type of drone can I use?

Participants may assembled drones, provided the drone meets the specified size, weight, motor and propeller requirements.

Q5. Can I use an autonomous or pre-programmed drone?

No. The drone must be manually controlled by the registered pilot throughout the official run.

Q6. What equipment do I need to bring?

Participants must bring their drone, controller, batteries, compatible charger, required cables, FPV goggles/display if applicable, spare propellers and basic tools. Any required smartphone, tablet or laptop must also be brought by the participant.

Q7. What will the organizers provide?

The organizers will provide the two obstacle course setups, designated flying area and charging point/extension board.

Q8. What happens if I touch or bypass an obstacle?

- Touching an obstacle/gate: +5 seconds
- Bypassing an obstacle: +15 seconds
- Crossing the course boundary: Disqualification

Q9. How will the winner be decided?

The result will be based on:

Final Time = Actual Completion Time + Penalty Time

The participant/team with the lowest valid final time will obtain the higher ranking.

Q10. What happens before I am allowed to fly?

Every drone must pass a pre-flight inspection covering physical condition, propellers, motors, battery, wiring, controller response, arming/disarming, failsafe and other safety requirements. A drone considered unsafe will not be permitted to fly.

Participants are advised to read the complete rulebook carefully before registering and must follow all instructions given by the event officials.

FLY SAFE. FLY SMART. CLEAR THE COURSE.

GOOD LUCK TO ALL PARTICIPANTS!

Navigate • Control • Conquer