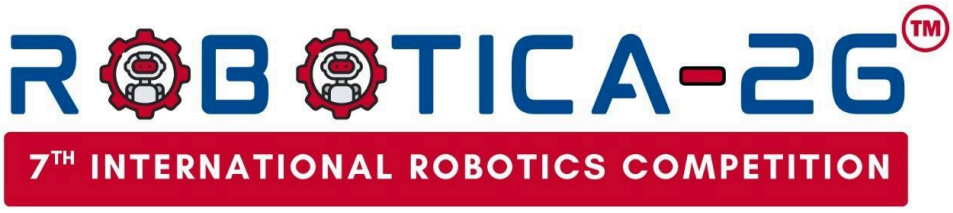
PROUDLY PRESENTS



ROBOTICA 26 – International Robotics Competition 2026

EVENT NAME: DRONE RACE

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1) GENERAL INFORMATION FOR THE DRONE RACE EVENT

The **Drone Race event** challenges participants to design and operate drones that navigate a specified track filled with obstacles, aiming to complete the course in the shortest time with precision and control. Built according to defined specifications, the drones face missions that test creativity, technical skills and problem-solving abilities.

This prestigious international competition offers students a platform to showcase their ingenuity, engineering expertise and passion for robotics and drone technology, while tackling real-world challenges through hands-on learning**.**

2) EVENT DETAILS

- **Event Name**: Drone Race – Robotica 26
- **Date**: January 30, 2026
- **Venue**: VIT University, Chennai, Tamil Nadu
- **Registration Fee**: Rs. 1000 per team
- **Team Size**: Maximum 2 members
- **Eligibility** : Students aged **12 to 18 years** (Grades 6–12)
- **Categories** : Junior - Grade 6^{th} – 8^{th}
  Senior - Grade 9^{th} – 12^{th}
- **Categories of drones:**
  - Assembled Drone
  - FPV Drone

Event Objectives

- Participants will focus on developing key skills:
  - **Drone Control & Flight Concepts**:
    Understanding aerodynamics, sensors and control systems.
  - **Engineering & Design**:
    Building stable, lightweight and high-performance drones.
  - **Strategy & Navigation**:
    Developing race strategies and obstacle management.
  - **Computational Thinking**:
    Problem-solving, debugging and iteration during design/testing.

3) EVENT FORMAT

❖ Round 1 – Preliminary Round (Qualifiers / Screening)

- **Time**: Starts from 9:00 AM
- **Format**:
  - Each team flies individually on a short test track.
  - Evaluated for:
    - Flight stability
    - Control accuracy
    - Obstacle avoidance
- **Purpose**: Shortlist top-performing teams for Round 2
- **Judging**: Offline, on-site by race officials.

❖ Round 2 – Obstacle Course Challenge (Quarter-Finals / Semi-Finals/Finals)

- **Format**:
  - Track includes gates, cones, slalom turns and small hurdles
- **Evaluation Criteria**:
  - Obstacle navigation accuracy
  - Collision avoidance
- **Judging**: Live time tracking by race officials.

4) DRONE SPECIFICATION

Parameter		Specification
Frame Size	:	Max 250 mm (motor-to-motor diagonal distance)
Weight	:	Max 2 kg (including battery)
Battery	:	Max 4S Li-Po (14.8V)
Propeller Size	:	Max 6-inch diameter
Motor Type	:	Brushless only (Max 2400 kV)
Control System	:	2.4 GHz RC or FPV with stable flight controller (e.g., Betaflight, KK2.1, APM 2.8, Pixhawk)
FPV System	:	5.8 GHz analog/digital VTX ≤ 25 mW, with goggles/screen
Failsafe	:	Mandatory auto-throttle cut on signal loss
Build Material	:	Carbon fiber or lightweight composites (no cardboard)
Safety Features	:	Propeller guards recommended (mandatory for beginners)

***Ready made drones will not be entertained to participate.**

5) DRONE RACE ARENA

- **Indoor Track Size**: 15m × 10m*
- **Outdoor Track Size**: 25m × 15m (adjustable based on weather)*
- **Obstacles**:
  - Gates
  - Cones
  - Hoops
  - Optional hurdles and tunnels
- **Safety Measures**:
  - The arena boundary marked with tape and outdoor track will be protected by a net.
  - Spectator line for safety
  - First-aid kit available on site

*Few details about Event format and Race tracks (along with sample track) will be updated in the https://www.robotica.org.in on November 10, 2025

6) EVENT RULES AND REGULATIONS

1. Each team may consist of a maximum of 2 participants.
2. Participants **must carry a valid school ID card**.
3. **No practice or unauthorized flying** in or outside the race arena.
4. Race is **point-based** – points system will be revealed later.
5. Drones must **not hit spectators or damage arena infrastructure**.
6. **False Start**:
   - First false start → race restart
   - Repeated false start → disqualification
7. **Unethical behaviour** (e.g., interfering with other drones) → disqualification
8. **The judge's decision is final** in all cases.
9. **Certificates of Participation** will be given to all valid participants (except those disqualified for rule violations).

7) REGISTRATION DETAILS

- **Fee**: Rs. 1000 per team
- **Deadline**: Jan 30, 2026
- **How to Register**:
  - **Online:** https://www.robotica.org.in
  - **Offline:** Via in-charge staff at respective institutions
- **Contact**: +91-81485 18703
- **Email**: robotica26@otomatiks.in

Why Participate in Robotica 26?

- Compete internationally with the best minds in STEM.
- Gain real-world exposure in drone engineering and flight mechanics.
- Boost your technical profile and creativity.
- Be part of an inspiring and innovative community.

We highly encourage students and robotics enthusiasts across India to **join us at ROBOTICA 26** and **showcase your drone-building and piloting skills**. This is an excellent opportunity to **push the boundaries of technology and innovation** in a fun, competitive, and educational environment.

Looking forward to witnessing your takeoff into the future of tech!

Team Otomatiks
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