



Rulebook

Drone Racing Challenge

About

Drone racing is an activity in which competitors fly "drones" (usually miniature radio-controlled planes or quadcopters) fitted with cameras while wearing head-mounted displays that show the drones' live video feeds. The objective is to complete a predetermined course as quickly as possible, much like full-scale air racing. Drone racing is a challenge for drones since it requires them to navigate a congested indoor environment without using any external sensing, meaning that they must conduct all of the sensing and processing onboard. The majority of successful teams used waypoint tracking techniques and strong visual recognition of the gates of different colors even though no team has yet been able to finish the entire race circuit because participants were provided with all environmental information prior to the competitions.

Eligibility

1. Participants must be **University** (Undergraduate Level, Bachelor's, Honor's, Degree) students. Participants must have a current studentship status which could be verified by an institutional ID card.
2. Each team shall be within 1-4 members.
3. Students from different educational institutions can form a team.

Registration Fee: 2,000/-

Registration Link: rebrand.ly/TechnocratsV1_23

(Please select your following segment during registration)

Arena Specification

- There will be several boxes (400mm*400mm) marked on the ground.
- Participant will have to take off from a box, and go and land in another box (as per through a circle).
- The path will consist of pillars, loops, bends, and underpasses, placed in random sequence along an aerial track. It will end with a drop zone and landing pad for testing maneuverability skills.

Bot specification

- Machine should fit into the dimension box of 400mm x 400mm x 300mm
- Use of autopilot, sonar, or obstacle avoidance system mode ex: Loiter, GPS, etc. is prohibited. If found, the copter will be disqualified.
- The quadcopter must be manually controlled.
- Readymade quadcopter is not allowed.
- Please bring extra propellers and chargers for your quadcopter.

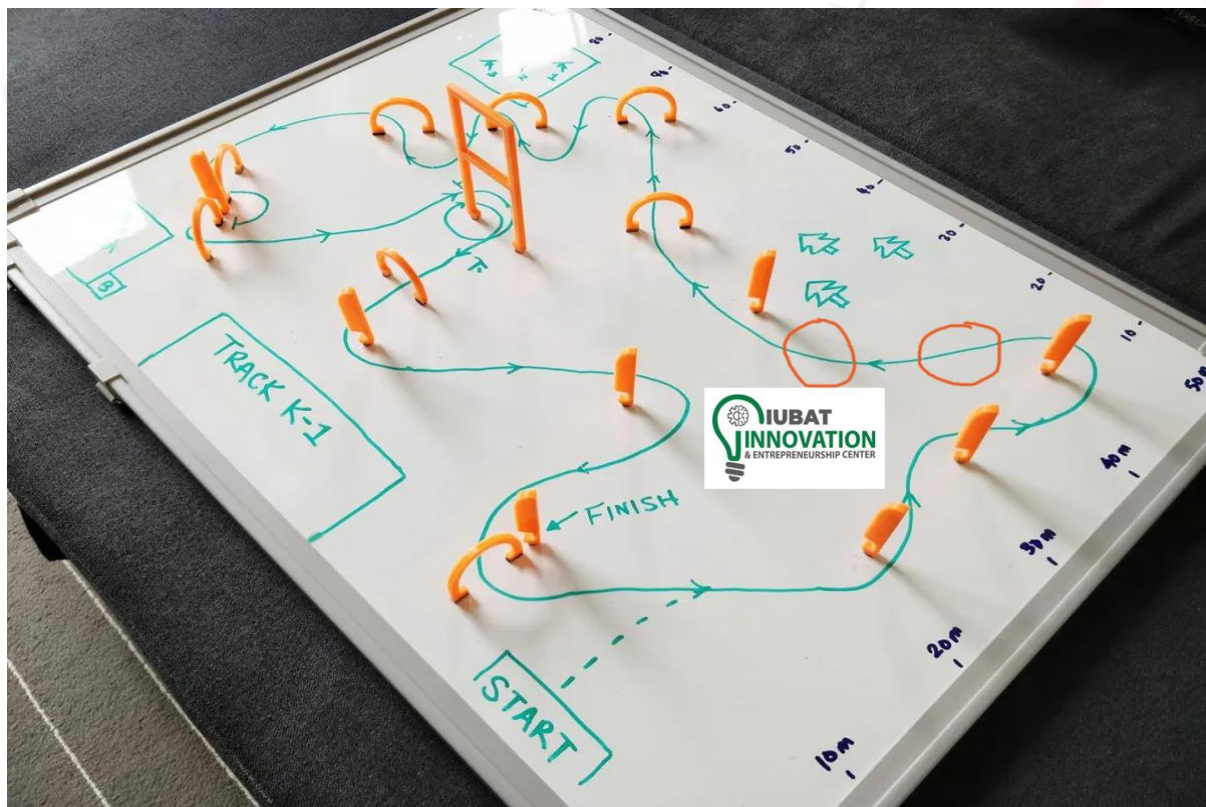
General Rules

- Flight time for a run is defined as the time taken by the drone to complete the path from the start zone to the end zone.
- A maximum time of 5 minutes from take-off to landing will be given to complete the circuit.
- The timer will start from the moment the countdown finishes.
- The timer will stop only when the drone finally lands on the landing zone.
- The time measured by the organizers will be final and will be used for scoring the teams.

- Any sort of misconduct at the IUBAT campus may result in disqualification.
- Time measured by any contestant by any other means is not acceptable for scoring.
- In case of any disputes/discrepancies, the organizers' decision will be final and binding.
- The organizers reserve the right to change any or all of the above rules as they deem fit.
- Trial runs on the track are not allowed.

Changes in rules, if any will be highlighted on the website and notified to the registered teams.

Sample Arena of Drone Racing Challenge



Awards

- Champion will be given a price money of **40k** along with crest and certificates.
- Runner-Up will be given a price money of **25k** along with crest and certificates.
- 2nd Runner-Up will be given a price money of **15k** along with crest and certificates.

For Any Queries:

Contact/Organizers Details

Md. Fahim Al Mamun

Research Officer, IIEC

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