



## II. INTERNATIONAL GEBZE TECHNICAL UNIVERSITY KELEBEK ROBOT OLYMPICS

### KELEBEK DRONE LEAGUE CATEGORY RULES

- *The specified ones are for only “Kelebek Drone League” category. Except of these rules the general rules must be taken into account.*
- *Gebze Technical University Robotics and Automation Club has the right to change the rules if necessary.*
- *According to the constitution of Republic of Turkey Law Nr.5846 on “Intellectual and Artistic Works Law”, it belongs to GTU Robotics and Automation Club.*

#### TASK DEFINITION

The goal of this category is finishing the track which is designed for unmanned aerial vehicle with rotating wing, with the highest score and lowest time.

#### COMPETITION FORMAT

- Vehicles will travel through the polygons and circles in the track, follow the rota and fulfil the tasks to be given.
- Tasks will be announced on the competition day.
- Vehicles will compete in the order determined by the draw.
- The competitor with the highest score will be considered more successful, and if the points are equal, the competitor who finishes the track in a short time will be considered successful.
- Vehicles must be manually controlled. Autonomous vehicles will not be accepted.
- Vehicles can be controlled by FPV or by monitoring from a distance.
- Pilots will be asked to show their DGCA (Directorate General of Civil Aviation) registration documents of pilots and vehicles at the registration desk. The pilots without DGCA registration documents can not attend to this category. This requirement is not required for vehicles lighter than 500g. (DGCA Registration address: <https://iha.shgm.gov.tr>)
- Vehicles that weigh more than 2.5 kg or whose diameter exceeds 1 m, including the propeller, can not participate. The diameter will be measured in the way that the propellers will be the longest. (The error margin is 5%.)
- At the controls to be made during registration; vehicles that contain any piece of equipment that will threaten the safety of viewers, competitors or referees will not be accepted to compete.
- Landings and take-offs will be made under the control of the referees and the designated regions.



- During the competition, only the referees and the competitor who comes in line can stand on the field.
- No test flights will be allowed before the competition.
- Viewers will watch the competition from the designated safe zone. Competitors who object to this can be removed from the venue without warning.
- The incoming competitor will take off the vehicle from the starting point and wait for the referee command. When the referee starts the timer, vehicle will begin.
- Duration of call is 3 minutes.
- The ones who does not come in duration of call are considered disqualified.
- Once the vehicle has took off and the track is over, it can be tried again with the condition of not getting down and getting the referee's approval. The round completed with the highest score will be considered.
- Vehicles have the right to take off only once. Vehicles that land, fall, or drop parts will not be given a second chance and will be disqualified.
- There is no right for technical break.
- Vehicles have 5 minutes for track . Vehicles that have not completed the track within this time period will not be evaluated.
- In adverse weather conditions, the KelebekRO team has the right to suspend or cancel the competition.

## **TRACK FEATURES**

- Full tasks and scoring will be announced on the competition day.
- All passages on the track will be of the size that the 1 meter diameter vehicle can pass.
- There may be various polygonal transitions, circles, corridors, landing-take-off zones and roll regions on the track.
- In designated areas, the vehicle may be asked to detonate the balloon on a platform and to land on the marked area, to stop its engines and to start up again.
- In designated areas, the vehicle may be asked to fall an object that we determined before.
- The contest will take place on the closed wire mesh basketball field or the grass field.

