

ROBORACE RULEBOOK

Presented by **Karuyantra Robotics Club – Karuyantra Carnival, Elysian 3.0 (GGSIPU)**

1. Event Overview

RoboRace is a thrilling competition where engineering meets speed. Participants design and control robots capable of tackling challenging terrains and obstacles in the least possible time. The event will feature two rounds: Round 1 – Qualifier (top-performing teams advance) and Round 2 – Final (fastest time wins, with a retry chance for top contenders).

2. Team Formation

- Teams of 2–4 members.
- Cross-institute teams are allowed.
- Individual participation not permitted.
- A participant cannot be part of more than one team.

3. Robot Specifications

- Type: Manually controlled wired or wireless robot.
- Max Dimensions: 30 cm (L) × 30 cm (B) × 25 cm (H)
- Weight Limit: 4 kg.
- Power: Max 24V DC, sealed non-leaking batteries only.
- Control: Wired bots must have slack cable; wireless bots require dual frequency.
- Design: Must handle inclines, rough terrain, and obstacles independently.

4. Track Specifications

The track features uneven terrain and obstacles such as speed breakers, slippery paths, sand, marbles, bridges, gravel traps, inclines, and rough patches. Checkpoints are placed throughout for resets.

5. Gameplay Rules

- Fastest time (after penalties) wins.
- Timer starts on movement, ends at finish.
- One restart allowed for false start: repeat = disqualification.
- Robots must complete obstacles sequentially.
- If more than 20% of robot leaves track: +3 sec penalty.
- First 3 hand touches are free: afterward +5 sec each.
- First 3 wall collisions are free: afterward +5 sec each.
- Skipping obstacle: Penalty based on difficulty of obstacle.
- Intentional damage = disqualification.

6. Penalty System

Infraction	Penalty
4th & subsequent hand touches	+5 sec each
4th & subsequent wall collisions	+5 sec each
Off-track movement (>20% of bot)	+3 sec each occurrence
Skipping an obstacle	Depending on the obstacle
Early start before signal	One warning, 2nd = disqualification
Arena damage / foul play	Immediate disqualification

7. Judging Criteria

- Total time (including penalties)
- Number of checkpoints cleared (if incomplete)
- Smoothness and control
- Innovation and design (special mention)

1. Referee & Judging Authority

- Referee's decision is final.
- Misconduct or argument leads to disqualification.
- Protests must be raised respectfully immediately after the round.
- Organizers reserve the right to change or update rules at any time based on circumstances. All decisions by the organizing team will be final.

2. Safety & Conduct

- No practice runs before event.
- Robots must not shed or detach parts.
- No interference with other teams.
- Damaging track or another robot = disqualification.
- Any external interference with the robot during its run — including signal hindrance, manual control, or wireless disruptions — is strictly prohibited. Such actions will lead to immediate disqualification.

3. Certification

- Participation certificates for teams completing at least one official round.
- Disqualified teams are not eligible.

4. Results & Tie-Break

- Fastest time (after penalties) determines winner.
- Ties broken via Round 1 performance or retry.