



## ROBO RACE HEAVY WEIGHT RULES AND REGULATIONS

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## 1. Objective

Design and build a remote-controlled robot capable of completing a pre-defined race track in the shortest possible time, overcoming obstacles, ramps, curves, and other challenges.

## 2. Team Composition

- Each team may consist of 1 to 3 members.
- Open to **Grade 6 to Grade 12**
- Only one robot is allowed per team.

## 3. Robot Specifications

### ● Dimensions:

- Must fit within a 30 cm x 30 cm x 30 cm box at the start.

### ● Weight:

- Maxweight: 7 kg ( $\pm$  5% tolerance allowed).

### ● Control:

- Robots must be remotely controlled (via RF, Bluetooth, or Wi-Fi, Radio control).
- No autonomous behavior is allowed.

### ● Power:

- Must be battery-operated (no external power source).
- Fully charged before the race; no charging during the event.

## 4. Track Specifications

- The track hurdles will include a combination of:
  - Straight paths
  - Curves
  - Inclined ramps
  - Speed breakers
  - Sea Saw
  - Bridges or tunnels
- Total length: ~10 to 20 meters (may vary).
- Track material: Flux print, Wood, MDF, or foam boards.
- The full track layout may or may not be revealed before the event.

## 5. Race Rules

- The robot must start behind the start line.
- The timer starts when the robot crosses the start line.
- Time stops when the robot completely crosses the finish line.
- The robot must stay within track boundaries.
- If the robot goes off track, time continues until it returns to the track.

## 6. Scoring and Winner Criteria

- The team that completes the track in the shortest time will be declared the winner.
- If no team is able to complete the track, the team covering the maximum distance within the allotted time will be considered the winner.
- Time penalties will be applied for the following violations:

- Touching the robot: +10 seconds
- Skipping an obstacle: +15 seconds
- Crossing the boundary : +5 seconds
- Crossing boundaries repeatedly: disqualification

## 7. General Conduct

- Teams must adhere to instructions from event coordinators and referees.
- All designs must be safe and must not damage the track or pose danger.
- Use of flammable, hazardous, or offensive material is strictly prohibited.
- Referee decisions are final and binding.

## 8. Tie-Breaker

- In the case of a tie in time:
  - The team with fewer penalties wins.
  - If still tied, a short obstacle sprint may be organized.

## 9. Disqualification Grounds

- Use of autonomous control or AI
- Damaging track or other robots
- Unsportsmanlike behavior
- Exceeding time limit repeatedly