

# Circuit Chase :

## Line Follow Robo Competition Rules

**Overview:** The **Circuit Chase** Competition challenges participants to design and program robots capable of following a pre-defined path with precision and speed. The event encourages innovation in robotics and tests participants' skills in control algorithms, sensors, and obstacle handling.

## Game Rules

1. **Robot Design:** Participants must build a manually operated robot capable of following a black or white line on a contrasting background without human interference during the run.
2. **Auto-Stabilization Limitations:** Use of auto-stabilization, pre-built modules, or any external support hardware for guidance or balance is strictly prohibited.
3. **No Alterations Mid-Competition:** Teams cannot make adjustments to their robots between rounds. Any changes after initial inspection will result in disqualification.
4. **Unique Robots Only:** Each team must use its own robot throughout the competition. Lending or sharing a robot between teams is strictly prohibited.
5. **Damage Liability:** The organizers are not responsible for any damage sustained by robots within the competition arena.

## Robot Specifications

- **Dimensions:** The robot must fit within a 30x30 cm frame.
- **Sensors:** The robot may use line-tracking sensors; however, they must be limited to detecting the line only (infrared or color sensors are acceptable).
- **Speed Limits:** The robot's maximum speed should not exceed 1 meter per second.
- **Power Source:** Maximum battery weight allowed is 300 grams, and the voltage must not exceed 12V.
- **Construction Materials:** Robots with sharp edges or metal components that could damage the track will not be permitted.

## Judgment Criteria

1. **Precision and Accuracy:** The robot's ability to stay on the line, even during sharp turns or complex paths.
2. **Speed:** The time taken to complete the track will be recorded and used as a primary score metric.
3. **Penalty Points:** Penalties will be incurred if the robot leaves the line or requires repositioning. Each penalty adds additional time to the robot's final score.
4. **Course Completion:** Successfully completing the track without penalties will earn bonus points.

## Team Guidelines

1. **Team Size:** Teams may have up to 4 members.
2. **Collaboration:** Members from different institutions are welcome to form teams.
3. **Team Representatives:** Only two members are allowed in the arena vicinity at a time during each run.