

TAKESHI'S CASTLE

An Utkarsh Production

RULEBOOK





Overview

Takeshi's Castle is a high-energy robotics competition consisting of multiple challenge-based stages designed to test teams on their robot-building, problem-solving, and competitive skills. The event includes the following stages:

- Tug of War
- Balloon Battle Bots
- Robo Soccer
- Wildcard
- Robo-Wrestling (Final)

General Guidelines

Team Composition

- Each team must consist of a minimum 5 members, with a maximum limit of 6 members allowed.
- Teams are required to register under a unique team name.
- Each team will be assigned one mentor. Teams are not allowed to approach other seniors or mentors on their own for help or clarification.

Elimination Rule

- Each stage of the competition is an elimination round.
- Only the winning teams progress to the next stage.
- Losing teams may qualify for the Side Team Pool, where a select few get a second chance through the Wildcard Round.
- The Wildcard Round gives one final opportunity to re-enter the main competition.
- Ultimately, only 6 teams will make it to the final stage of the competition.





Robot Construction Guidelines

To ensure fairness, learning, and hands-on participation, all teams must follow the construction rules below:

Design & Build Rules

- Robots must be completely designed, built, and programmed by the team members only.
- The main chassis/body must be custom-built using cardboard, wood, or plastic.
- Metal and acrylic are strictly not allowed, except for the rope hook in Tug of War.
- No pre-built or commercially available robots or chassis are allowed.
- The robot must be controlled solely by the team (no external assistance).
- Team name must be clearly visible on the robot at all times.
- Only components provided by the club are allowed (given on a first-come, first-serve basis).
- Apart from club inventory, no additional items from mentors or others are permitted without approval.

Robot Structure & Modifications

- Once assembled, no changes are allowed to the robot's main structure (battery, motors, wheels).
- Wheels, motors, and battery placements must remain fixed for the entire competition.
- Minor add-ons or attachments for individual rounds are allowed, but the main body cannot change.





Submission Before Assembly

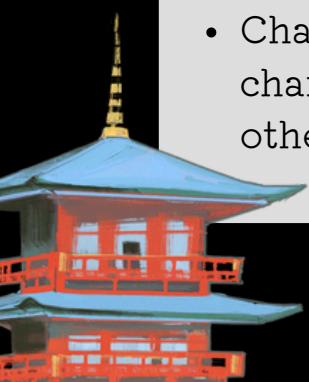
- Teams must submit a circuit diagram and chassis design to receive components.
- Mentorship is allowed during planning, but assembly and construction must be done by the team.
- Components will be issued based on first-come, first-serve priority.

Components Provided by Club

- DC Motors (4)
 - ▶ 200 RPM Single Shaft BO Motor (Straight)
- Motor Driver (1)
 - ▶ L298N Motor Driver
- Buck Converter (1)
 - ▶ LM2596HVS DC-DC Buck Converter
- ESP8266 (1)
 - ▶ Wi-Fi-based microcontroller module
- Wheels (4)
 - ▶ 7x2 cm DC gear motor wheels
 - ▶ BO wheel dimensions: 65mm diameter, 26mm thickness
- Breadboard (1)
- Battery (1)
- Jumper Wires
- (Any additional on permission from Event Coordinator)
- Chassis : NO material will be provided from the club

Fair Play

- Any form of sabotage, unsporting behavior, or violation of the rules will result in immediate disqualification.
- Changing of the main body will result in disqualification. By changes we mean the position of battery, motors, wheels or other components that are common for all stages.





- Use of components other than those issued by the club without the consultation of coordinator or co-coordinators will lead to immediate disqualification.
- In case of any damage to the components of club or club equipment will result in the imposition of fine on the entire team.

Safety

- All participants must ensure their robots are safe and do not pose any risk to others.
- Teams must follow all safety guidelines provided by the organizers.

Stage Details

1. Tug of War

Objective:

Pull the opponent's robot across a central line using a rope.

Arena Specifications

- Rope Length: 1.5 meters (75 cm each side)
- Central Line: The dividing line between both teams zones

Robot Requirements

- Each robot must have a secure, custom-built hook to tie the rope.
- The hook should be strong and fixed properly to avoid detachment during the match.
- Use of anchoring mechanisms or fixed supports is strictly prohibited.

Rules:

- The rope must be securely attached to the robot using the custom hook.
- If the knot loosens or the hook breaks during the match, it will result in immediate disqualification.





- Robots must start behind the central line.
- The first robot to pull the opponent completely across the central line is declared the winner.
- No anchoring or mechanisms that attempt to fix the robot in place are allowed.
- No part of the robot should detach during the match; doing so will lead to a loss or disqualification.

Progression Format

- 24 teams will participate in Round 1.
- 12 winning teams will directly advance to the next round.
- From the losing side, the top 3 teams with the longest survival time (measured by timing) will be added to the Side Team Pool and get a chance to re-enter via wildcard.

2. Balloon Battle Bots

Objective

Each robot is equipped with a balloon and popping mechanism (pins/spikes). The aim is to protect your own balloon while trying to pop the opponent's.

Arena Specifications

- Arena Type: Flat, smooth surface
- Match Type: Free-for-all
- Obstacles: May be added in later rounds
- Match Duration: Max 3 minutes

Robot Requirements

- Balloon Position: Clearly visible (top or rear)
- Weapon: Fixed pins or spikes only (no projectiles or fluids)

Rules

- The balloon must be properly inflated before the match begins — a partially filled or deflated balloon will not be allowed and may lead to disqualification.





- The height of the balloon from the ground must be between 10–15 cm — balloons placed too low or too high will not be permitted.
- Protect your balloon while trying to pop others.
- No intentional robot detachment or part dropping.
- If your balloon pops or falls off, you're out.
- Offensive attacks allowed only via the bot's built-in mechanism.
- No human interference during the match.
- Judges may declare winners based on balloon status, aggression & control if time runs out.

Progression format

- 12 teams from Tug of War advance to the Balloon Battle Bots. These 12 teams will compete in Free-for-all → resulting in 6 winners.
 - The 6 winning teams directly qualify for the next round.
 - From the 6 losing teams:
 - Top 3 losing teams (based on survival time or performance) will be selected as Side Teams.

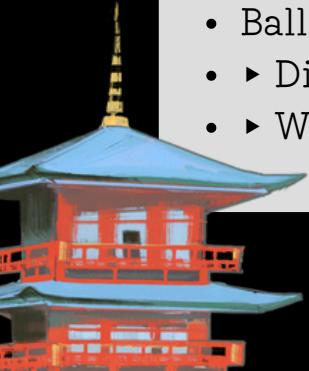
3. Robo Soccer

Objective

Score goals by maneuvering a ball into the opponent's goal post using your robot.

Arena Specifications

- Field Dimensions: 16 ft × 8 ft (approx. 488 cm × 244 cm)
- Center Circle Diameter: 60 cm
- Goal Post Size: 65 cm × 30 cm
- Penalty Line: Marked 1 meter from each goal post
- Ball Size: Approximately size 1 soccer ball
 - Diameter: 150 mm
 - Weight: ~150 grams





Robot Requirements

- Each robot must have a mechanism to push, guide, or carry the ball toward the goal post.
- Designs must not include robotic arms or claws that can grip and hold the ball for long durations.

Rules

- Each match lasts 10 minutes. The team with the most goals at the end wins.
- Robots may control and move the ball with or without human intervention (depending on strategy and programming).
- No aggressive physical contact between robots is allowed—only incidental contact during ball handling is permitted.
- Robots must not use mechanisms to hold or trap the ball in a fixed position for an extended time.

Progression format

- 6 teams from the previous round (Balloon battle bot) advance to the Robo Soccer.
- These 6 teams will compete in 1v1 → resulting in 3 winners.
- The 3 winning teams directly qualify for the next round.

4. Wildcard Round

Objective

Provide a second chance for eliminated teams to re-enter the main competition.

Participation

All the Side teams(6 teams) in previous rounds are eligible to participate.

Challenge

(Will be disclosed at that time only)





Winning Criteria

The 3 teams that win this round will be allowed to re-enter the main competition and continue competing for the overall championship.

Rules

- The round will be conducted under modified rules to fit the shorter format
- Only 3 teams will be selected to re-enter, based on the performance in this round.

5. Final Round: Robo-Wrestling

Objective

Push the opponent's robot out of a circular arena.

Arena Specifications

- Diameter: 150 cm

Robot Requirements

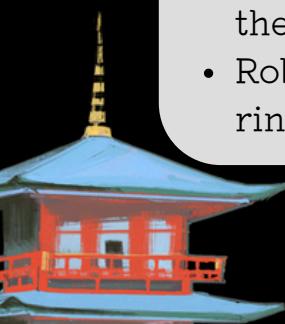
- Make custom mechanisms to prevent damage or cause damage to the opponent, making sure there is not much damage to components of the club. Also you cannot use items/blades/hammer which can destroy opponent bot. In this part you can just push the bot so as to throw it out of the arena.

Rules

- Robots must start within the designated circle.
- The match ends when one robot is entirely outside the circle.
- No external objects or parts should be used to anchor the robot inside the circle.

Judging Criteria

- Tug of War: Pulling opponent over center line within time.
- Balloon Battle Bots: Bots with an intact balloon win the match.
- Robo Soccer: Match results are decided by which team scores the highest number of goals.
- Robo-Wrestling: Successfully pushing opponents out of the ring.





Contact

- Event Coordinator: Geetanjali Saraswat, 7231985230
- Event Co-coordinator: Aditya, 9264457698,
- Event Co-coordinator: Vitthal Seth, 8303750081

For all event-related queries, please reach out via the contact above.

