

Soccer Game



Introduction

The **Robotic Soccer Game** is an exciting team-based robotics competition designed to promote **innovation, teamwork, and problem-solving skills** among school students.

Participants will design, build, and operate a robot to compete in a soccer match against another team. Robots can be controlled either **via wired or wireless systems**, giving students the flexibility to choose their preferred technology.

The competition encourages students to apply principles of **mechanical design, electronics, and strategic thinking** while navigating their robots to score goals in the opponent's net. Each match is time-bound and emphasizes **fair play, safety, and teamwork**.

This manual provides clear and detailed guidelines to ensure **safe, fair, and competitive gameplay**. Teams are expected to innovate within the rules, demonstrate creativity, and maintain discipline throughout the competition.

Structure of the Game / Match Format

1. Competition Format

- Matches are conducted in a **head-to-head format**, where two teams compete against each other.
- **Each** team operates **one robot**, controlled by their chosen member.
- The competition follows a **knockout system** — the winning team advances to the next round while the losing team is eliminated.

2. Match Duration

- Total match time: 10 minutes.
- Active play: 5 minutes.
- Repair/Break period: 2 minutes (each team is allowed one repair break per match).

3. Game Objective

- Teams aim to score the most goals in the opponent's net within the active play period.
- The team with the highest number of goals at the end of the 5-minute period is declared the winner.

4. Repair / Break Rules

- Each team may use one repair break per match in the designated pit area.
- Repairs must be completed within the 2-minute break; the total match time continues.

5. Match Procedure

- Robots are placed at designated starting positions on the field.
- The referee provides a countdown signal to start the match.
- Teams operate their robots using wired or wireless control, based on their chosen system.

6. Winning Criteria

- The team with the most goals at the end of the active play period wins.
- In case of a tie, judges may conduct a sudden-death round or determine the winner based on ball possession and control.

7. Judges and Officials

- Judges monitor the match, maintain scores, and ensure fair play and safety.
- Decisions by judges regarding results, penalties, or disputes are final and binding.

Eligibility & Team Formation

1. Participant Eligibility

- The competition is open to school students from Class 3 to Class 10 only.
- Participants must present a valid school ID card.

2. Team Composition

- Each team must consist of 1 to 3 students.
- All team members must belong to the same school.
- Each student may participate in only one team.

3. Mentor/Guide Requirement

- Each team may have one teacher/mentor from their school.
- The mentor may provide guidance but cannot operate the robot during matches.

4. Robot Build Requirement

- Each robot must be designed, assembled, and tested by the team members themselves.

- Robots may be controlled using either wired or wireless systems, based on the team's preference.
- Use of pre-assembled or commercial-ready robots is not allowed.

5. Registration Rules

- Teams must register before the announced deadline with all team members' details.
- Each team must have a unique team name.
- Late or incomplete registrations will not be accepted.

6. Team Responsibilities

- Teams must ensure their robot complies with all technical and safety specifications.
- Teams should bring their robot, spare parts, and tools needed for repairs.

7. Code of Conduct

- Teams must maintain discipline, respect officials, and follow instructions.
- Misconduct, cheating, or attempts to gain an unfair advantage may lead to disqualification of the team.

Robot Specifications (Soccer Game)

1. Dimensions & Weight

- Maximum robot size: **30 cm × 30 cm × 30 cm (L × W × H)**.
- Maximum permissible weight: **3 kg**, including battery and all mounted components.

2. Control System

- Robots may be either wired or wireless, as per the team's choice.
- Teams must ensure their chosen control system does not interfere with other robots.
- Wireless teams must use secure and interference-free communication methods (e.g., RF, Bluetooth).

3. Power Source

- Robots must be powered only by DC batteries, with a maximum voltage of 24V.
- Direct AC connection is strictly prohibited for safety reasons.

4. Motors & Drive System

- Any number of DC motors and gear mechanisms can be used, provided the robot stays within the allowed weight and dimension limits.
- The drive mechanism must be safe and must not damage the field surface.

5. **Ball-Handling Mechanism**

- Robots may use pushing, dribbling, or guiding mechanisms to move the ball.
- The ball-pushing or controlling mechanism must not exceed the overall width of the robot.
- Mechanisms that trap or hold the ball completely (e.g., clamping) are not allowed.

6. **Safety Requirements**

- Robots must not have sharp edges, exposed wires, or components that can harm players, referees, or damage the playing field.
- Robots emitting smoke, fire, or hazardous substances will be disqualified.

7. **Inspection**

- All robots must pass technical inspection before the match.
- Any robot failing inspection must be modified to comply with rules before being allowed to play.



Event Logistics

- **Venue:** Cambridge International School, Akurdi, PCMC, Pune.
- **Date:** Sunday, 16th November 2025
- **Registration Fee:** ₹1500 per team & ₹1000 for Individual participation
- **Last Date to Register:** 10th Nov, 2025
- **Contact:** 9730480960, Motionrobotics@gmail.com, www.motionrobotics.in

Field Specifications & Game Rules

1. Field Dimensions



- The soccer field will be a rectangular area of **5 feet × 7 feet (width, length)**, with clearly marked boundaries.

2. Goals

- Each goal will be 1 foot wide (≈ 30 cm) — proportionate to the field size.
- Goals will be placed at opposite ends of the field.

3. Ball Specifications

- A standard lightweight ball (plastic or foam) will be used for matches.
- Teams are not allowed to modify or use alternative balls.

4. Starting Positions

- Robots will start at designated positions equidistant from the center of the field.
- The referee will give a countdown signal to begin the match.

5. Gameplay Rules

- Teams must operate their robot using wired or wireless control, based on their chosen system.
- Robots must stay within field boundaries; leaving the field will incur a penalty.
- Ball handling mechanism must stay within the width of the robot at all times.

6. Scoring

- A goal is counted when the ball fully crosses the goal line.
- The team with the most goals at the end of active play is declared the winner.

7. Penalties & Fouls

- Robots intentionally obstructing, damaging, or pushing the opponent unfairly will incur penalties.
- Repeated or severe fouls may lead to disqualification.

8. Repair Breaks

- Each team is allowed one 2-minute repair break per match in the designated pit area.
- Repairs must not exceed the allocated time; the total match time continues to run.

9. Sudden-Death / Tie-Breaker

- If the match ends in a tie, a sudden-death round may be conducted, where the first team to score a goal wins.

10. Referee Authority

- Referees will enforce rules, monitor fair play, and resolve disputes.
- Decisions by referees are final and binding.

General Rules

1. Robot Ownership & Build

- Each robot must be entirely built and prepared by the registered student team.
- Pre-assembled or commercially available robots are not allowed.

2. Operation & Control

- Only one designated operator per team may control the robot during the match.

- Teams may choose wired or wireless control, but must ensure reliability.
- Robots must not interfere with the opponent's robot outside normal gameplay.

3. Repair / Break Rules

- Each team is allowed one 2-minute repair break per match.
- Repairs must be performed in the designated pit area.
- Total match time continues during repair; no extra time is provided.

4. Safety Compliance

- All robots must have securely mounted and insulated components.
- Sharp edges, flames, hazardous materials, or projectiles are strictly prohibited.
- Robots posing safety risks will be disqualified.

5. Fair Play & Sportsmanship

- Teams must compete honestly, avoid intentional obstruction, and respect opponents.
- Misconduct, cheating, or unsportsmanlike behavior may result in disqualification.

6. Field Conduct

- Participants must not enter the field unless authorized by referees.
- Any tampering with the field or equipment may lead to team elimination.

7. Judges & Referee Authority

- Judges and referees have the authority to pause, restart, or stop matches for safety or fairness concerns.
- Their decisions regarding match results, penalties, or disqualifications are final and binding.

8. Team Responsibilities

- Teams are responsible for bringing their robot, spare parts, and necessary tools.
- Teams must ensure compliance with all rules before and during the match.

Judging & Scoring Criteria

1. Primary Scoring Parameter

- The main criterion for winning a match is the number of goals scored by a team.

2. Goal Verification

- A goal is counted only when the ball fully crosses the goal line.
- Judges or referees will verify all goals.

3. Winning the Match

- The team with the most goals at the end of the 5-minute active play period wins the match.
- If only one team scores, it automatically wins.

4. Tie-Breaker Rules

- If the match ends in a tie, a sudden-death round may be conducted: the first team to score a goal wins.
- Judges may also consider ball possession, control, and fair play in case of repeated ties.

5. Penalties

- Robots intentionally damaging, obstructing, or pushing opponent robots unfairly will incur penalties.
- Minor infractions may result in time penalties or free-kick advantages.
- Severe or repeated violations may result in disqualification.

6. Technical Issues

- If a robot malfunctions due to technical failure (wired or wireless), a repair break may be used.
- Judges will ensure that the malfunction is not due to intentional unfair practices.

7. Judges Authority

- Judges' decisions regarding scoring, penalties, and match outcomes are final and binding.
- Teams must accept the judges rulings without objection.

Logistics & Facilities

1. Power Supply

- Standard electrical power points will be available at the venue for charging batteries.
- Participants must bring their own extension cords, adapters, and spare batteries if required.

2. Competition Arena

- The official game arenas (Soccer Game) will be available only during the competition rounds.
- Participants are not allowed to enter or tamper with the arena before or after their scheduled round.

3. Emergency Support

- Basic first aid facilities will be available at the venue.
- A fire extinguisher will be kept on standby as a precautionary measure.

4. Team Assistance

- Only registered participants are allowed inside the competition area.
- Teachers, parents, and mentors may support participants outside the arena but are not allowed to interfere during matches.

Disclaimer

The organizing committee reserves the right to modify, add, or remove rules and regulations of the competition if deemed necessary. Any such changes will be communicated to participants before the commencement of the event. Participants are expected to stay updated through the official announcements made by the coordinators.