acm

IOIT ACM

STUDENT CHAPTER

TENET

TECHFIESTA

BUILDING COOL

11 - 13 OCTOBER, 2025

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ROBO SOCCER

INSTRUCTIONS MANUAL

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OVERVIEW

Robo Soccer is a thrilling 1v1 robotics challenge where participants operate their bots to outscore their opponents in a fast-paced soccer match. The game combines precision, strategy, and quick reflexes. Each match will be played between two individuals, with their robots trying to score goals while defending their own side.

1. **Match Format:**
   - Match Type: 1 v 1 knockout.
   - Duration of match : 6 minutes (It will consist of 2 halves of 3 minutes each)
   - 60 seconds break will be given in each match
   - In case of a tie, a **1-minute golden goal round** will be played.

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2. Scoring System:

- Each goal will add **1- point** to the players score.
- Own goals will count towards the opponent's score.
- Player with higher points at the end of the match wins.

3. Foul and penalties System:

- **Fouls include:**
  - Damaging the opponent's bot intentionally.
  - Leaving the arena deliberately.
  - Touching the bot or ball during play.
- **Penalties:**
  - First foul = warning
  - Second foul = temporary suspension (5 seconds)
  - Third foul = disqualification

4. Registration Condition:

- **Participant** may register individually with or without a bot.
- Participant without a bot may participate in matchday using bots provided by organizers.

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5. **Safety & Fair Play Rules:**
   - Bots must not have sharp edges, flame emitters, or hazardous materials.
   - Strictly no wireless jammers or external interference devices.
   - Participants must follow instructions of referees and organizers at all times.

6. **Winning & Certificate Criteria:**
   - **Winner (Champion):** The participant that wins the Final Match.
   - **Runner-up:** The participant that finishes as the losing finalist.
   - **Certificates:** E-Certificates awarded to all the finalist , semi- finalist and all the participants who actively participated in the competition.

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7. Bot Specifications:

1. Dimensions & Weight

- Maximum Dimensions: 30 cm × 30 cm × 30 cm (L × W × H), ±5% tolerance.
- Maximum Weight: 5.0 kg (including batteries).

2. Power Supply

- Internal power source only – robots must carry their own batteries.
- Maximum Voltage: 12V DC (for safety reasons).
- Battery Types Allowed: Li-ion / Li-Po / NiMH / Lead-acid (must be secured properly).
- No external wired supply or charging during matches is allowed.

3. Control System

- Robots may be wired or wireless.
- Wired bots: Wires must be flexible, long enough, and elevated to avoid tangling on the field.
- Wireless bots: Must avoid frequency conflicts with other teams (Bluetooth, RF, or Wi-Fi permitted).
- Manual or semi-autonomous control allowed (fully autonomous depends on event category).

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4. Mobility & Drive

- Robots may be wheeled or tracked (no flying or legged mechanisms).
- Must ensure smooth multi-directional movement for dribbling and defense.
- Robots should be able to withstand collisions without damaging opponents.

5. Ball Handling Mechanism

- Only pushing, guiding, or shooting mechanisms are allowed.
- Grabbing, clamping, or holding the ball in a fixed position is strictly prohibited.
- The bot must not conceal the ball completely – the ball should remain visible at all times.
- Shooting/kicking mechanism must use reasonable force to avoid damage.
- Standard tennis ball (approx. 6.7 cm diameter) will be used.

6. Construction Rules

- Robots must be student-built. Ready-made RC cars or commercial bots are not permitted.
- Use of kits and standard parts (motors, wheels, sensors, controllers) is allowed, but the overall build must be original.
- Bots should not damage the arena surface or goalposts.

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7. Safety Requirements

- All electrical connections must be secure and insulated.
- No sharp edges, fire, water, oil, or projectiles.
- Robots must operate safely around other bots and participants.
- Organizers have the right to inspect and disqualify unsafe bots.

8. For more information

- Website: https://www.ioittenet.com/
- Instagram: https://www.instagram.com/ioit_tenet/

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DATE & TIMING

- MONDAY, 13 OCTOBER 2025
- 12 PM ONWARDS

VENUE

- AISSMS INSTITUTE OF INFORMATION TECHNOLOGY
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