

Robo Wars Competition

5th International Robo Tech Olympiad 2025

Organized by Robo Tech Valley & Uttara University

The **5th International Robotech Olympiad 2025**, organized by **Robo Tech Valley** and **Uttara University**, is a prestigious robotics competition featuring **Robo War**.

This rulebook outlines participation guidelines, safety regulations, and judging criteria to ensure a fair and competitive environment. Participants must uphold innovation, teamwork, and sportsmanship throughout the competition.

Weight Category: 15 Kgs

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1. TASK

Design and construct a remote-controlled robot capable of fighting in a tournament against other robots.

2. DESIGN SPECIFICATIONS

Basic Specifications:

1. No restrictions on bot dimensions.
2. Maximum machine weight: 15 Kg (includes batteries and pneumatic sources/tanks, excluding the remote controller).
3. "Cluster Bots" are allowed if total weight meets requirements.
4. Pneumatic, hydraulic, and electric lifters are allowed.
5. Only active weapon bots are allowed.

Mobility:

1. Rolling (wheels, tracks, or the entire robot).
2. Non-wheeled motion is allowed (e.g., linear-actuated legs).
3. Jumping/hopping is allowed (maximum height: 6ft).
4. **Not Allowed:** Flying (airfoils, balloons, etc.) or surface-securing methods (suction cups, glue, etc.).

C. Robot Control Requirements:

1. Only wireless remote control allowed; all power supplies must be onboard.
2. Autonomous functions must be manually overridable.
3. Teams must have at least four-frequency wireless control to avoid interference.
4. Market-available or custom-made remotes are allowed (subject to approval).
5. Remote pairing must be completed before entering the arena.

Battery and Power:

1. Electric-powered robots only (no IC engines).
2. Maximum voltage: 52V DC.
3. Batteries must be sealed and leak-proof.
4. Spare charged batteries are recommended.
5. Bots must have manual emergency shut-off switches.

Pneumatics:

1. Maximum allowed pressure: 50 bars.
2. Certified storage tanks and pressure regulators required.
3. Integrated pressure gauge must be present.

Hydraulics:

1. Only non-flammable liquids allowed.
2. Maximum allowed pressure: 50 bars.
3. All components must be securely mounted.

Weapon Systems:

1. Allowed: Spinning weapons, cutters, saws, flippers, lifting devices, magnetic weapons, etc.
 2. **Not Allowed:**
 - Liquid projectiles (e.g., foam, liquefied gases).
 - Flammable liquids or weapons causing invisible damage (e.g., RF jamming, electrical weapons).
 - Entangling weapons (chains, ropes, loose fabrics).
 3. Spinning weapons must stop within 60 seconds after power removal.
 4. Flame-based weapons (if allowed) must meet strict safety guidelines.
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3. COMPETITION RULES AND SPECIFICATIONS

Team Specifications:

1. Teams may have up to 4 participants (from the same or different institutions).
2. Each team must have a unique name.
3. A team representative must be designated for all communications.

Match Duration and Type:

- Standard matches: **3 minutes** (excluding timeouts).
- Match types:
 1. One-on-one combat.
 2. Resurrection Match (for previously defeated bots).
 3. Rumble (multiple bots simultaneously).

Match Frequency:

- Teams will have **20 minutes** between consecutive matches to prepare.

Criteria for Victory:

1. A robot is declared victorious if its opponent is immobilized.
2. Knockouts occur when a robot is thrown out of the arena.
3. Robots cannot win by pinning or lifting alone (maximum **20 seconds** per pin/lift).
4. Scoring based on:
 - **Aggression:** Frequency and effectiveness of attacks.
 - **Control:** Ability to maneuver and strategize effectively.
 - **Damage:** Functional impact on the opponent's bot.

Event-Specific Terminology:

- **Knockout:** A robot becomes immobile due to an opponent's attack.
- **Tap-Out:** A team voluntarily concedes defeat.
- **Technical Knockout:** A bot is immobilized due to mechanical failure.

Safety Rules:

1. Bots must be constructed with **adequate protection** for batteries and pneumatic systems.
 2. Safety inspections are mandatory before competing.
 3. Robots must have deactivation mechanisms and safety covers on weapons.
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4. ARENA SPECIFICATIONS

- Arena dimensions: **10ft x 10ft x 10ft.**
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5. PRIZES

- Total cash prize:
 - Distribution:
 - **1st place: 25000**
 - **2nd place: 15000**
 - **3rd place: 10000**
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6. IMPORTANT NOTE

- The **5th International Robo Tech Olympiad 2025** reserves the right to modify the rules at any time.
- Any updates will be **communicated via email and official event channels.**
- Participants must stay informed and comply with the latest rule set.

For inquiries, contact **Robo Tech Valley & Uttara University** via official communication channels.

 **Prepare your bots and get ready for an electrifying competition at the 5th International Robo Tech Olympiad 2025!**