

ROBOWARS

Combat Robotics Competition

Ingenium — IIT Indore

Competition Overview

ROBOWARS is a combat robotics competition where teams design and build robust remote-controlled robots to battle opponents inside a secured arena.

The competition evaluates mechanical strength, electronics reliability, power management, and strategic control under aggressive real-world combat conditions.

Objective

To design a combat-capable robot that can withstand physical impacts, effectively disable opponents, and maintain mobility throughout the match duration.

Team Composition

- Teams must consist of 4 to 6 members

Technical Constraints

- **Maximum Weight:** 10 kg (including battery and weapon system)
- **Maximum Dimensions:** 500 mm × 450 mm × 500 mm
- **Power Source:** On-board battery only
- **Control:** Wireless remote control with mandatory fail-safe
- **Weapons:** Mechanical, electric, or pneumatic (subject to safety approval)
- **Prohibited:** Explosives, fire-based weapons, corrosive liquids

Arena Specifications

- **Arena Size:** 4 m × 4 m
- **Arena Type:** Fully enclosed arena with safety shielding
- **Floor Surface:** Reinforced metal or composite flooring

Competition Structure

Stage 1: Design Proposal Submission (Online | Pre-Competition)

Teams must submit a concise technical proposal including:

- Robot concept and overall design philosophy
- Drive system and weapon mechanism description
- Safety considerations and fail-safe strategy
- Preliminary Bill of Materials (BoM)

This stage is used for shortlisting and verification of rule compliance.

Stage 2: Design & Safety Scrutiny (Offline | Before Matches)

- Mechanical robustness and chassis inspection
- Verification of weapon safety locking mechanisms
- Electrical isolation and emergency cutoff checks

Stage 3: Knockout Battle Rounds (Offline | Competition Days)

- One-on-one combat matches
- Fixed match duration
- Knockout format progressing to finals

Rules are subject to change at the discretion of the organisers.
Further instructions will be communicated to registered participants.