

Rulebook

Battle Bot Fight

(Open for All)

About

In the robot combat mode of competition, specially designed machines engage in combat utilizing a variety of techniques to render one other unconscious. Typically, the devices have been remote-controlled automobiles instead of self-governing robots. Robotics enthusiasts typically construct their own machines, which might differ greatly in terms of complexity and price. Though it was already moving swiftly, innovation in information and technology has accelerated it even further. To ensure flexibility and transformation, which eventually increases efficiency, it is imperative to accept a range of skill sets and competencies. Thus, you have the opportunity to showcase some of your hidden abilities by entering the **National Innovation Competition 2024 - Technocrats V.2** and exhibiting some of your innovative robotic talents.

Eligibility

1. Participants must be **University** (Undergraduate Level, Bachelor's, Honor's), **College, Polytechnic** students. Participants must have a current studentship status which could be verified by an **institutional ID card**.
2. Each team shall be within **1-4 members**.
3. Students from different educational institutions can form a team.

Registration Fee: 2,000/-

Registration Link: <https://forms.gle/nt8KXsLCMFJqgnzF8>

(Please select your following segment during registration)

General Rules

- The entire program provides a platform for fostering goodwill between engineers and technical people as well as a robotics competition. Therefore, we do not accept any unpleasant or impolite behaviour from anyone.
- Participants must register their team using a team name.
- Competition rounds will depend on the team number. The schedule will be published before the event date.
- Before starting each round, the bot must be handed over to the authority.
- Only **2 members** will be allowed in the arena to control the bot during the competition.
- All participants are asked to keep to the schedule and work together to foster a welcoming environment.

Bot Specification

- Maximum weight of the bot will be **15 kg** with all utilities.
- The machine must be powered electrically. Use of an IC engine in any form is not allowed. Onboard batteries must be sealed, immobilized-electrolyte types (such as gel cells, lithium, NiCad, NiMH, or dry cells).
- The electric voltage between any **2 points** on the machine should not exceed **24V DC** at any point in time. Participants will have to bring their converters for standard power supply according to Bangladesh standards.
- Participants must protect the battery terminals from a direct short and causing a battery fire, failure to do so will cause direct disqualification.
- Use of damaged, **non-leak-proof batteries** may lead to disqualification.
- Special care should be taken to protect the onboard batteries. If the judges find that the battery is insufficiently protected, the team will be disqualified immediately.

- Change of battery will not be allowed during the match.
- Only bots with onboard batteries will be allowed.
- Before combat, all bots will go through a technical inspection. Any operating principle that is not disclosed will result in immediate disqualification. Judges may limit any function they find dangerous.
- The form of a robot must be distinctive. There will be no secondary robots or independently moving objects that separate from the primary robot.

Gameplay

- Every bot must follow the weight limit. Exceeding the weight will cause a point penalty. Exceeding **50 grams**, 30 marks will be deducted as a penalty.
- Bots cannot activate their weapon before starting the match or while counting down.
- **No points** will be counted for **pushing**.
- Only active weapon-hitting points will be counted.
- Besides the hitting points judges will also mark **3 categories**.
 - a. Aggression
 - b. Tactics
 - c. Damage to the opponent bot.
- Every team can take a maximum of one restart for **1 minute**.
- **40 points** will be deducted for restart.
- If the weapon of any bot becomes immobilized during the match, then the bot will not get any more points after becoming the weapon immobilization.
- **Flammable fuels, liquid, gaseous or solid**, are not permitted.

- If any bot cannot move or comes to a stop, the judge will start the countdown for **10 seconds**. Within this time if the bot remains stopped the opponent team will declare a winner.
- Bots are not allowed to **hold** the opponent bot to the side wall for more than **20 seconds**.
- It is against the rules to physically or electronically jam your opponent's controller. All jamming-capable robots will be eliminated from the tournament.
- All entries must agree to the general rules of the facility of the event.

Mobility

All robots must have easily visible and controlled mobility to compete. Methods of mobility include-

- **Rolling** (wheels, tracks, or the whole robot)
- **Walking:** Walking robots are defined as those with linear-actuated legs that operate independently of each other
- **Jumping** and hopping are allowed
- **Flying** is NOT allowed

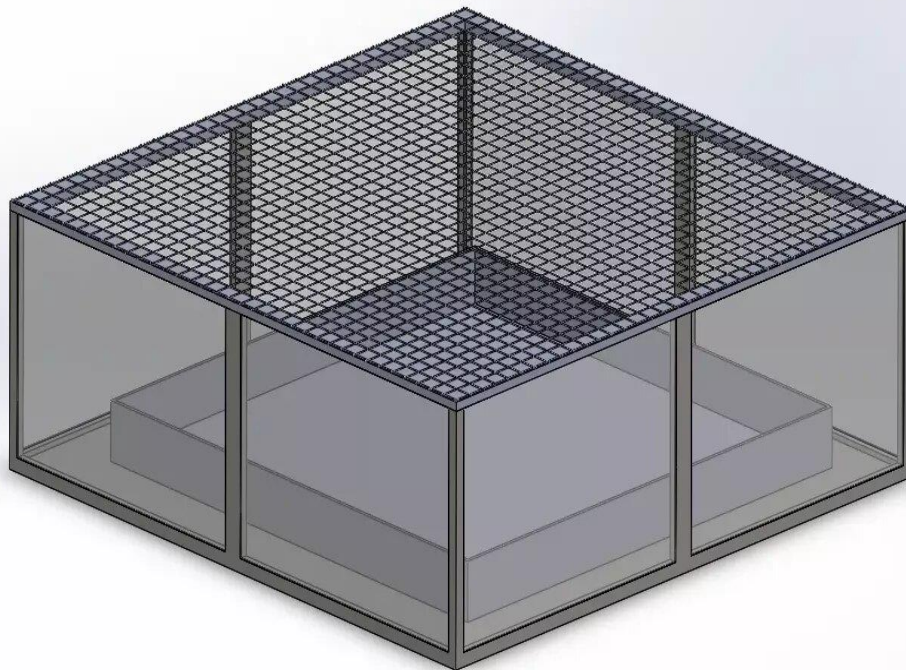
Grading Criteria

- Active weapon hit **10 points** per hit
- Restart the penalty Negative **40 points** each time
- Aggression **10 points** each time
- Tactics depending on the judgment panel
- If any team cannot continue, the opponent will be declared the winner.
- Damage to opponent **10 points** and depending on the judgment panel

Note: The judges' rulings are definitive in every instance. The Judges and the event's organizers maintain the right to modify the rules as they see fit. Misbehavior toward the judges and organizers may be used as justification for disqualification.

Arena Specification

The Arena will be (12' x 12') in length and width with a height of 4.5'. The sample arena view is given below-



Awards

- Champion will be given a price money of **30k** along with crest and certificates.
- Runner-Up will be given a price money of **20k** along with crest and certificates.
- 2nd Runner-Up will be given a price money of **15k** along with crest and certificates.

NOTE – The team Coordinator and Judge reserve the right to change the rules at any point in time. The change will however be highlighted on the website.

For Any Queries:

Contact/Organizers Details

Md. Fahim Al Mamun

Research Officer, IIEC, IUBAT

Contact: 01521469392

Md. Nurullah Haque

Assistant Research Officer, IIEC, IUBAT

Contact: 01720579410