

GOVERNMENT COLLEGE OF ENGINEERING AURANGABAD,
CHHATRAPATI SAMBHAJINAGAR

ROBO SUMO

1. MATCH OVERVIEW:

- Robo-Sumo matches consist of three rounds between two remote controlled robots set on a circular wrestling platform, or ring.
- In the first round, the robots are placed side-by-side in the centre of the ring, about one robot-width apart, and facing in opposite directions.
- In the second round, the starting positions of the robots are reversed
- In the third round, the robots are placed back-to-back in the centre of the ring to start.

2. BOT SPECIFICATIONS:

- Weight: Maximum weight is 2.5kg
- Dimensions: The robot must fit inside a 25cm x 25cm box. There 20cm height limit
- Control: Robots must be controlled via Remote Control (Bluetooth, RF, or Wi-Fi). Autonomous functions are permitted but must be toggleable

3. POWER SUPPLY & MECHANISM:

- All robots must use two identical gear motors, wheels, and a common battery pack (battery voltage 24 volts max) for their motive propulsion
- Additional motors of any type (e.g. DC, servo, stepper, etc.) are allowed on the robot for functions other than propulsion (e.g. rotating sonar sensor, fork-lift arms, shovel scoops, etc.)

3. SENSORS:

- Additional sensors for sound, contact, proximity, optical, vision, or other inputs related to robot sensing functions are allowed

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1. THE DOHYO (THE RING)

(The battle takes place on a circular platform called a Dohyo)

- 1) Surface: Typically a smooth, flat black surface.
- 2) The Border: A 5cm wide white line marks the edge of the ring
- 3) Starting Lines: Two parallel lines in the center where robots start back-to-back
- 4) The Robo-Sumo ring is a flat cylinder between 1 m and 1.5 m in diameter, (with a thickness of between 1.2 cm and 2.5 cm)

The ring can be made of MDF, plywood, particle board, or other materials and should have a relatively smooth surface with a bit of texture. The ring is entirely painted flat black except for a gloss white border marking the top side of the outside edge.

2. PARTICIPATION:

- A match is played by two teams in one round, Each team consisting of one bot.
- An individual may participate or construct a team of a minimum of 2 and a maximum of 4 members.
- Any institution (School/Collage/University) or group of students may form a team
- Register team for the specified competition online on the official Wings website only
- A ready-made bot kit is not accepted, if found so, the team will be disqualified

3. MATCH RULES & SCORING:

Match consists of three rounds (Best of 3). **Each round of 3 minutes**

- 1) The Start : Robots are placed on the starting lines. On the referee's signal, the match begins immediately.
- 2) Winning a Round (Yuhkoh Point): Pushing the opponent out of the ring until any part of them touches the outside

2. For any Query – Contact:

- Shubham Kadam - 9011831046
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For registration visit the official website of WINGS-2K26.