



2024

WRO - ROBOSPORTS

Rules for the national round

You can access the official rulebook for the *World Robot Olympiad - RoboSports Category* through this link:

<https://wro-association.org/wp-content/uploads/WRO-2024-RoboSports-Double-Tennis-General-Rules.pdf>

The official rulebook outlines all the rules and guidelines that participants must follow. For national competition rounds, certain rules have been modified to make the competition more accessible and easier to participate in.

Participants are strongly encouraged to first review the official rulebook for the *World Robot Olympiad - RoboSports Category*, which outlines the complete set of rules and guidelines. Once you have familiarized yourself with the official rules, please refer to the current document for any specific rules that have been adjusted for the national competition rounds.

Note that these adjustments are only applicable at the national level, and the original official rules will be strictly enforced during the international competitions.

Robot Material & Regulations:

1. Each team must build one robot for the competition.
2. The dimension and weight restrictions are the same as the official rulebook says.
3. The following controllers are allowed:
 - a. LEGO - Please refer to the official rulebook (Page 16)
 - b. Arduino - Any brand or non-brand Arduino can be used. Not limited to only official Arduino boards.

Any other controllers (i.e. RPi, OpenMV) can only be used for image processing. Only LEGO controller and Arduino can be used to control the robot's functions.

Game Table and Game Components:

1. As each team will have only one robot, the game mat will naturally be half the official size.
2. Teams will be allowed to choose whether they want the side with a ramp, or the side with the vertical wall.
3. The game will start with each side having 2 orange balls and 1 purple ball. A total of 4 orange balls and 2 purple balls will be on the field.

Selection and Gameplay:

Each team will participate in a selection round. During this round, teams will have 90 seconds to throw as many balls as possible to the opposite side using their robots. Please note that the purple balls will not be used in this stage. Based on the number of balls successfully thrown to the opposite side, the top four teams will advance to the semifinal matches. From there, two teams will be selected to compete in the final. There will also be a game to determine the third spot.

Scoring:

(Applicable for the seminal and final matches only)

1. At the end of each match, The ball score is calculated for both teams based on the number of balls on their half. The team with the lowest ball score wins.
2. Orange balls are counted as +1. Purple balls are counted as -2.
3. The ball score for each team can be between -4 and +4.

Disqualification:

Refer to *Appendix 12 (page 21)* of the official rulebook. Some of the team/robot actions that result in disqualification have been modified.

1. Touching the red area on the ramp will not result in disqualification.

