“ROBO MISSION” COMPETITION REGULATIONS

1. General information

WRO RoboMission in the category teams competition in the field tasks doer robots Robots are fully autonomous to be need.

Each young group for every year new field and missions working will be released . Competition in format competition day unexpected rules or additional tasks such as various elements to be possible.

Attention Focus Areas

In RoboMission students the following develop:

Programming skills and robotics main concepts (perception) (control, management, navigation).

Engineering skills (size/weight) within the limits mechanic solutions).

Missions solution strategies working exit and optimization .

Calculation Thinking: trial and error correction, iteration, collaboration.

In the team work , communication , problem solution and creativity .

The most important thing is to learn.

Adults help to give possible, but the robot build or coding team instead of to do possible it's not.

Teams, coaches and judges WRO's guide principles and the Code of Ethics action they do.

Competition day of the judges final to the decision respect and fair play principle priority.

2. Team and young groups definitions

2.1. Team of 2 or 3 people from the student consists of It will be.

2.2. To the team one coach, leadership does.

2.3. 1 person participant and 1 person coach team does not count and participate can't.

2.4. Team one in season WRO's only one in the category participation to be able possible .

2.5. Each student only one in the team participation possible.

2.6. International at the event coach The minimum age for is 18.

2.7. Coach one how many team with performance possible .

2.8. RoboMission young groups:

2.8.1. Elementary: 8–12 years old (2025: born 2013–2017)

2.8.2. Senior: 14–19 years old (2025: born 2006–2011)

2.9. Youth competition day not, competition being held calendar in how much to the full looking at is determined (born year according to).

3. Responsibility and of the team own labor

The robot build and programming only team members by execution possible . Coach guide to give possible, but the team instead of build / code prohibited (both in training and in competition).

Competition on time of the team external individuals with communication to do prohibited ; mobile telephone and communication devices competition in the territory not used .

On the Internet or other in the communities to solutions very similar solutions, or of the team himself/ herself by not created apparently from existing hardware/ software use is prohibited.

Violation if found, the judges time penalty, point deduction, round exclusion or disqualification such as measures use possible.

4. Think documents and rules

WRO game every year documents and general the rules announcement does Season through Q&A during precisions introduction possible. National organizers local to the conditions see adaptations possible.

Competition on the day hierarchy usually: General rules → Game documents → Q&A → Referees of the jury final decision.

5. Robot materials and regulation

RoboMission from 2025 international at the level various robotic systems for open . National organizers additional restrictions inputs possible.

5.1. From the start before robot maximum Dimensions: 250 mm × 250 mm × 250 mm (including cables). From the start then size is not limited.

Busy	Requirement / limit	Note

5.2.1	General weight ≤ 1.5 kg	
5.2.2	Battery ≤ 8,000 mAh	Production issuer to the instructions compliance do it .
5.2.3	Voltage ≤ 18 V	
5.2.4	Current ≤ 5 A	
5.2.5	Start/Stop button	External in part , easy visible and printable Let it be . When pressed all actions immediately stop need.
5.2.6	Sensors	Restriction: cameras — Junior/Senior; LIDAR/3D scanners — Senior only.
5.2.7	Motors number	Elementary — 4; Junior — 5; Senior - 6.
5.2.8	Wheel / caterpillar	Carpet don't hurt , stick trail Don't leave it .
5.2.9	Mechanical security	Injury danger no danger if change or exclusion.
5.2.10	Electricity security	Danger if exclusion; only safe to change permission.
5.2.11	Gases	Only atmosphere air ; other gases is prohibited.
5.2.12	Liquids	Prohibited (oil and oils too).
5.2.13	Spray / aerosol	It is forbidden.
5.2.14	Pneumatics	Permission : max 3 bar, tanks total 150 ml; the compressor is a motor.
5.2.15	Hydraulics	It is forbidden.
5.2.16	Fragile materials	Like glass dangerous possible materials is prohibited.
5.2.17	3D printing details	Permission; competition 3D printing in time release is prohibited .
5.2.18	Laser	Only safe; eye for safe certificate required.

5.3. Robot to fly (into the air) (climbing) is prohibited.

5.6. Robot autonomous to be need; remotely management and radio/ wireless communication is prohibited.

5.9. Inspection and like Bluetooth/Wi - Fi in an attempt connections turned off must be.

6. Robot technician conclusion

6.1. Teams filled technician the conclusion (Appendix B) on paper take arrivals need.

6.2. Technical summary from 1 page not to exceed (A4 or US Letter).

6.3. Some in competitions technician conclusion out of 5 points for maximum bonus or is it mandatory to be possible.

7. Play table and equipment

7.1. Field: game table + print rug (mat). Every age group for separately rug

7.2. Rug Dimensions: 2362 mm × 1143 mm. Borders official height: 50 mm (or higher).

7.3. Rug matte, no shine coating with recommendation: 510 g/m² PVC tarpaulin (Frontlit).

7.7. Field or objects injury forbidden ; intentionally injury from the round to exclude take may come.

8. Competition elements

8.1. Seasonal Season Challenge — mandatory

Season Challenge every one RoboMission in the competition to be condition

8.2. Unexpected task / Unexpected rule (Surprise Task / Surprise Rule)

Surprise Task — additional task; Surprise Rule — available to the task change introduces and again requires programming possible.

8.3 . Appendix task (Extra Task)

Extra Task competition one how many week before announcement will be done , teams get ready takes .

8.4. Extra Day Challenge

Separately on the day will be held; with Season Challenge in the ranking together to be counted possible.

8.5. On-Day Challenge

With Season Challenge one on the day to be held additional call.

8.6. Skill Test

the Season Challenge directly related not happened habit test (interview , separate) task , technical assessment and etc.).

9. Tournament format and order

9.1. In the tournament practice times known number and official robot rounds to be condition

9.5. Training from the end before robots quarantine will be transferred to the territory (robot parking); not transferred team next in the round participate can't.

The best in attempt total score percentage	**Certificate**
< 25%	Participation
25–50%	Bronze
50–75%	Silver
> 75%	Gold

10. Robot attempt

10.1. Each try 2 minutes continue time is up ; the referee's signal begins .

10.2. At the start robot projection full starting zone inside Let be. Robot state via ' information ' input ' or sensor calibration is prohibited .

10.7. 2 minute session when finished, touch If so, the robot will move the table. abandonment if or violation if will be completed.

10.11. Disqualification usually 0 points and 120 seconds (most bad result) as is written .

11. WRO International format in the final and rating (example)

The international final usually lasts 3 days: Day 1 is training, Day 2 is the Season Challenge, Day 3 is the Extra-Day Challenge.

Rating usually Season + Extra-Day most good score, then time criteria and next the most good results through is determined.

A. Glossary

Term	**Description**
Check Time	Inspection time: referee robot size and technician requirements (e.g. wireless connection exit) checks.
Coach	Coach : the team reads and guide gives , but team instead of build / code does not.
Practice Time	Exercise time : robot test and code / mechanics change possible was time
(Robot) Attempt	Official attempt: judges 2 minute assessment running

Robot Round	Robot round: teams alternately official their attempts doer stage
Quarantine Area / Robot Parking	Robot delivered quarantine territory.
Technical summary	1 page about a robot technician conclusion.

B. Technical for the Technical Summary template

Square	**Explanation / example**
Team name	Team name
Team number	If given if
Team members	Names (name only)
Coach	Complete FISH.
Robot kit	For example: LEGO, fischertechnik or himself/ herself gathered
Weight	Example: 1.1 kg
Size	For example: 20 cm × 15 cm × 15 cm
Controller (s)	For example: SPIKE Prime, EV3, Arduino and etc.
Battery	Example: 7.5 V / 2200 mAh
Sensors	Type and number
Motors	Type and number
Programming environment	Block / Python / others
Robot picture (start/stop marked)	The photograph add

C. Possible robot sets list (examples)
Fischertechnik – STEM Coding RoboMission
ELECFREAKS – Nezha Pro
Olibots
ROBOROBO – AIKIRO SERIES

LEGO platforms : LEGO SPIKE Prime, LEGO MINDSTORMS EV3

D. Competition elements according to examples

The following table and samples competition format explanation for given (example) as).

Season Challenge (example)	Each	Max.	#	Total
Task A	10	40		
Task B	5	30		
Bonus	3	12		
Maximum score		82		
Total points				
Time (seconds)				

E. Supplement ideas

National organizers various robotic systems in the middle balance for classes (e.g. LEGO and Others (current) they reach It is possible. This is common . rating with together every class according to separately rating to conduct help gives.