

REPUBLIC OF TURKEY

MINISTRY OF NATIONAL EDUCATION

**The General Directorate of Technical and Vocational
Education**

**14. INTERNATIONAL
MEB ROBOT CONTEST
OPEN CATEGORY RULES**

2022 – SANLIURFA

OBJECTIVE

It is organized for robotic projects in International Robot Competitions to provide a platform for high school and university students to realize and present their dreams, scientific ideas, abilities.

SUBJECT

It will be organized in following 3 topics;

- ✓ Biomimicry
- ✓ Natural Disasters
- ✓ Industrial Systems
- ✓ Medical Systems

Biomimicry : The term biomimicry comes from bios(meaning life) and mimicry(meaning to imitate). Biomimicry is an innovative discipline that learns from nature and develops sustainable solutions by using natural design principles, modelling systems, process and forms of nature. One of the best examples is simulation of sunflowers at solar panels. Solar panels can follow the sun autonomously to maximize energy capture from sun just like sunflowers.

Natural Disasters: To perform tasks such as warnings, rescue, protection etc. to prevent life and property losses caused by natural disasters can be stated as basic aims of this topic.

Industrial Systems:

Technology which is developing rapidly causes a new aspect about design and production. Modeling of complex manufacturing systems , improving manufacture systems and decreasing production costs has led to increase demand for innovative approaches in system control and designs. Designs for innovative solutions of industrial systems according to criterions mentioned above can be listed in this topic.

Medical Systems: Under this topic, devices and robots for rehabilitation robots, medical service robots and disinfecting systems will be evaluated.

- Rehabilitation robots: Rehabilitation is called the process of maximizing the physical, psychological, social and professional condition of the individual who is in environmental constraints because of a physiological or anatomical disorder or inadequacy. Examples of rehabilitation robots include therapeutic exercise, motion support/exoskeletal robots, walking rehabilitation robots and prosthetics.

- For medical service robots, it is possible to say that family members and caregivers, health care organizations, technology providers, elderly or physically disabled individuals can be used in a home and hospital environment, and that the primary goal is to be free, cautious, and to provide attributes that can meet specific needs for all users.

- For Disinfection Systems, measures taken against infection and practices to reduce infection interaction will be evaluated in this category. The importance of disinfecting systems has once again emerged in this period of pandemic period. This area includes hand-foot disinfection systems, media disinfection and intelligent mask systems.

RULES

1. Only students from universities, high schools and secondary schools can participate to this competition.
2. Teams which will participate to competition are determined in frame of general rules. Each team can participate with only one project.
3. Projects should be prepared according to "Project Preparing Guide-2022" in appendix-1

4. Projects that have participated or applied to any other project competition with the same or different names and / or with the same or similar content (subject) **before the deadline** are not allowed to participate in this competition. Before the deadline, such projects that are determined their participation or application to another competition with the same project will be eliminated from the competition at any stage.
5. Students who participate to “TUBITAK research projects contest for secondary school students” cannot apply with same project to this competition
6. Documents for application;
 - ✓ Project Plan (appendix 1)
 - ✓ Application form (appendix 2)
 - ✓ Declaration of commitment and ethics statement (appendix 3)
7. Preparing and uploading all documents are under responsible of competitors
8. All teams must upload all project documents (Appendix-1,2,3 , pdf format) signed and stamped to robot.meb.gov.tr **before 8 May 2022** for pre-evaluation.
9. Pre-evaluation result which listed the projects that will be invited to final competition and other conditions will be published on <http://robot.meb.gov.tr> on **22 May 2022**
10. All competitors have to follow announcements published in official web site :<http://robot.meb.gov.tr>
11. All competitors are responsible to follow the rules of social distance and wear masks during the competition
12. Disinfectant possession and taking into account the social distance rules in the settlement of the stands are required.
13. Competitors must disinfect their hands before and after the presentation to the judges. They should be aware of the social distance during the presentation.
14. Teams which are invited to final competition have to prepare posters, brochure, text and in necessary 3D design model of their projects.
15. Project should be maximum 80kg weight and its dimensions should be less than 80x140x100cm.
16. Competitors will present their projects in exhibition hall reserved for his category. They will show followings to jury board;
 - ✓ Presentation
 - ✓ Project introduction in exhibition hall
 - ✓ Posters and brochures of their projects
 - ✓ Feasibility and applicability of their projectsJury board will evaluate and give scores according to criteria above
17. Scores given by jury board in exhibition hall will be announced as “first-evaluation score”
18. Depends on participation, jury board will invite certain number of projects to presentation room according to first-evaluation scores.
19. Team members have to present their project presentations in maximum 10min to jury board.
20. Teams have to bring all necessary equipments to show their projects to jury board.
21. Projects/Robots will be evaluated by expert jury members of each group according to following criteria (total score 100);
 - ✓ Innovation
 - ✓ Autonomy

- ✓ Design (Performance, cost, simplicity)
- ✓ Applicability
- ✓ Actuality
- ✓ Presentation

After evolution process by taking into consideration of above criterions, winners (the first,second and third places)will be determined.

PRE-EVOLUTION

1. Projects which are prepared in accordance with project guide will be pre-evaluated by related jury experts through their “project reports”. Additional time will be given to projects that have some lacks after this evaluation.
2. It is expected that projects were inspired from original ideas of students. Students can get consultancy but their projects should be formed and finished with their own knowledges and competences. If it is determined that projects were not meet this expectation, competitors and advisor will be disqualified.
3. Projects which were invited to final competition, they will be interviewed by jury members. Computer and projection device necessary for presentation will be provided by the organisation.(All other equipments must be brought by teams)

CALENDAR

Pre-evolution and corrections	08 - 22 May 2022
Announcement of pre-evolution results	23 May 2022
Final competitions	13-16 June 2022

COVID-19 pandemic rules during the competition

- a - Clean your hands with disinfectant before entering the competition area.
- b - When you enter the race zone for the competition, be sure that wearing your mask to cover your nose.
- c - keep your distance while judges are checking your robot
- d – Competitors can't take off his mask during the contests and enter the competition without a mask.
- e – Pay your attention to the social distance while taking your robot and leaving the competition area at the end of the race.