REGULATIONS
«EDUCATIONAL ROBOTICS – ENGINO, LEGO, MAKEBLOCK & OPEN CATEGORIES»

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1. Introduction

The challenge of educational robotics provides an opportunity to students and educators of primary, secondary, secondary technical and vocational levels and also to college/university students and to adults to cooperate, to exploit their fantasy and creativity to develop constructions and solutions in which robots play an important role to address a problem.

It is offered in two formats:

(a) to primary school students and educators who are invited to explore a specific theme and implement a construction by using specific common robotic platforms and

(b) to gymnasium, lyceum, college/university students and educators and adults who are invited to decide on a theme and without any limitation as to the platforms to be used to implement innovative robotic constructions and applications.

2. Aim

1. The challenge promotes cooperation and teamwork among participants, new learning approaches such as project-based learning and the development of analytical and critical thinking through small-scale research to present solutions to current social problems.

3. Categories of Robotic Platforms

1. The table below lists the age level of the teams and the robot platforms that can take part in the challenge.

Table 1: Educational Robotics – Platforms, Categories & Levels

Exhibition/Challenge Educational Robotics Categories	Robotic Platforms	PRIMARY 1st – 3rd	PRIMARY 4th – 6th	GYMNASIUM	LYCEUM	ADULTS
LEGO	WeDO, SPIKE ESSENTIAL, SPIKE PRIME	√		✗		
MAKEBLOCK	MBOT, MBOT 2 & MBOT NEO					
ENGINO	MINI & PRO					
OPEN CATEGORY	All the platforms above and in addition Arduino, Kypruino, Micro:bit, Raspberry Pi, ARM, ESP and their combination.	✗		√		

4. The Theme

The theme of the challenge varies depending on the robotic platforms used and the age category of the participating teams.

4.1 Theme the Platforms Engino, Lego & Makeblock

This year's theme for Educational Robotics ENGINO, LEGO and MAKEBLOCK will be «**SUSTAINABLE DEVELOPMENT & GREEN ISLAND"**. Sustainable development is about meeting today's needs while protecting the environment for future generations. A "Green Island" is a place where clean energy, responsible water use, waste reduction, and smart technologies work together to create a balanced ecosystem.

Teams are encouraged to explore the use of robotics technology in combination with Artificial Intelligence in presenting a unique and innovative solution/construction. In this regard, you may recall the AI FOR GOOD INITIATIVE which leverages Artificial Intelligence for the benefit of humanity as well as the 17 UN Sustainable Development Goals (https://sdgs.un.org/goals) where specific objectives can contribute significantly to understanding the issue and generating ideas.

Through a series of brainstorming sessions with their coaches, teachers and trainers we are certain that teams will generate impressive and innovative ideas that will be implemented with patience and persistence in collaborative spirit to produce an excellent solution.

4.2 Theme of Open Category

1. In this category the theme is specified by the Organizing Committee. It is rather decided by the team and can relate to and cover any aspect of life activity without restriction.
2. It is allowed to use any number and any combination of robotic equipment types (e.g. indicatively Raspberry Pi, Arduino and Lego together in one construction), number of controllers, motors, sensors and other materials without restrictions.
3. Teams are urged to innovate by exploring ways to incorporate Artificial Intelligence in their solutions by taking advantage of the recent developments in the field. Computer vision techniques can also be employed to further advance innovation together with additional equipment.
4. Evaluation in the Open Category covers all levels together and the best three robotic constructions will be awarded.

5. The Team - Eligibility for Participation

1. The competition is addressed at teams and not individuals.
2. Each team can consist of two (2) – six (6) students.
3. Teams of the primary education must be accompanied by an adult, preferably their coach or teacher.
4. Only one student belonging in the "Grade Primary 1st - 3rd " category can participate in a team of "Grade Primary 4th – 6th ". The opposite is not applicable.
5. Point 4 above applies for the levels of the open category accordingly.
6. The team appoints one of its members as a leader who will be responsible for the communication with the Organizing Committee and the judges, for the technical control process and for operating the robot during the competition.

6. Programming Language(s)

1. For the development of the program, any combination of programming language(s) supported by the respective platforms may be used.

7. Use of Computers

1. Each project team can use any number of computers (or a combination of computers, tablets mobile phones) to execute the project.

8. The Robots

1. For the Engino, Lego and Makeblock categories the robot should be constructed with original materials and parts of the corresponding platform.
2. There is no limitation as to the number of robots a team can use.
3. There is no limitation as to the number and type of sensors that can be used.

9. The Construction and its Wider Environment

1. For the Engino, Lego and Makeblock categories:
    - The construction should be implemented with original and licenced materials of the respective platform.
    - All parts of the construction including automation or mechanical parts driven by motors shall be made of authentic materials of the respective platform.
2. The overall height of the structure may be up to 1.5 meters high.
3. Paper (of any size, thickness and colour), polystyrene, wood, aluminium and plasticine may also be used for putting together the construction environment.
4. Teams that may want to use materials not listed above can contact the Organizing Committee for clarificationς.

10. The Field

1. The field is defined as “the floor of the structure, the base on which the construction and the robot are placed”.
2. The field is a do-it-yourself (DIY) area made of mat and/or thin durable wood with dimensions up to 1meter-wide x 1 meter length.
3. The field can either be flat or anomalous/mountainous.

11. The Competition

1. The teams have to prepare and present a construction related to the theme of the category and as outlined in section «4**. The Theme**».
2. In the construction, it is important for the robot to play an apparent, leading and active role in its environment.
3. The robot must perform a combination of four (4) mobile/kinetic activities or automations.
    - **Mobile/Kinetic activity** is the process of moving the robot (or another part of the structure) from one point to another as a result of its reaction to an external stimulus from the wider construction environment.
    - **Automation** is the process in which a sensor realizes/understands/captures an external stimulus from the wider construction environment and reacts to that stimulus by updating the robot control program. The robot, in turn, processes the data it receives from the sensor and performs a task. Such a task may, for example, be the movement of the robot, the creation of sound or noise, the appearance of data/calculations or an alert/ update or an image on the computer screen etc.
    - It is understood that automation does not involve human intervention of any kind.
4. The robot should remain on the field throughout the activity presentation.
5. If the robot hangs or gets stuck and does not move, it can be assisted by contestants by lifting it or by moving elements on the track.

12. The Assessment Process

1. The programme of the event will specify the date and time on which the presentation of the constructions of each category will take place.
2. The evaluation is carried out by groups of judges who visit the participating teams at the exhibition area of their constructions.
3. Depending on the number of teams participating in the competition and in order to minimize the waiting time, there may be two parallel evaluation teams.
4. In order to minimize the waiting time of the teams, the following assessment process will be followed:
    - The teams will set up their construction at a place indicated by the Organizing Committee.
    - The evaluation teams will perform the assessment of the constructions of the teams.
    - Upon completion of the assessment of all the teams of the category, the results will be announced.
    - Time will then be given to the audience to visit the competition area to have a closer view and admire the constructions of the teams.
    - At the time to be indicated on the programme, the teams of the category will exit the competition area with their constructions.
5. As an indication of appreciation and sportmanship, teams are requested to remain at the Athletic Center to enjoy the presentations of the teams in the other categories.

13. Assessment Criteria

1. The maximum number of points to be achieved by a team is one hundred (100).
2. The evaluation criteria are explained below.

13.1 Presentation (Maximum Points: 30)

1. The team will have available three (3) minutes to present the structure and the activities performed by the robot to the judges.
2. The presentation gives thirty (30) points and will consider the following criteria (10 points per criterion):
   - Clear and comprehensive explanation of the construction, coherence of the presentation (10p).
   - Presentation and communication skills (10p).
   - Degree of participation of all team members in the presentation, explanation of each member's role. Their collaboration and complementarity during the process(5p).
   - Satisfactory responses to the judges' questions from all team members(5p).

13.2 The Robots (Maximum Points: 20)

1. This part of the evaluation gives twenty (20) points and includes the following criteria (10 points per criterion).
   - An explanation of the code developed to program the robot (10p).
   - Demonstration and explanation of at least three (3) robot functions or automations performed by the robot (5p).
   - Robot design and potential of optimization of its functionality, variety and operation of sensors used (5p).

13.3 Poster (Maximum Points: 20)

1. This part of the assessment is worth twenty (20) points and involves creating a poster based on the criteria below.
2. The poster is A3 size and is divided into two equal parts, each worth 10 points.
3. The first upper (or right) half is produced manually using any material they wish. The second lower (or left) half is produced by the children using any artificial intelligence tool.
4. The two parts of the poster should have different content. In other words, the part produced with artificial intelligence should not be a "copy" of the part produced manually.
5. The content of the poster may relate either:

- ✓ entirely to the theme of the challenge, in which case the two parts should be complementary to each other or
- ✓ one part will relate to the theme of the challenge and the other part to the team's work in preparing their construction.

13.4 Conception of Idea and Implementation (Maximum Points: 15)

1. This part of the evaluation gives fifteen (15) points and includes the following criteria (5 points per criterion):
   - Level of research performed on the theme, applicability of the solution to the real world.
   - Relevance and affinity of the construction with the theme of the competition in order to effectively and qualitatively solve a problem.
   - Creativity and originality of the team, overall quality and authenticity of the construction.

13.5 Explanatory Video (Maximum Points: 15)

1. Each team must explain its construction and the idea behind it with a video.
2. The team must upload its video on the web so that it can be accessed by the Evaluation Committee for review and evaluation purposes prior to the competition date.
3. The team must notify the Evaluation Committee about the link that leads to its video by completing the **video registration form at this link** .
4. Registration of the video must be made **at the latest by Friday 19th June 2026 at midnight.** Any registration after the above date will be disregarded and the team will receive zero (0) points for the Explanatory Video.
5. The maximum duration of the video must be up to three (3) minutes.
6. The video must document collaboration, team and collective work amongst team members implementing the construction and programming the robot.
7. The video should present the robot's motor activities and the automations.
8. The video must also be available on the day of the competition for demonstration before the judges, if so requested.

14. Declaration of Winning Teams

The Lego, Engino and Makeblock Educational Robotics categories will be evaluated separately for Primary 1st - 3rd and Primary 4th - 6th grade levels and three prizes will be awarded for each category.

The evaluation in the Open Category is single and uniform and covers all levels and awards will be given to the three best projects.

15. Note – Team Participation in ROBOTEX INTERNATIONAL

It is noted that at Robotex International:

- all three categories of Engino, Lego, Makeblock are offered as in Cyprus.
- no video is submitted.
- there is no evaluation process of the constructions.
- no winners are declared.
- certificates of participation are given to all teams.

The above was in effect during last year's Robotex International event and you may see this year's regulations here.

16. Responsibility

1. The organizers of ROBOTEX CYPRUS do not accept any responsibility for any incidents and/or accidents that may be caused by the participants or their robots or any of their equipment.
2. The organizers of ROBOTEX CYPRUS do not accept any responsibility for any damage to the robots or the construction or the theft of them, should it occur.

17. Terms and Conditions of Participation

1. Participation in ROBOTEX CYPRUS assumes and requires acceptance of all terms and conditions for participation by competitors, the coaches and organizations they represent.
2. In case of any difference in the competition rules between the English and the Greek versions, the Greek version is considered as correct.
3. The robot must be registered before the competition. The registration process includes technical inspection of the robot, marking the robot with a number sticker.
4. All questions and issues that may arise during the competitions must be reported to the judges.
5. The final decision about objections is taken by the judges in cooperation with the organizers.
6. Judges' decisions on any objections are considered final and can't be challenged by participants, the coaches or the organizations they represent.
7. In the case of a deliberate alteration or change of marking of the unique number of robots, the coach and his team will be automatically expelled from the event. As a result, they will not be able to take part in any other challenge they may have enrolled. The coach and his team will leave the venue immediately. The coach also loses the right to take part in the next ROBOTEX CYPRUS event and is automatically excluded from participating in ROBOTEX INTERNATIONAL in case one of his/her teams has won a ROBOTEX CYPRUS competition. The Organizing Committee reserves the right to publicly announce the coach, the team and its members.
8. It is expected that both the coaches and the members of the teams will exhibit a spirit of fair play and will behave with mutual respect, decency and esteem both to themselves and to the organizers, judges and volunteers. The behaviour of all coaches and team members should promote "fair play". Therefore, the Organizing Committee reserves the right to expel anyone from the venue of the event who violates the above principles of good practice.

18. Technical Control

1. For purposes of clarity of this section, the clauses «6. The Robotics Platforms», «9. The Robot», «10. The Construction and its Wider Environment» and «11. The Field» will be collectively referred to as the “Team’s Entry”.
2. Technical control includes the inspection of the Team’s Entry.
3. If any of the items of the Team’s Entry above do not comply fully with the requirements, the team will not be accepted to compete and will automatically be disqualified from the event.
4. Technical control of the Team’s Entry will take place as part of the assessment process of the team.
5. It is expected that the team will arrive early as specified on the programme of the event. Failure to do so, the team will not be accepted to participate in the competition.
6. Only the members of the team must be involved in the process of transport of the team’s entry to the competition area.
7. Only the members of the team must be involved in the preparation of the team’s entry and its placement at the exhibition area.

19. Changes and Cancellation of Rules

1. Any changes and/or cancellations in the rules of the competition are decided by the Cyprus Computer Society in consultation with the Organizing Committee of the ROBOTEX. You may address comments and suggestions to the Organizers at robotex@ccs.org.cy.