IIUM ROBOTIC COMPETITION (IRC)2026

RULES AND REGULATIONS:
CREATIVE INNOVATION
(PRIMARY & SECONDARY)

REVISED MAY 2026

1. Objective

In the SDG Innovation project category, the participants will have to share their ideas through an innovative robotic project on how to solve SDG-related problems in a creative way.
Primary School Participant's Age : 7 to 12 years old
Secondary School Participant's Age : 13 to 17 years old

2. Theme

2.1. Secondary School Category

The theme is **AI Innovations for a Smarter Future.**
This theme encourages students to explore how Artificial Intelligence (AI) concepts can be used to create simple, intelligent devices that improve daily life. Participants will design and develop innovative projects using basic electronics, sensors, and automation combined with AI-inspired decision-making systems. The goal is to help students understand how emerging technologies such as AI can solve real-world problems in homes, schools, and communities. Projects should focus on practical solutions that improve safety, efficiency, learning experiences, or environmental sustainability

This theme is structured around five key Sustainable Development Goals (SDGs), ensuring that projects align with internationally recognized sustainability objectives. **SDG 3 (Good Health and Well-Being)** promotes the creation of safety and health-focused devices. **SDG 4 (Quality Education)** supports the development of educational tools that enhance learning experiences. **SDG 7 (Affordable and Clean Energy)** emphasizes energy-efficient solutions**. SDG 9 (Industry, Innovation, and Infrastructure)** encourages participants to explore simple yet effective engineering innovations, and **SDG 11 (Sustainable Cities and Communities)** focuses on designing smart home and community-based technologies.

Overall, participants must use basic electronics, automation, and user-friendly design to create intelligent gadgets that enhance everyday experiences. The competition's goal is to cultivate early-stage problem-solving, creativity, and hands-on technical skills, ensuring students understand how technology can improve comfort and safety. This initiative encourages everyone to investigate practical solutions for making our living and learning environments smarter, more connected, and more efficient.

2.2. Primary School Category

The theme is **Innovations for a Smarter Cities and Communties.**
This theme encourages students to become young innovators by transforming everyday environments into smarter, more efficient spaces. Through hands-on engineering, participants will design battery-powered devices and automated systems that solve real-world problems in homes, schools, and communities. By integrating basic electronics with intelligent automation, students will create practical solutions that improve safety, convenience, and daily living. This approach highlights how simple yet innovative technologies can contribute to building smarter, more connected, and sustainable communities.

This theme is structured around five key Sustainable Development Goals (SDGs), ensuring that projects align with internationally recognized sustainability objectives. **SDG 3 (Good Health and Well-Being)** promotes the creation of safety and health-focused devices. **SDG 4 (Quality Education)** supports the development of educational tools that enhance learning experiences. **SDG 7 (Affordable and Clean Energy)** emphasizes energy-efficient solutions**. SDG 9 (Industry, Innovation, and Infrastructure)** encourages participants to explore simple yet effective engineering innovations, and **SDG 11 (Sustainable Cities and Communities)** focuses on designing smart home and community-based technologies.

Overall, participants must use basic electronics, automation, and user-friendly design to create intelligent gadgets that enhance everyday experiences. The competition's goal is to cultivate early-stage problem-solving, creativity, and hands-on technical skills, ensuring students understand how technology can improve comfort and safety. This initiative encourages everyone to investigate practical solutions for making our living and learning environments smarter, more connected, and more efficient.

3. Rules

3.1. Project Requirements:

All projects must comply with the following general requirements:

- The project must align with at least one relevant Sustainable Development Goal (SDG) based on the competition theme.
- The project must be completed before the competition day (pre-made)
- All projects must be battery-powered (rechargeable or standard batteries allowed).
- The project must not exceed the recommended size of (1 meter height x 1 meter length x 1 meter width). Oversized projects may not fit the allocated space and risk not being displayed properly.

Primary School Category:

- The project must use basic electronics and/or simple automation (e.g., sensors, circuits, switches).
- The project should solve real-life problem in home, school, or community settings

Secondary School Category:

- The project must include at least one Artificial Intelligence (AI) concept.
- The project can be developed using hardware platforms (e.g., ESP32, Arduino, Raspberry Pi) or Software platforms (e.g., Python, Android/iOS).

3.2. Presentation & Demonstration:

- Each team must **present and demonstrate** their project to the judges.
- The presentation **must be in English** and include:
  I. Project overview
  II. How it addresses SDG(s) chosen
  III. Technical design and functionality
  IV. Demonstration of working features
- Each team will have 5 minutes for presentation, 2 minutes for Q&A session. Failure to complete the presentation within 5 minutes will result in a lower mark.

3.3. Booth Setup:

- Each team has **1 hour** to setup their booth before the exhibition.
- The booth must be **attractive and informative**, and teams are encouraged to reflect **cultural, aesthetic, or educational themes**.
- Participants are encouraged to bring extension cables if needed.
- Poster Requirement: Each team must prepare and print innovation poster in A0 size for their booth.
- Participant are encouraged for bringing their own stand to better display their poster

3.4. Competition Schedule

- The official schedule will be announced prior to the day of the competition.
- Participants must be punctual and adhere to the instructions from the committee.

4. Evaluation

The evaluation will be done based on the following judging categories:

Judging Category	Weight	Score
1. Project idea	10%	
2. Project originality	10%	
3. Practicality	20%	
4. Robot/project design	20 %	
5. Booth design	10%	
6. Project Presentation	10%	
7. Project Demo Performance	20%	

5. Disqualification

5.1. Performing any act against the spirit of fair play and friendship between participating teams.

5.2. The team does not follow the instructions from the program committee in charge.

5.3. Submit a project that does not align with the SDG from their category.

6. Others

6.1. For any dispute not specified in the rules, the committees in charge are given full authority to decide, and their decision is final.

6.2. All teams are encouraged to decorate their robots to reflect the culture, aesthetics, and styles of their respective educational institute, country, or theme.

6.3. Only the participants are allowed to be at the booth during the judging process.