

Educational Robotics Trainer

Overview

The use of robots in education is important in all educational stages. Through its design, programming and construction, learners acquire knowledge and skills in the field of computer engineering, electronic, coding and mechanical engineering, and these skills are among the requirements of industrially developed countries.

When designing, building and programming an autonomous robot, we explore advanced mathematical, scientific and technical concepts.



15 Hours
16:00 -21:00



**For Educators,
and Teachers**



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1-3/8/2021

Certified By



الجمعية العربية للروبوتك والذكاء الاصطناعي
Arab Robotics & AI Association

Educational Robotics Trainer

Day 1:



- Ice-breaker activity



- Introduction to the Robot

- What is the purpose of using robots in life?

- Why do we use robots in our daily life?

- What do we expect from this course?

- Get to know the robot training Kit



- What are the main units of a robot?



- The main processing unit of the robot and its functions



- Robot output units and their functions



- Robot input units and their functions



- Design and build a robot using the build guide



- Activity



- Robot programming software



- Programming the motors and controlling the movement of the robot



- Activity

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Day 2:



- How to use mathematical equations in the movement of the robot



- Activity

- Conditional tools and how to use them – part1

- Sensors and their functions

- Distance sensor and how to use it

- engineering design



-Activity



- Conditional tools and how to use them – part2



- Touch sensor and how to use it



- engineering design



-Activity



- Light sensor and how to use it



- engineering design



-Activity



- Gyro sensor and how to use it

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Day 3:



- Data Operations



-Activity

- Sensors Data Wires

-Activity

- Variables and constant Variables

-Activity



- Array operation and logic operation



-Activity



- Compare reading sensors with each other



-Activity



- PID controller



-Activity



- Advanced programming



- Sending and receiving data



- Activity