ROSARY SCHOOL
Marj Elhamam

Arduino Course

Presented to by

AGENTX
ARTIFICIAL INTELLIGENCE

We use technology every day. We play games, watch videos, and connect with friends. But have you ever wondered how it all works? Or thought about building your own?

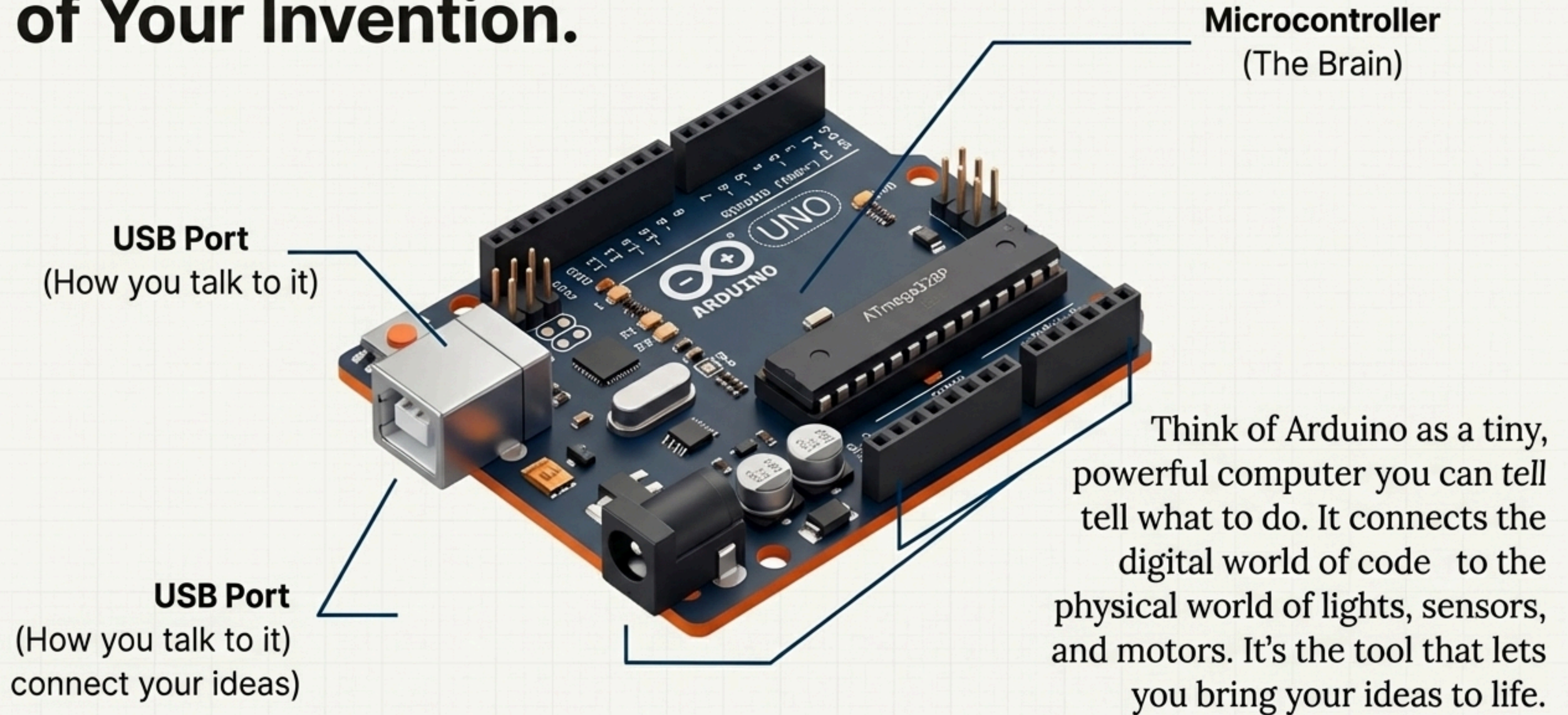# Go From Technology Consumer to Technology Creator.

CONSUMER

CREATOR

This isn't just another class. It's a hands-on journey to learn the language of technology. The Smart Tech Evolution Program is designed to give you the skills to stop just *using* technology and start *building* it.

Meet Arduino: The Brains of Your Invention.

Microcontroller
(The Brain)

USB Port
(How you talk to it)

USB Port
(How you talk to it)
connect your ideas)

Think of Arduino as a tiny, powerful computer you can tell tell what to do. It connects the digital world of code   to the physical world of lights, sensors, and motors. It's the tool that lets you bring your ideas to life.

Your Toolkit for Innovation

Sensors

Ultrasonic Sensor	Light Sensor	Temperature Sensor

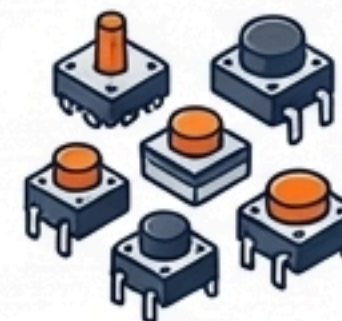## Motors

Outputs

DC Motor	Servo Motor	LEDs	Buttons

You'll learn to use a range of electronic components. These are the building blocks—the eyes, ears, and hands—of your creations.

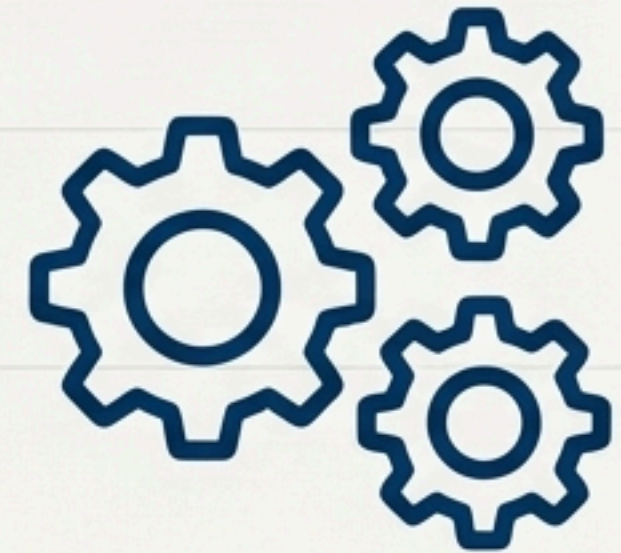# Your Journey Begins: Level 1 - Smart Foundations

12 Sessions
(120 minutes each)/
One Semester

Grades 6 to 9

Core Focus
Electronics, Arduino
Programming, and Logic

This first level is designed to build a rock-solid foundation. Over one semester, you will master the fundamentals of physical computing through engaging, hands-on projects.

The Spark of Creation.

1 **Introduction to Physical Computing**

Understand what Arduino is and how software controls hardware.

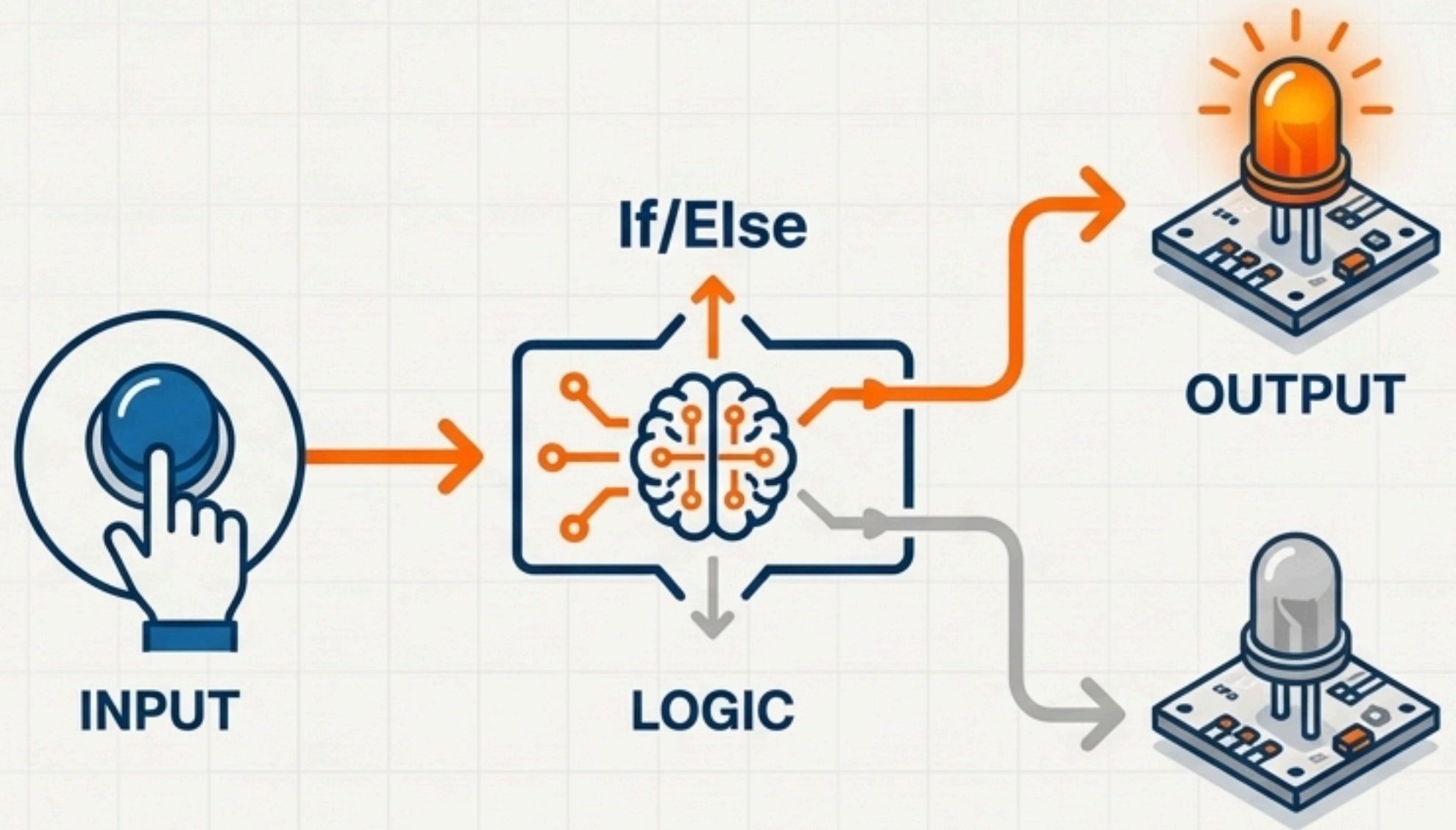**2** **Basic Electronics & Safety**

Learn the rules of electricity (voltage, current, ground) and how to build circuits safely.

3 **Your First Program**

Get familiar with the block-based coding environment and upload your first program to the Arduino.

Giving Your Project a Mind.

INPUT

If/Else

LOGIC

OUTPUT

Reading Inputs

Learn how Arduino reads signals from buttons and switches.
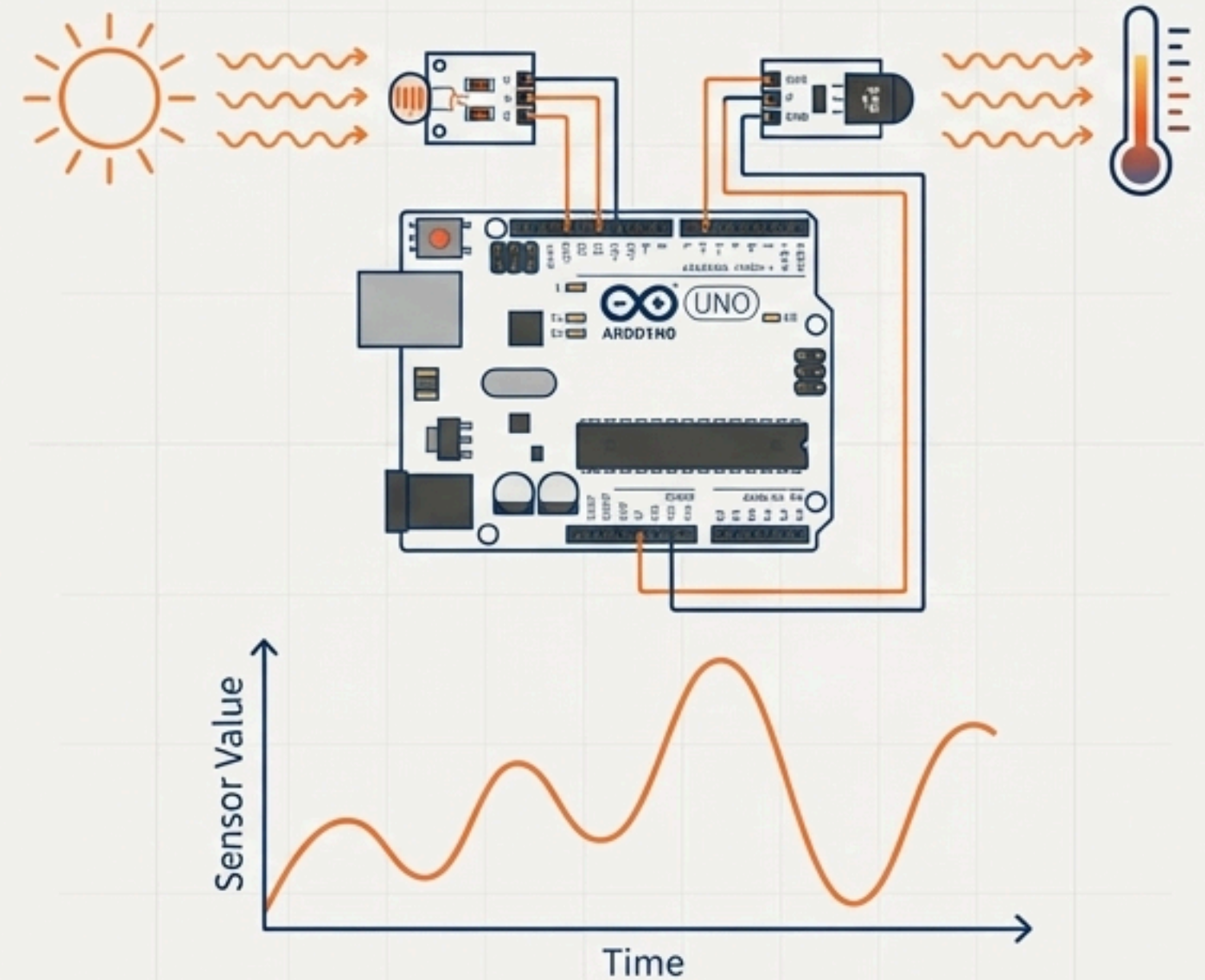
Making Decisions

Master computational thinking by using 'If/Else' logic to make your hardware respond to user input and make its own decisions.

Controlling Outputs

Build circuits to control LEDs—making them blink, fade, and respond to commands.

the Real World

- **Understanding Analog Signals:** Grasp the difference between simple ON/OFF (digital) signals and the wide range of values from the real world (analog).

- **Reading Real-World Data:** Learn to use sensors to measure light, temperature, and distance, turning your project into a smart device that can perceive its environment.

The Skills You Will Master.

Possess a Solid Foundation: Build, wire, and troubleshoot complex circuits independently.

**Master Computational Thinking:** Use logical decision-making (*If/Else*) to control hardware behavior.

Develop Core Creator Skills: Sharpen your problem-solving, circuit-building, and logical thinking abilities.

Be Ready to Build: Integrate multiple sensors and actuators to design and present a fully functional project.

Earn a Certificate of Global Recognition

- **Official Certification**: Upon completion, students receive an official certificate recognizing their technical and logical skills.

- **Accredited by UK Education Services**: Our program strictly aligns with the UK Quality Assurance standards for education.

- *For those seeking further professional recognition, the awarding body is* **Cambridge International College for postgraduate studies**, *with optional international accreditation available upon request for an additional fee (20 JDs)*
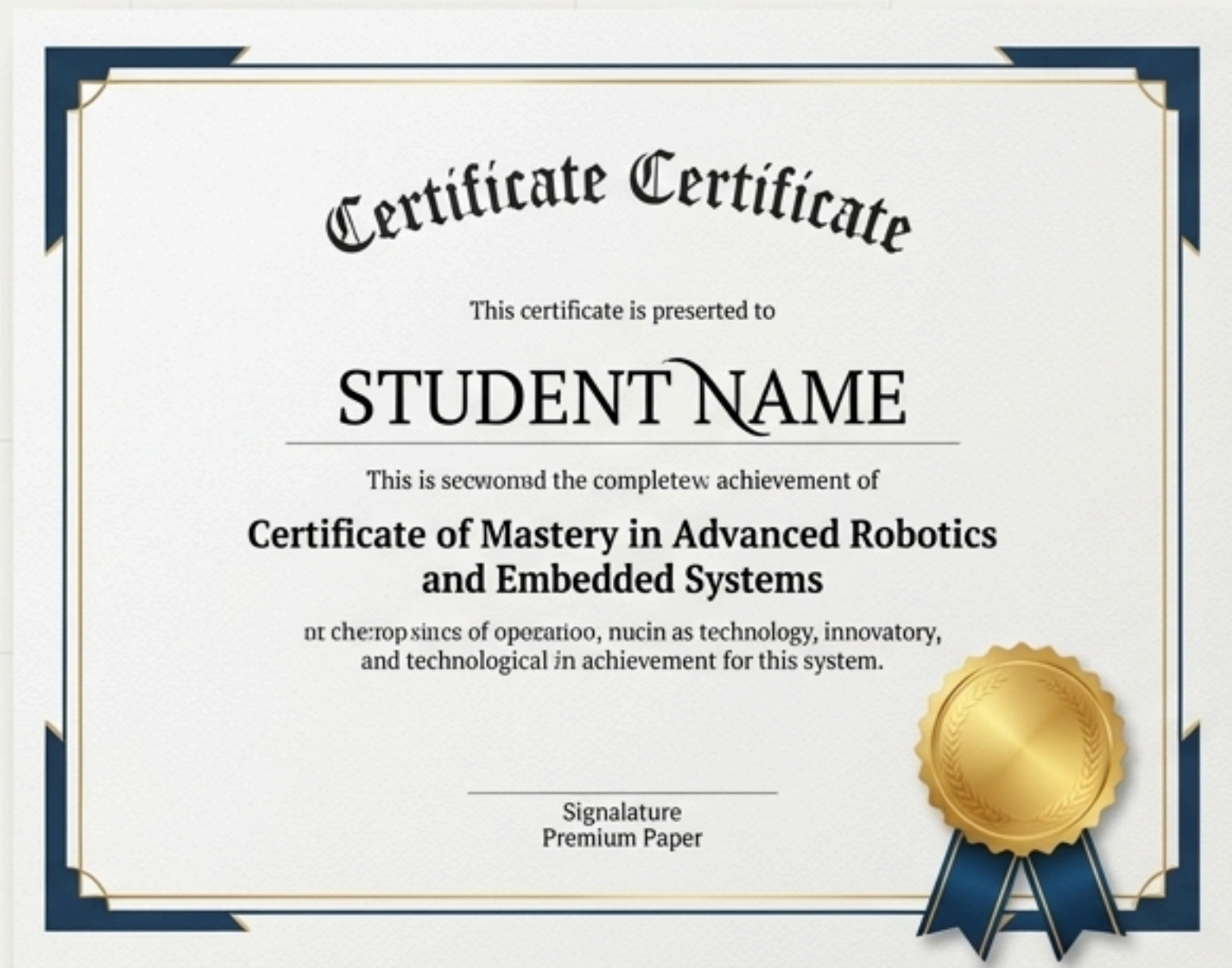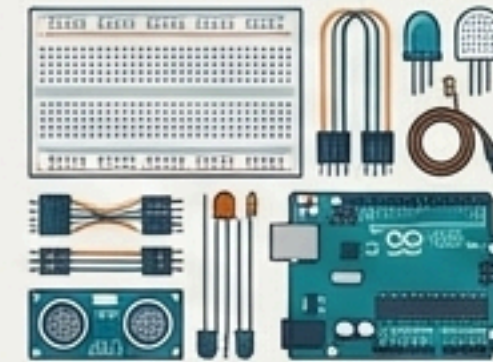
Choose Your Creator's Package.

Core Package

Full instruction, supervision, and learning materials for one semester.

60 JOD / student

All-In-One Package

Everything in the Core Package, plus a professional-grade hardware kit that the student keeps.
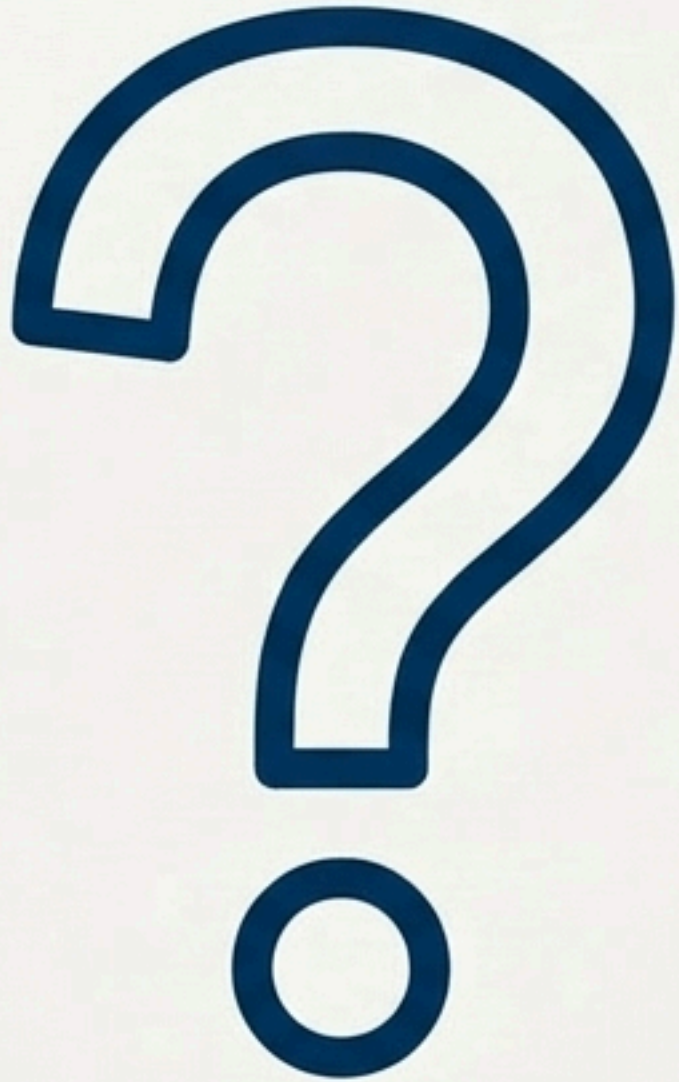
95 JOD / student

Ready to Start Building?

1

1. Register:: Simply fill out the registration form to secure your spot.

2

2. Begin Your Journey: We'll see you *on campus!* The program will take place on Rosary School premises.

Spots are limited. Register now to begin your transformation from consumer to creator.

Have a Question?

For any inquiries about the program, curriculum, or registration process, please contact:

Name: Mrs. Lina Alnimri
Email: lina.nimri@rosary99.edu.jo