



EMBEDDED SYSTEMS INTRODUCTION AND BASICS COURSE

Master the Foundations of Embedded Systems, IoT & Automation

Duration: 8 Weeks

Mode: Online (Virtual) with Hands-on Practical Projects

Delivered by: DBS Technologies

[Sensors | Microcontrollers | Actuators | IoT Components]

Hands-on. Practical. Project-Based.

DBS Technologies – Empowering the Next Generation of Embedded Engineers

Inside: Course Overview

Why Join This Course?

Embedded systems power the modern world — from smart homes and wearable devices to industrial automation, robotics, and automotive electronics.

This beginner-friendly course gives you a strong practical foundation in microcontrollers, sensors, actuators, programming, and real embedded system design using the popular Arduino platform.

Whether you're a student, tech enthusiast, hobbyist, or professional looking to enter IoT and embedded systems, this course equips you with job-ready skills.

Training Delivery

- Pre-recorded high-quality video lessons (self-paced learning)
- Comprehensive course materials and slide decks
- Live interactive sessions for Q&A, doubt clearing, and deeper explanations
- Hands-on practical assignments and mini projects
- Community support for troubleshooting

Duration	8 Weeks
Mode	Online (Virtual) with Hands-on Practical Projects
Prerequisites	No prior experience required. Basic computer skills are enough.
Certificate	Certificate of Completion from DBS Technologies upon project submission

What You Will Learn – Course Outline

Course Structure (8 Weeks)

Module 1	Introduction to Embedded Systems Definition, real-world applications, embedded vs general-purpose systems, architecture basics
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Module 2	Electronic Components & Circuit Fundamentals Resistors, capacitors, diodes, transistors, breadboard, Ohm's Law, schematics
Module 3	Microcontrollers & Arduino Platform Microcontroller vs Microprocessor, Arduino boards, IDE setup, pins & memory
Module 4	Embedded Programming Basics C/C++ for Arduino, variables, control statements, loops, functions, serial communication
Module 5	Interfacing Sensors Analog vs Digital sensors, temperature, LDR, PIR motion, ultrasonic sensors
Module 6	Interfacing Actuators LEDs, buzzers, DC & servo motors, relays, importance of driver circuits
Module 7	Mini Projects & System Integration Temperature monitor, automatic light system, motion alarm, simple home automation

BONUS: Final project guidance combining sensors + actuators + logic.
By the end of 8 weeks, you will build real working prototypes and gain confidence in designing embedded systems.

Key Benefits & Who Should Join

What You Will Gain	Target Audience
<ul style="list-style-type: none">✓ Solid understanding of embedded systems concepts✓ Practical skills in hardware interfacing and Arduino programming✓ Ability to build real projects (smart lighting, security alarms, environmental monitors)✓ Hands-on experience with sensors, actuators, and troubleshooting✓ Foundation for advanced IoT, robotics, or career in embedded systems	<ul style="list-style-type: none">✓ Engineering and science students✓ Tech beginners and career switchers✓ Hobbyists and DIY makers✓ Professionals interested in IoT and automation

How It Works + Enroll Today

How the Training Works

1. Watch structured video lessons at your convenience
2. Follow along with provided course materials and circuit diagrams
3. Attend weekly live sessions for interaction, code reviews, and problem-solving
4. Complete hands-on practical exercises using affordable Arduino components
5. Build and showcase your mini projects

What You Need

- A computer with internet
- An Arduino starter kit (Uno recommended – guidance provided)
- Enthusiasm to learn!

**Ready to Build the Future?
ENROLL NOW!**

Regular Price: ~~₦25,000~~

Early Bird Special: ₦20,000 (First 5 registrations per cohort!)

Limited slots available. Send us a message to enroll.

Contact Us

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Follow Us: [LinkedIn](#) | [Facebook](#) | [Instagram](#): **DBS Technologies**
Registration Link: Will be shared upon enrollment confirmation

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