

COURSE TITLE : ARDUINO INTERFACING & APPLICATION SYSTEM

COURSE OVERVIEW

This course introduces the principles and applications of Arduino microcontroller platform. This 5-days course aims to equip participant from fundamental understanding of embedded system to actually develop an embedded system at the end of the course. Most of the course approaches are hands-on as we believe participants learn more effectively. The topics emphasized are Arduino microcontroller architecture and software programming using embedded C language. The content also covers internal peripherals such as parallel input and output, analogue to digital converter (ADC), pulse width modulation (PWM) and serial communication. The participants will learn technique and circuit to interface Arduino microcontroller with other devices in embedded system.

COURSE OBJECTIVES

At the completion of this course, participants will be able to :

- Describe the Arduino microcontroller's architecture and peripheral subsystem.
- Perform input/output tasks using internal registers.
- Develop program in embedded C programming language for the Arduino microcontroller.
- Identify code erroneous and perform debugging on the programming code.
- Develop an Arduino microcontroller-based system with peripheral devices interface.

THE UNIQUENESS OF THIS COURSE

- 60% of the course will be practical.
- Didactic equipments that are designed to assist participants in understanding theories.

WHO SHOULD ATTEND

This course is designed to those who want to provide students, or engineer or for those interested in understanding and becoming familiar with the concepts involved in Arduino microcontroller platform, firmware/software programming and interfacing technique.

TARGET GROUP

Software programmer, Electrical & Electronic Engineers, technicians and technical teachers.

KEY TOPICS

- Introduction to Embedded Systems
- Arduino Microcontroller System Hardware Fundamental
- Arduino Microcontroller System Firmware/Software Development
- Arduino Microcontroller Internal Peripheral Interfaces 1
- Arduino Microcontroller Internal Peripheral Interfaces 2
- Arduino Microcontroller Interfacing
- Visual Basic.NET Serial Communication Interfacing and Programming

METHODOLOGY

Lectures, discussions, Exercises & Practical, Lab work

COURSE DURATION

5 Days / 40 Hours

Personal Computers, C Programming and Visual Basic.NET Programming.

PRE-REQUISITE

Fundamental knowledge in Electronics and Digital Technology, Microprocessors,

CERTIFICATION

Certificate of attendance will be issued to those who fulfill 80% of attendance.

Minimum participants: 3

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