

Certificate Course in Embedded System using Arduino

Objective of the Course:

This short term course focuses on students having knowledge of Basic Electronics and willing to develop career in field of Embedded System

Learning Outcome:

The student will able to know the programming in open source embedded development board-Arduino and industrial applications of these modern microcontrollers.

Duration of the Course: 4 weeks (40Hrs.)

Course Fee : 2000/- + GST (18%)

Minimum Eligibility Criteria: Pursuing/Passed BE/B.Tech/BCA/BSc (Electronics)

COURSE OUTLINE

| Sr. No. | Modules to be Covered |
|----------------|-----------------------------------|
| 1 | Basic Concepts of Embedded System |
| 2 | Learning Arduino Platform |
| 3 | Sensor & Actuators with Arduino |

Detailed Course Syllabus:

1. Basic Concepts of Embedded System

- Introduction to Embedded System
- Main Components of Embedded Systems
- Concepts of Microprocessor and Microcontroller

2. Learning Arduino Platform

- Arduino Uno Architecture
- Setup the IDE, Writing Arduino Software
- Arduino Libraries
- Basics of Embedded C programming for Arduino
- Interfacing LED, push button and buzzer with Arduino
- Interfacing Arduino with LCD and seven segment

3. Sensor & Actuators with Arduino

- Overview of Sensors working
- Analog and Digital Sensors
- Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino
- Interfacing of Actuators with Arduino.
- Interfacing of Relay Switch and different types of Motors with Arduino