

ADVANCE EMBEDDED SYSTEMS WITH ARDUINO AND ESP



COURSE CURRICULUM

OBJECT

In this course you will learn how the Arduino platform works in terms of the physical board and libraries and the IDE (integrated development environment).

The course will also cover programming the Arduino using C code and accessing the pins on the board via the software to control external devices. Along with Arduino you will learn about how ESP8266 and raspberry pi works.

OUTCOME

Upon successful completion of this course, the student should be able to:

Understand the main features of the Arduino based EmbeddedSystem

development environment

To understand the hardware interfacing of the peripherals to Arduino system.

Design new embedded systems using Arduino system.

After the completion of the course, the students will be specialized in Embedded

System Design using Arduino.

PREREQUISITE

Strong desire to learn and have fun with Arduino and embedded systems

Basic Understanding of Electronic Components

COURSE CONTENT

- Basic Electronics
- Basic Electronics Components
- Arduino Introduction
- Programming Introduction
- Program Examples
- IR Sensor
- Ultrasonic Sensor
- Motor Shield L298N
- LED Screen (4 pin OLED screen)
- Bluetooth Module
- GPS Module
- Introduction to IoT
- Esp82<u>26</u>
- Introduction to Raspberry pi

DURATION

60 Days