

DURATION : 3 Months

1.Introduction To Embedded System

What is Embedded System
Need of Embedded System
Types of Embedded System
Application
Uses

2.Basics Of Electronics

Overview On Resistor, Capacitor, Inductor Working and Their Types
Transistors (PNP, NPN)
Diodes (Zener, Schottkey Diode)
MOSFET (N Channel, P Channel)
Relays (SPST, SPDT, DPDT, DPST)
Opto Couplers, TRIAC, DIAC
OPAMPs

3.Design And Simulation Of Electronics Circuits

Half Wave Rectifier
Full Wave Rectifier
Bridge Rectifier
Transistors - Switches And Amplifiers
Mosfet Switching
Relay Switching

4.C Language

Introduction To C Language
Data Types And Variables
Input/Output management
Control Flow Statements
Programming With Functions

Array, Pointer And Strings
Structures And Union
Dynamic Memory Allocation
Files

5. C++

C++ Overview
Functions And Variables
Classes In C++
Operator Overloading
Initialization And Assignment
Storage Management
Inheritance And Polymorphism

6.Embedded C (Programming With AVR & ARM Microcontroller)

Fundamentals Of Microcontrollers
Assembly Of Embedded C language
Peripheral Interfaces
Communication Protocol
Memory IC Interfacing
ADC/DAC
Project

DURATION : Additional 2 Months

9. Linux For Embedded Development

Operating System Concepts
Introductoin To Linux
Why Linux in Embedded System
Linux Terminals a Shell
File System
Process and its Types
IPC (Inter Process Communication)
Thread Programming
Socket Programming
Memory Leakage Tools
Device Drivers