

Advanced Course in Embedded System Development –Course Prospectus

Introduction

This advanced course on Embedded System Development from Deep Thought Systems is designed to make fresh engineering graduates very proficient in embedded system development in a very short span of time. The course is designed by industry experts and aligns well with the contemporary needs of the industry. The course is a highly practical oriented one and gives a lot of stress on the lab exercises. As a result, the employability of candidates successfully completing our course will be superior to the students who does similar courses elsewhere. Towards the end of the course, we will also conduct mock tests and interviews and also communication sessions so that the candidates will be able to appear for tests and interviews very confidently.

Course Organization

The course is divided into 7 modules as given in table below.

Sl.No	Module	Duration (Weeks)
1	Embedded C programming	1
2	8 bit processor PIC family	3
3	32 bit processor . ARM family	4
4	Automotive module	2
5	Embedded Linux Programing	2
6	Advanced connectivity	2
7	Hardware overview for firmware engineers	2
	Total	16

Duration of the course is 16 weeks (4months) with classes from 10.00 AM to 5.00 PM from Mondays to Friday. Each day will have half day theory classes and half day lab sessions so that the students can get practical experience on what they learn during the theory classes. Each student will have separate computers and all the necessary development boards and other tools.

Module-1 : Embedded C programming

Module-2: PIC processor programming

Introduction to Micro controllers, Introduction to PIC 18 family, Overview of PIC18F25K80 processor, Memory Organization, Interrupt programming, I/O programming, Peripheral programming for Timer, PWM, ADC, UART and SPI, Character LCD interfacing

Module-3:STM-32 programming

Overview of ARM family, ARM assembly, Introduction to STM32 micro controller, programming of various peripherals, Working with Keil IDE.

Module-4:Automotive electronics

CAN networking, CAN programming on PIC18F25K80 and STM32, OBD, J1939, ECU overview and operation

Module-5 : Embedded Linux programming

Bluetooth, GPRS and USB programming

Module-6 : Advanced connectivity

Bluetooth programming, WiFi module interfacing, GSM/GPRS module interfacing

Module-7 : Hardware overview

Schematic capture, PCB design using PCB design software, Gerber file generation, Using tools like Oscilloscopes, Function generators and Logic Analyzer for hardware trouble shooting.

Course Fees

Course Fee will be Rs.50,000/- + tax.