PINE TRAINING ACADEMY

Course Module

YOU'RE CAREER, OUR PASSION

Summer Training Program on Embedded System.

Address

D-557, Govindpuram, Ghaziabad, U.P., 201013, India

+91 9999 0 37484

vaibhav.mishra@pinetrainingacademy.com

4/26/2016

Pine Training Academy

Summer Training Program on Embedded System.		
Module	**Detailed Syllabus**	**Duration**
Module–1 Introduction.	• Introduction to Pine Training Academy. • Introduction of Embedded System. • Philosophy of Embedded System. • Embedded System Design & Development Process.	Week 1-Month 1
Module-2 Embedded Hardware.	1. Analog Introduction wrt to Embedded System. 2. Digital Introduction wrt to Embedded System. 3. Hardware Design (prototype design concept) 4. Assembly Language for 8051 and PIC MCU (8 Bit).	Week 1 and 2-Month 1
Module-3 Embedded Programing Interface	5. Basic of C Language. 6. Embedded C (Processor C). 7. Implementation on hardware kit using both C and Assembly Language. 8. Difference between 8/16/32/ARM Architecture and its working. 9. Basic Interface 1-LCD, Keyboard, Sensor, Relay.	Week 3 and 4-Month 1
Module–4 Project	10. Industry Standard Project - Basic Study of working on LIVE Project i.e. Project Understanding and Its Requirement. • Common Rail Rejection system testing • GSM based automotive security system • GPRS based cluster energy meter • Single phase energy meter • Three phase energy meter • Multi tariff energy meter • IPV4/IPV6 based smart home • Smart Drive • Digital Direct Control • Bluetooth based client server application • Smart City automation solution for street light and water management. • Smart Agricultural system	Week 1,2,3,4 Month 2

Module -5 Advanced Embedded System – Optional	11. Basic Interface 2- Memory card, ADC/DAC, Motor, RTC, EEPROM. 12. Introduction of 16 bit/32bit (ARM) and its basic architecture and difference. 13. Advanced Interface – Ethernet, USB, RTOS, SPI Driver, UART, Serial/Parallel Port Driver and CAN/LIN. 14. Real Time Application/Projects based on TI or Renesas Platform depend on the availability of vendor resources. 15. Linux Kernel and Shell Programming. 16. Wireless Interface – 2.4 GHz (RF) ISM band using ZIGBEE Protocol Stack, IOT (Internet on Things), and IPV6 base stack, Linux Device Driver for I2C Driver	