

Course 1: Practical Electronics & Sensor development

- ✓ **Practical working with electronic components**
- ✓ **Resistor, Capacitor, Diodes, Transistor, Relay**
- ✓ **Designing of Logic gate and Power supply**
- ✓ **Development of sensor like light, surface, sound sensor, vibration sensor, temperature sensor, humidity, ultrasonic, infra, Radio, moisture etc.**

Course 2: ESE(Embedded System Engineer)

- ✓ **Designing of various sensor modules**
- ✓ **Power supply development**
- ✓ **Sensor modules interfacing with MCU**
- ✓ **Display devices & their interfacing with MCU**
- ✓ **Communication- wireless, wired, PC based**
- ✓ **IDE's hands on- Keil4, AVRstudio, microC**
- ✓ **Simulators- Proteus, AVR simulator**
- ✓ **Working Environment- Linux, windows**
- ✓ **Project development-as per your requirement**
- ✓ **Soft Skill Development**

Course 2: Micro-controller Family 8051/AVR/PIC/Arduino/Raspberry-Pi

- ✓ **Introduction 8051/AVR/PIC family Microcontroller**
- ✓ **Programming language- C, Embedded C**
- ✓ **Component & IC level electronics**
- ✓ **Internal working of 8051/AVR/PIC Microcontroller**
- ✓ **Memory organization**
- ✓ **Peripheral features of 8051/AVR/PIC microcontroller**
- ✓ **I/O programming in Assembly/Embedded C**
- ✓ **Timers/Counter programming**
- ✓ **Interrupts programming**
- ✓ **USART/UART programming**
- ✓ **ADC programming**

Course 3: ARM 7 TDMI-LPC2129 MICRO-CONTROLLER

(ARM 32 bit Microcontroller)

- ✓ **Introduction to ARM Family**
- ✓ **Block diagram and system architecture**
- ✓ **Memory addressing and System control block**

- ✓ PIN connect block
- ✓ GPIO programming
- ✓ Timer programming
- ✓ A/D converter
- ✓ UART programming
- ✓ I2C and SPI Protocol
- ✓ RTC [Real Time Clock]
- ✓ VIC [Vector Interrupt Controller] programming
- ✓ CAN conceptualization
- ✓ I2C enabled EEPROM conceptualization
- ✓ GPS & GSM [AT commands] Technology interfacing

Course 4: Peripheral Interfacing With all Microcontroller (MCU)

- ✓ Led & Led Array
- ✓ 7-Segment & Multiplexed
- ✓ 7-Segment
- ✓ 2*16 LCD
- ✓ Switch & 4X4 Keypad
- ✓ Temperature sensor
- ✓ Accelerometer/Tilt sensor
- ✓ Buzzer
- ✓ Relay
- ✓ Touch pad
- ✓ Flex sensor
- ✓ Surface sensor
- ✓ Sound sensor
- ✓ Gas sensor
- ✓ PIR sensor
- ✓ Humidity sensor
- ✓ Alcohol sensor
- ✓ DTMF
- ✓ RTC
- ✓ DC motor
- ✓ Stepper motor
- ✓ Servo motor
- ✓ Wireless RF Module
- ✓ RFID