



***DELIVERING SKILLED ENGINEERS***

**SKILL DEVELOPMENT TRAINING ON  
EMBEDDED SYSTEM DESIGN**

# **SYLLABUS**

## **1. INTRODUCTION**

Duration : 80 Hours

Basics of 'C' Language  
Digital Electronics & Circuits  
Microprocessor & Microcontroller

## **2. 8-BIT MICROCONTROLLER**

Architecture  
Input/ Outputs  
Registers  
Memory  
Hardware Connection

## **3. HARDWARE INTERFACING AND PROGRAMMING**

Digital Inputs & Outputs  
LED & Switch Interface  
Timer  
Interrupts  
7 Segment Display  
16x2 LCD Display  
Analog Inputs / Outputs  
LDR Interfacing  
Temperature sensor  
Infrared Sensor  
Gas sensor  
Pulse Width Modulation  
DC Motor Interfacing  
DC Motor Speed Control  
Servo Motor  
Stepper Motor

## **4. SERIAL COMMUNICATION**

Universal Asynchronous Receiver & Transmitter (UART)  
Serial Peripheral Interface (SPI)  
Inter Integrated Circuit (I2C)  
Real Time Clock