Certificate Course on Embedded System Design

Objective: To train engineering under-graduates on 8051 microcontroller, using C-Language programming and interfacing various peripherals.

Brief Course Contents

Microcontroller

Overview of digital electronics, Microcontroller, 8051 Architecture, Port Organization, 8051 Interrupts, Instruction Set, Addressing Modes Overview of C Language, Embedded C, Difference between Embedded C and C, Embedded C Library Programming Tools and Techniques, Microcontroller on Board, Programming 8051 using Keil C, Writing program using the Keil IDE.

Interfacing peripherals

Interfacing peripherals to microcontroller. LED, Different types of LED, working. Seven Segment Display, Driving circuits Relays, different types of Relay, how it connect with microcontroller. Piezo buzzer (Alarm unit) Matrix-Keypad LCD interfacing Stepper motor ADC (LM35).

Project work

Eligibility

B.Sc, Diploma/Degree in Electronics, Electricals, IT, CS or undergoing