

## Certificate Course in Embedded System Design

### Embedded System Design

*04 Weeks Online Course*

4 Weeks (2 Hrs. per day)

Timing: - 03:00 PM to 05:00 PM

Medium of Instruction: Bilingual (English & Hindi)

#### Objective

It forms basic skills in embedded systems design. Those skills are usable in designing digital control units for consumer electronics, industrial automation, telecommunication systems, etc.

B.E / B.Tech./ Diploma (Electrical/ Electronics / Instrumentation) with basic knowledge of C Programming (pursuing or completed)

#### Eligibility

#### Prerequisite

- Candidate must have latest computer/laptop with preferably 4 GB RAM or higher and Windows7/Windows10 O.S.
- Internet connection with good speed (preferably 2Mbps or higher).

Rs. 1600/- incl. GST & all other charges.

#### Course Fees

#### Certificate

Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

- ✓ Instructor-led live classes.
- ✓ Instructor-led hands-on lab sessions through **Virtual Labs**
- ✓ Content Access through e-Learning portal.
- ✓ Assessment and Certification

#### Methodology

#### How to Apply

- Step-1:** Read the course structure & course requirements carefully.
- Step-2:** Visit the Registration portal and click on apply button.
- Step-3:** Create your login credentials and fill up all the details, see the preview and submit the form.
- Step-4:** Login with your credentials to verify the mobile number, email ID and then upload the documents, Lock the profile and Pay the Fees online, using ATM-Debit Card / Credit Card / Internet Banking / UPI etc.

**Course Content**

| Day     | Topic   | Day     | Topic  |
|---------|---|---------|--|
| Day #01 | Introduction to Embedded Systems  | Day #11 | Interfacing of Buzzer and Keypad with 8051       |
| Day #02 | Classification of Embedded Systems, Architecture of Embedded Systems, Design issues of Embedded Systems | Day #12 | Interfacing of LCD display with 8051             |
| Day #03 | Introduction to Microprocessor and Microcontrollers   | Day #13 | Interfacing of Stepper Motor with 8051           |
| Day #4  | 8051 Microcontroller Architecture   | Day #14 | Interfacing of DC Motor with 8051                |
| Day #5  | Memories and Registers of 8051  | Day #15 | Interfacing of A/D converter with 8051           |
| Day #6  | Introduction to Embedded C  | Day #16 | Introduction to ARM Microcontrollers             |
| Day #7  | Microcontroller Programming using Embedded C  | Day #17 | Introduction to ARM Microcontroller Architecture |
| Day #8  | Input/output ports programming using Embedded C.  | Day #18 | RTOS Concepts                                    |
| Day #9  | Interfacing of LED display with 8051  | Day #19 | Query Session                                    |
| Day #10 | Interfacing of 7 segment display with 8051  | Day #20 | Feedback and Final Assessment                    |

**Course Coordinator**

**S.C. Agrawal, PTO**  
**NIELIT Gorakhpur**  
**Email: [scagrawal@nielit.gov.in](mailto:scagrawal@nielit.gov.in)**  
**Mobile Number: 8317093881**

**Sh. D.K. Tripathi, STO**  
**NIELIT Gorakhpur,**  
**Email: [dkt@nielit.gov.in](mailto:dkt@nielit.gov.in)**  
**Mobile Number: 8317093884**

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