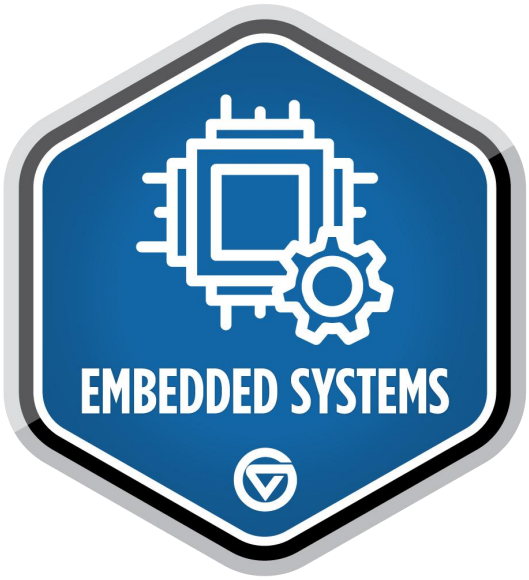

EMBEDDED SYSTEM

COURSE SYLLABUS

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Embedded Systems Course Syllabus

SLA is one of its kind Institute which not only equips you in technology skills but will train you for free in Aptitude skills, Soft Skills, Mock Interviews, Interview Skills, Work ethics and Corporate Values that you need to know to get into IT Industry. Our training is given by expert real time development experienced trainers and we enable each and every student of ours to do their own real time projects by the end of the program.

We do not buy you a job by bribing companies to secure a place in IT, instead we equip you with the skills needed to get employed in IT and will support you with unlimited number of relevant interview opportunities so that your career in IT becomes assured. Our support will be there until you get placed in an IT Company as that's our mission too.

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Microprocessor & Microcontroller Classification

- Difference between Microprocessor & Microcontroller
- Classification based on architecture
- Memory Classification

Registers & Memory of AT89C51

- Description of RAM
- Description of CPU Registers
- Functions of SFR

Introduction of EMBEDDED C

- Introduction to Embedded C
- Difference between C & Embedded C
- Programming style
- Basic structure of C program

Constants, Variables & Data Types

- Keywords & Identifiers
- Data type & its memory representation
- Arrays and strings

Operators

- Types of Operators
- Bitwise Operators explained
- CONTROL STRUCTURES & LOOPS
- Decision making with if statement
- If….else statement
- Switch statement, and GOTO statement
- The While and Do – While statements
- For statement

Functions

- Why Functions
- Types of Functions
- A Multi functional program
- Return values & their types

Introduction To Softwares

- Kiel Compiler
- Proteus
- INTERFACING OF LED
- Introduction of LED's
- Interfacing Circuit Description of LED's
- Programming of LED's Interfacing

Interfacing of Seven Segment Display

- Introduction to 7 Segment Display
- Types of 7 Segment Display
- Interfacing Circuit Description of 7 Segment Display
- Programming of 7 Segment Display Interfacing

Interfacing of LCD

- Introduction to 16 x 2 LCD
- Commands of 16 x 2 LCD
- Interfacing Circuit Description of 16 x 2 LCD
- Programming of 16 x 2 LCD

Interfacing of Switches & Keyboard Matrix

- Introduction to Switches & Keyboard Matrix
- Interfacing Circuit of Switches & Keyboard Matrix
- Programming of Keyboard Matrix & Switches
- Controlling of LED's by using Switches
- Key board Matrix & LCD Interfacing Program

Interfacing of Motors

- Introduction to Motors
- Types of Motors used in Embedded System
- Programming & Controlling of motors in Embedded System

Timers & Counters Programming

- Introduction to Timers & Counters
- Difference between Timer and Counter
- Description of SFR associated with Timers & Counters
- Programming of Timers & Counters

Serial Communication Programming

- Introduction to Serial Communication
- Types of Serial Communication
- Description of SFR associated with Serial Communication
- Programming of UART

Interfacing Of Adc

- Introduction to ADC
- Programming of ADC
- SENSOR INTERFACING
- Introduction to sensing devices
- Interfacing of IR Sensors
- Interfacing of Temperature Sensor

Embedded Networking

- I2C Bus Standard
- Bluetooth
- Zigbee
- USB
- UART

Linux Fundamentals & Device Driver Programming

- Linux Fundamentals
- Linux Commands
- VI Editors
- Introduction to Device Driver
- The Role of Device Driver
- Kernel Module Vs Application
- Types of Device Driver
- Character Driver
- Block Driver & Network Driver