KEY FEATURES

- 24×7 Support on exercises.
- **Free Demo classes**
- Case studies
- 4.7/5 rating
- Industry standard tools
- Two decade of experience
- World class course structure
- Expert mentorship on Embedded System career
- 100% Placement Support
- Lifelong membership

COURSES OFFERED

DATA ENGINEERING

- Data Analytics
- Machine Learning
- Business Analytics
- Python

SYSTEM ENGINEERING

- IoT
- Hardware Design
- Embedded System
- VLSI Design

PRODUCT ENGINEERING

- Product Design
- Product Management
- Digital Marketing
- Start your Startup

SOFTWARE ENGINEERING

- AI
- Cloud
- Full Stock
- Develops

Location:

Center for Innovation and Entrepreneurship,

IIIT-H Campus, Gachibowli,

Hyderabad – 500032

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DESIGN NATION
IMPARTING EXCELLENCE

SYSTEM ENGINEERING

EMBEDDED SYSTEM

DESIGN NATION
IMPARTING EXCELLENCE

ABOUT THE COURSE

Embedded Systems is a computer system designed for couple of specific functions, which is embedded inside a device system, that includes electrical and mechanical parts. Popular examples of embedded systems are Mobile Phone, DVD players, GPS, Microwave oven and Washing machine

Embedded Systems, program is specifically designed with an objective to provide a sound platform and prepare attendees for a successful career in the field of Embedded System Design. The course content, the advanced lab, 1:5 classroom strength allows special focus on individual performance. We provide in-depth insights into on C Programming, Data Structures, Embedded C, Micro Controller Programming with ARM, Real-time Operating Systems, Linux System Programming, Kernel Internals, Linux

INFRASTRUCTURE

1. ARM Cortex Board
2. Arduino Board
3. Raspberry Pi Mod-4 IoT Board
4. Arduino Uno Board
5. ARM Cortex starter kit
6. Xilinx SPartan-6 starter kit
7. Xilinx Zync starter Kit
8. 100+ Variety of Sensors
9. PIC Rabbit 5000 Microcontrollers

COURSE CURRILCULUM

1. Engineering primer
- Number systems
- Logic gates
- Boolean expressions
- Introduction to registers and counters
- Introduction to Embedded systems

2. C Primer
- Introduction to C Programming
- Types and Operators
- Control Flow
- Definitions and declarations, Header files, Scope and lifetime
- Introduction to pointers
- Bit Manipulation, Bit level manipulation
- Standard C I/O functions
- Functions

3. Designing with ARM7
- Introduction to MCU / MPU
- Introduction to ARM
- ARM7-TDMI Architecture & Programmer's model
- ARM & THUMB Instruction Set Architectures
- ARM7 Assembly programming using Keil MDK tool-chain

- LPC2378 – ARM7 based MCU Architecture & Programming using Embedded C
- Interfacing and Programming with LPC2378 (GPIO – LED, Switches, Matrix Keypad & LCD, Timer, RTC, ADC, UART)
- In-Circuit debugging using Keil Ulink2 JTAG debugger
- Boot sequence & System initialization
- Exception handling
- Advanced simulation, Code profiling & Optimization techniques
- Overview of Serial protocols (SPI, I2C and CAN) Overview of ARM Cortex Cores

4. Advanced C
- Advanced Pointers
- Advanced Data types
- Data Structures
- Conditional compilation
- File operations

5. GPOS and Shell Scripting
- Advanced Pointers
- C string handling
- Advanced Data types
- Dynamic Memory allocation techniques
- Data Structures
- Search and Sort algorithms
- Conditional compilation
- File operations

6. System Programming using Linux
- Linux kernel architecture
- Linux System Programming
- Process Management
- Inter-Process Communication

7. Module Projects(Integrated in the course)
- C/8051/ARM/RTOS