

SIES Graduate School of Technology

Department of Electronics and Telecommunication

Presents

Internship on Embedded Systems - ARM Mbed Platform and Node MCU

6th-15th December 2019, 9.30 AM to 4.00 PM

There is difference between education and knowledge. Education provides learning. While knowledge translates that learning into a career that earns a living. But the truth is, our education system is largely structured around academic learning, leaving the task of turning it into a career to the individual. For the less-privileged though, the only barrier that stands between them and a technocrat is knowledge of practical aspects of technology.

This course is meant to be a hands-on type course, giving students a chance to hear and read about embedded system topics, and then put those concepts to work by developing and debugging embedded system hardware and firmware

Objectives

- i) Learn about Embedded systems and ARM Mbed platform
- ii) Interfacing various devices like 7 segment display, LCD display.
- iii) Interfacing various sensors like accelerometer, LDR, temperature sensor etc.
- iv) Learn basics of Node MCU and its interfacing with sensors and IOT application designing.

Course Contents

Module 1: Introduction to microprocessor and microcontroller, Introduction to Embedded systems, Introduction to ARM Mbed platform.

Module 2: Simple programs like LED blinking, use of BusOut and PwmOut function.

Module 3: Basics of 7 segment display and LCD and their interfacing with freedom board.

Module 4: Basics of accelerometer, LDR, potentiometer and its interfacing with freedom board.

Module 5: Basics of Node MCU, its interfacing with various Sensor, Designing of IOT applications based on Node MCU.

Faculties

Prof. Pushkar Sathe

Prof. Vaishali Mangrulkar

List of mini projects

1. Implementation of soil moisture monitoring
2. Implementation of weather station monitoring
3. Home automation using IoT
4. Implementation of automatic car parking system
5. Implementation of Liquid level monitoring