Embedded Systems

This is an exhaustive hands-on Workshop on Embedded Robotics is designed to meet the industry needs and provide students with practical learning and exposure. This course would provide the participants knowledge and experience on the fast growing field of Embedded Systems & Robotics. Embedded Systems and Robotics is the next big thing, so get ready for the same.

Content:

Day 1

1. Introduction to Embedded System and Robotics
   - Applications and Future Scope

2. Micro – Controllers and its features
   - Atmega and its features
   - I/ O Ports and Working
   - Hands on
   - How to Glow a LED, LED Patterns
   - How to use a Sensor with uC
   - LED Control using Sensor. (Hands – On)

3. LCD Display
   - Interface LCD with a micro controller
   - Display Name on LCD. (Hands – On)
   - Display on LCD through the Keyboard. (Hands – On)
   - Making a Digital Clock or Counter . (Hands – On)

4. UART Communication
   - Communicate with a PC or Laptop (Hands – On)
   - Display Text on PC using the Embedded Board (Hands – On)
   - Control LED with the help of PC. (Hands – On)

Day 2

5. ADC
   - Display ADC Values on PC and LCD(Hands – On)
   - Control LED Brightness using PWM(Hands – On)

6. Relay
   - Interfacing Relay with Controller.
   - Writing Code to use Relay as switch to control Real appliances.

7. Home Automation Project
   - Home Automation Project to Control Heavy Appliances using uC and Sensors.

Kit Content:

- STEM v1.0 Board
- Programmer
- Usb Cable
- LCD
- USB to TTL Convertor
- IR Sensor
- Relay board
- Connecting Wires

The Faculty:

The faculties are people from top academic institutions, industries and research institutions. They have experience in the industries at the same time had the best education in this field. In fact some of them are pursuing master and Doctorate at Top notch universities to build their knowledge base.

Note: Techfest, IIT Bombay Certificates to all participants (only if participant attends all the sessions).