Certificate Course on Embedded Systems for IoT

Objectives

- Understand the role of embedded systems in IoT
- Evaluate the design needs of an embedded system in terms of H/W & S/W
- Specify, model and partition the tasks for H/W & S/W
- Implement, test and validate the embedded systems for IoT applications

Outcomes

- Select MCU, communication interface, memory and sensors for a specific IoT application.
- Design data acquisition and signal conditioning system
- Develop hardware and Software for a specific IoT application
- Develop test cases and frame work to evaluate the systems designed

Module– 1 Sensors and Actuators

- Data acquisition
- Types of sensors and actuators
- Signal conditioning circuits
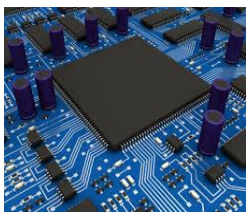- ADC selection and characteristics
- NI DAQ

Module 3 – Embedded Programming

- IDEs and Embedded C
- Bare metal programming
- OS based programming
- Sockets implementation
- Linux device drivers

All Modules include extensive practical sessions

Module – 2 Embedded Processors

- Hardware/software partition
- Analog-Digital interface
- ARM CORTEX
- Development boards
- Embedded protocols

Module 4 – Optimization and Security

- Hardware in loop testing
- Software debugging
- Performance analysis
- Safety and security standards

Project Execution

Pre-requisites: Students should have knowledge of basic analog & digital systems and programming fundamentals.
Course Duration : Feb 19th – 24th
Weekend Batch: 3 weekends from Feb 24th

Batch Size: 30 Students on FCFS Basis
Who Can Apply: Faculty, Students and Industry professionals
Course Fee: Rs.5,000/- + 18% GST
Payment through DD in favour of Principal, RVCE, payable at Bangalore

Contact for Information and Registration

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