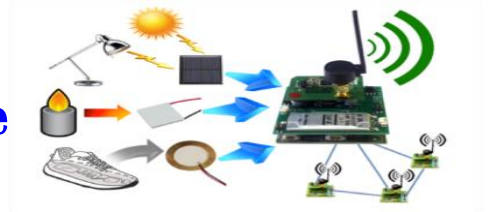




VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)



TIFAC-CORE in Automotive Infotronics
VIT, Vellore-14
Certificate Course
on



"Embedded System Design, Wireless protocols & Standards"

January 2020 - June 2020

Scope:

This program intends to provide opportunities for participants with various engineering backgrounds to gain knowledge and experience on "Design and real-time implementation of ARM based Embedded systems" and with various wireless protocols implementations in 2.4 GHz band.

About ARM: ARM Technology that lies at the heart of advanced digital products, from mobile phones and digital cameras to games consoles and automotive systems, and is leading intellectual property (IP) provider of high-performance, increased connectivity, better code density, low-cost, power-efficient RISC processors, peripherals, and system-on-chip (SoC) designs.

Target Participants

Students pursuing B. Tech / M. Tech degree in any engineering discipline may apply

Course fee : Rs. 8500/-

Duration : 50 hrs – on 2 or 3 days in a week of 2 hrs from 6.15pm to 8.15pm

Interested candidate can register and pay the course fee through **Demand Draft (DD) to be drawn in favor of "Vellore Institute of Technology", Payable at Vellore** on or before **6th January 2020**.

The number of participants is limited to Thirty (30) based on First Come First Serve.

For Registration & Technical Queries:

Mr. A.P. Baranidharan

TIFAC-CORE

9486970154

TT703, Technology Tower, VIT, Vellore-632 014

Contact no: 0416-220 2383

E-mail: baranidharan.ap@vit.ac.in

Course Contents

Theory Sessions

- Introduction to Embedded Systems
- Embedded C Programming
- Introduction to ARM Architecture
- IAR Embedded Workbench IDE Exploration
- Stellarisware / Tivaware Exploration
- Input Output programming
- Analog to Digital Converter
- Timer - Modes of Operation
- Communication Protocols
 - UART
 - SPI
 - I2C
- Graphical LCD Programming
- Introduction to wireless protocols
- Bluetooth Module interface & programming
- Wi-Fi Module interface and programming

Hands on & Demo Sessions

- Switch / Keypad interface
- LED interface
- LCD interface
- Light sensor, Distance measuring sensor interface
- RGB LED programming for interior light control
- Tone generation using timer
- RFID reader interface
- GSM Modem interface
- Shift register interfacing using SPI
- External memory interface using I2C
- Graphical LCD interface for GUI design
- Data transfer using HC-05 (Bluetooth module)
- Device control using ESP8266 (Wi-Fi module)