



School of Electronics Engineering
Department of Embedded Technology
Value Added Course



Embedded Systems for IoT using Remote Engineering Lab (VAC2331)

26-09-2026 to 12-12-2026

Contents:

- Characteristics of embedded system, Processing unit selection – general purpose special purpose and application specific – Embedded product design flow-Waterfall, Spiral, Vmodel - Software and hardware Co-Synthesis, Role of microprocessor and microcontroller architecture
- Strategies of processor selection - 8051, ARM, ARMCORTREX, ESP32, MSP430, CC3200, DSP Processor. Strategies of memory selection, Cache memory, virtual memory, Selection of operating systems-(GPOS vs RTOS).
- Instruction set, Assembly language, Embedded C, IO programming, Interrupt programming, Timer, serial port, LCD display, Keyboards.
- RISC Concepts, ARM Instruction set, Assembly language, Embedded C, IO programming, Interrupt programming, Timer, PWM, serial port, ADC.
- Assembly language, Low power modes, Embedded C, IO programming, Interrupt programming, TimerA, Timer B, ADC, PWM detection and generation SPI, I2C, serial port, ADC.
- Internet of Things, IOT reference layer, HTTP, MQTT, Python basics, ESP32, open cloud platforms, Texas TI-CC3200, WIFI station point and Access point IoT use cases.

Target Audience: VIT- Vellore UG, PG, and Research Scholars

Registration Fees: Rs.500/-+GST

Last date for Registration: **25th Sep 2026**

Registration Link:

<https://events.vit.ac.in/>

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