



NIELIT CHENNAI

ISTE Complex, No.25,Gandhi Mandapam Road,  
Chennai – 600 025.

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**Course Title: *Embedded Software Design and Development***

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**Course Duration: 200 Hrs.**

**Education Qualification: B.E/ B.Tech in ECE/EEE/E&I, B.Sc (Electronics)**

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**Module - C programming Software: Turbo C- 30 Hrs.**

Variables, Data-types, Operators, Decision control structure, Loop control structure, Case control structure, Arrays, Functions etc.

**Module -Architecture of MSP430F5529-12 Hrs.**

Pin-outs, Functional Block Diagram, Memory, CPU, Memory Mapped Input/Outputs, Clock generator, Interrupts and Resets

**Module -Application Design and Development using Libraries-96 Hrs.**

Using GPIOs, Clocks, Timers, RTC, Flash RAM and ROM & USB

**Module- Architecture level Design of Embedded Application – 66 Hrs.**

1. General Purpose I/O ports – LED, Seven Segment display, Controlling Dual Seven Segment Display using 8 bit lines, Key Interfacing, Keypad interfacing , LCD Display
2. Analog to Digital Converter –Temperature Monitoring Using LM35 Sensor
3. Timers – Timer interrupt, Watchdog Timer
4. Interrupts – Button Interrupt
5. Serial Communication(UART)
6. Serial Peripheral Interface (SPI)