TechnoScripts

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ABOUT US

TechnoScripts is an ISO 9001:2015 certified best training institute for advance courses in Embedded System. We are pioneer of Embedded System training in Pune development. Though we provide many different courses and training in embedded all aim at giving good practical knowledge to students as well help them in career

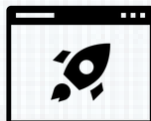# OUR FEATURES
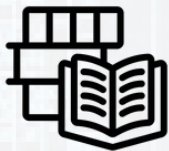
STUDY MATERIAL

ISO 9001:2015 CERTIFIED

100% PLACEMENT SUPPORT

COURSE COMPLETION CERTIFICATE

INTERVIEW PREPERATION

LIVE PROJECTS

STATE OF THE ART LABS

LEARN ONLINE / CLASSROOM

OUR COURSES

Advance Career Track

Automotive Embedded

PG Diploma in Embedded

MATLAB Simulink

MBD Training

IOT Training

Autosar Training

LIVE PROJECTS | INTERVIEW PREPERATION | MOCK INTERVIEWS

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COURSE SYLLABUS : PIC MICROCONTROLLER

Module 1: Introduction to PIC Microcontrollers
- We'll kick things off with the PIC family, figuring out what these little chips are all about.
- You'll get to know the PIC18F4520, a super common chip for cool projects.
- We'll talk about how PICs are the brains behind stuff like toys or car systems.
- I'll show you why these chips are awesome for building your own gadgets.

Module 2: Overview PIC18F4520 Architecture
- Let's pop open the PIC18F4520 and see what's inside, like its wires and parts.
- Processor core—it's kinda like the chip's brain running your code.
- Block diagram, which is like a map of how the chip's pieces connect.
- I'll explain how this setup lets you control things like lights or motors.

Module 3: Memory Organization in PIC18F4520
- You'll see how the PIC18F4520 stores stuff, like where your code lives.
- We'll cover program memory and data memory, and how they keep things organized.
- I'll break down flash, RAM, and EEPROM—don't worry, it's simpler than it sounds!
- You'll learn how memory makes sure your project doesn't crash halfway through.

Module 4: Special Function Registers (SFRs) and Their Functions
- We'll dig into Special Function Registers, or SFRs, which are like the chip's control knobs.
- You'll find out how SFRs handle things like turning pins on or setting timers.
- I'll walk you through a few SFRs, showing what each one does with examples.
- By the end, you'll know how to tweak SFRs to make the PIC do your bidding.

Module 5: Developing and Debugging Assembly Language Programs (ALPs)
- You'll start writing Assembly Language Programs (ALPs) in MPLAB, which is pretty fun.
- We'll use the Pickit programmer to get your code onto the PIC18F4520 chip.
- I'll show you how to debug, like finding why your code's acting weird.
- You'll get comfy fixing bugs, so your programs run smooth as butter.

Module 6: Interfacing LEDs, Switches, and Relays
- You'll hook up LEDs to the PIC and make 'em blink with your code.
- We'll add switches, so you can press a button to control something, like a fan.
- Relays are next—you'll code them to turn stuff on, like a loud click you can hear!
- I once fried a chip forgetting a resistor, so I'll make sure you wire it right.

Module 7: Interfacing Digital Sensors, LCD, and ADC
- You'll connect digital sensors, like ones that check temperature or motion.
- We'll hook up an LCD to show stuff, like "Temp: 25°C" on the screen.
- The Analog-to-Digital Converter (ADC) turns squiggly signals into numbers.
- You'll code everything to work together, like a mini weather station.

Module 8: Interfacing Analog Sensors, DC Motors, and Real-Time Clock
- Analog sensors are up, like ones that measure light or pressure in a room.
- You'll control DC motors, making them spin fast or slow with your code.
- We'll add a Real-Time Clock (RTC) to track time, like for a digital clock.
- You'll tie it all together, coding a project that feels like real engineering.

Module 9: Introduction to SPI Protocol and Implementation
- We'll jump into SPI, a way for the PIC to chat with other devices super fast.
- You'll learn how SPI sends bits of data, like passing notes in class.
- We'll look at SPI data frames, which are like the format of those notes.
- You'll write code to make SPI work on the PIC, connecting stuff like displays.

Module 10: Introduction to I2C Protocol and Implementation
- I2C's another communication trick, using just two wires to talk to lots of devices.
- You'll see why I2C's great, like connecting sensors without a wiring mess.
- We'll check out I2C data frames, which tell devices what to do.
- You'll code I2C on the PIC18F4520, making things like a sensor network hum.

PLACEMENTS

We provide 100% placement support to every student enrolled for Job oriented courses. We invite top companies for campus interview at our centre as well arrange the interviews for students at company premises.

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