

PIC Microcontroller Applications with **FLOWCODE**

This course is based on Microchip PIC controller and Flowcode graphical programming software is designed to provide a comprehensive development and learning platform for Microchip's FLASH-based 6-, 8-, 14-, 18- and 20-pin 8-bit PIC® microcontrollers.

Geared toward first-time PIC® microcontroller users and students, the PICDEM™ Lab Development Kit is supplied with five of our most popular 8-bit PIC® microcontrollers and a host of discrete components to create instructive applications.

Flowcode is one of the world's most advanced graphical programming languages for microcontrollers. The great advantage of Flowcode is that it allows those with little to no programming experience to create complex electronic systems in minutes



Course Overview

Module 1: Introduction

- Introduction of Embedded System
- Evolution in Microcontroller technology
- Past, Present & Future of Embedded System

Module 2: Microcontroller PIC18F4520

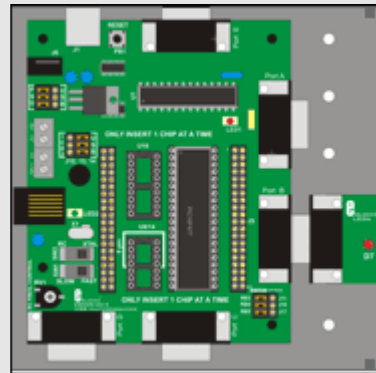
- Hardware Details
- Pin Diagram
- PIC Architecture
- Interrupts and Timers
- Microcontroller PIC Assembly Language
- MPLABIDE MPASM

Module 3: Flowcode

- System Function Design
- Converting the Function to Flow chart
- Configuring Flowcode
- Flowcode window
- Converting Flowcode to C code

40 Hours Programme

PIC18F4520



Module 4: IO Device Interface and Practical

- Study of Input Output Devices
- LED Display, 7-Segment
- DIP Switch
- Matrix Keyboard
- Stepper Motors
- Serial Communication Concepts
- Practices on interfacing circuits
- Practices of ICP
- Opto-Isolators, Relay
- I2C, SPI Protocol
- Serial Memory
- On chip Peripherals PWM

Module 5: PICkit 3 In-Circuit Debugger

- Convert all Flowcode Program in C
- HI-TECH C Compiler

Module 6: Project

- Projects using PIC
- General Purpose Input/Output LAB
- Comparator LAB
- Analog to Digital converter Peripheral LAB

Module 7: Conclusion

- Introduction to:
- In Circuit Emulators
- ICD debug interface

