

Embedded Course Topics

Course

Microcontroller

Introduction to Course

Microcontroller - Architecture and Peripherals

Microcontroller - Addressing modes

Instruction Set and Assembly Programming using Simulator

Introduction to Kit and associated Tools

Assembly Programming Assignments and further theory

Introduction to Standalone Controller

Introduction to Communication and multi-tasking

USART Assignment

CAN - Overview

I2C Assignment

Can - Advanced Theory

LCD Assignment

Introduction To Wireless Communication RFID

ADC and Keyboard Assignment

C programming Assignments

C Programming hints

USART Assignment

Wireless Technologies: 802.11, ZigBee

LCD Assignment

Multi-Tasking and RTOS overview

I2C Assignment

Multi-Tasking and RTOS Continued

More Assignments in C

Introduction to Embedded Databases

More Assignments in C

Embedded Project

Introduction to Projects and project selection

Introduction to project documentation and management

Requirement Specification

Requirement Review

Software Design Document

Firmware Design

Firmware Design

Firmware Design - Review

Device Driver Code Development

Debugging Techniques

Device Driver Code - Review

Development - Main Logic

Development - Main Logic

Development - Main Logic

Main Logic - Code Review

Integration test plan

Integration testing

Acceptance Testing

Release

Evaluation - Test paper