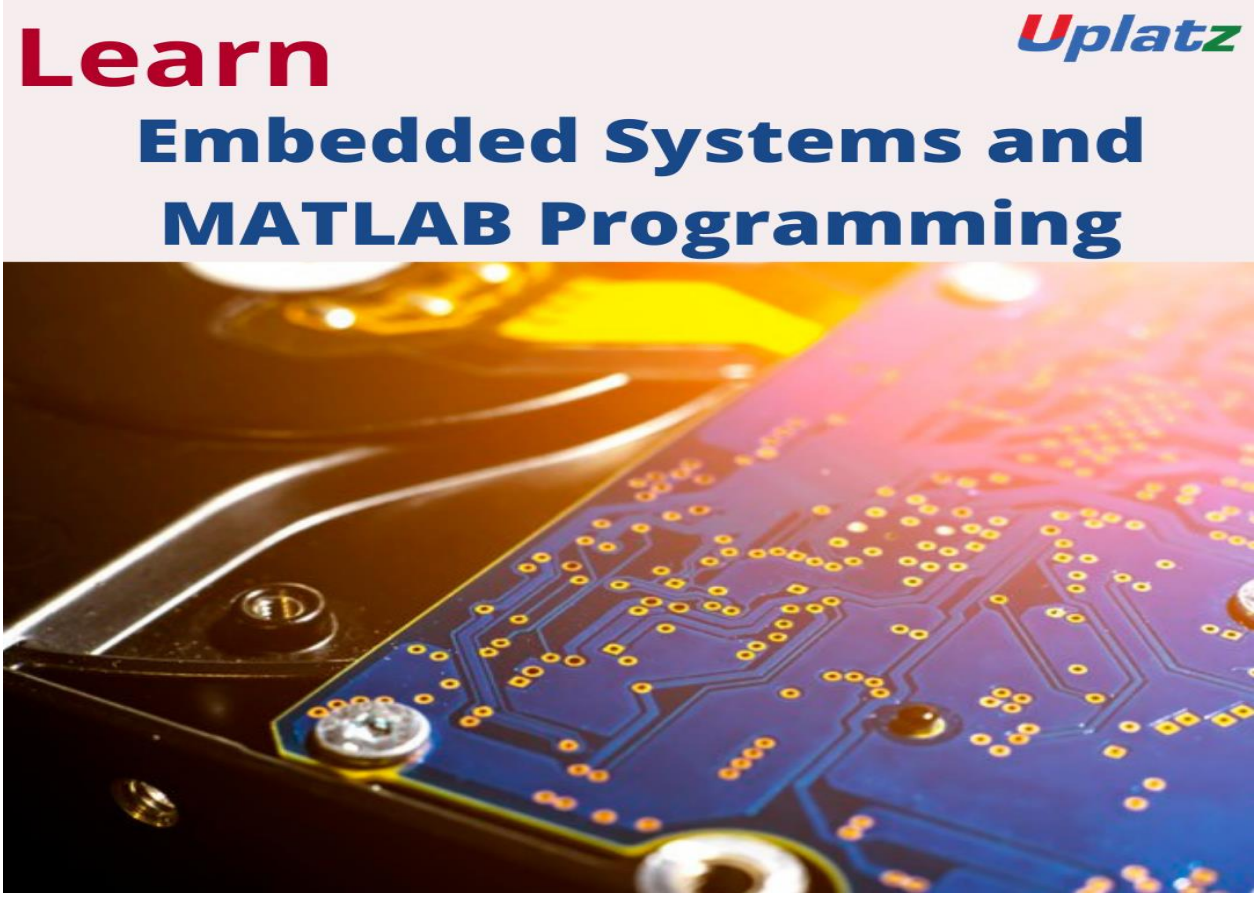

Embedded Systems – Course Curriculum

INTRODUCTION TO EMBEDDED SYSTEM

- History & need of Embedded System
- Basic components of Embedded System
- Programming Language Classification of Embedded System
- Advantage & Disadvantage

MICROPROCESSOR & MICROCONTROLLER CLASSIFICATION

- Difference between Microprocessor & Microcontroller
- Classification based on architecture
- Memory Classification

REGISTERS & MEMORY OF AT89C51

- Description of RAM
- Description of CPU Registers
- Functions of SFR

INTRODUCTION OF EMBEDDED C

- Introduction to Embedded C
- Difference between C & Embedded C
- Programming style
- Basic structure of C program

CONSTANTS, VARIABLES & DATA TYPES

- Keywords & Identifiers
- Data type & its memory representation
- Arrays and strings

OPERATORS

- Types of Operators
- Bitwise Operators explained

MATLAB Programming – Course curriculum

Introduction

- Basic of MATLAB
- Types of Window
- Types of File
- Basic Operations

Matrix (Array Design)

- Matrix Operation
- Array Design
- Array Operation
- Multidimensional Array

Graphics

- Plotting
- Multiple Plot
- 2-D Plot
- 3-d Plot
- Subplot
- Handle Graphics
- Animation
- Example(like a project)

Symbolic Calculation

- Symbols
- Design Formula
- Differentiation
- Integration
- Solve Equation
- Example(like a project)

Publishing Report

- Publishing Report
- Design HtmlFile,Pdf,Word,PPT
- Import Export
- Example(like a project)

Operators

- Arithmetic Operator
- Logical
- Relational

Branch and Loop

- If statement
- If-else statement

- Else-if statement
- Pause,Break,Continue,Switch-case,try-catch,Return Statement
- For Loop,While Loop
- Example(like a project)

Script and Function

- Script Design
- Function Design
- Types Of Function
- Example(like a project)

GUI (Graphical User Interface)

- Introduction Of GUI
- GUI Function Property
- GUI Component Design
- GUI Container
- Writing the code of GUI Callback
- Dialog Box
- Menu Designing

Introduction Of image Processing

- Designing of Projects
- Application

Simulink

- Introduction Of Simuling
- Study of Library
- Circuit Oriented Design
- Equation Oriented Design
- Connectivity
- Model
- Subsystem Design
- Connect Call back to subsystem

Error, Warning, Menu

- Cell, Structure
- Character String

Application

- Ode
- ELG

Solveand Design Electrical System

- Design rlc circuit
- rectifier