

## Course Contents

### **UNIT-I** **6L**

#### **Introduction**

Microprocessors Evolution and types (Intel 4004 – Pentium IV and road maps), Overview of 8085, 8086, 80286, 80386, 80486, Pentium processors and Microcontrollers.

### **UNIT-II** **8L**

#### **Architecture of 8086**

Register Organization, Execution unit, Bus Interface Unit, Signal Description, Physical Memory Organization, General Bus Operation, I/O addressing capabilities, Minimum mode and maximum mode timing diagrams, Comparison with 8088

### **UNIT-III** **12L**

#### **8086 programming**

Assembly language program development tools (editor, linker, loader, locator, Assembler, emulator and Debugger), Addressing modes, Instruction set descriptions

### **UNIT-IV** **12L**

Assembler directives and operators, Procedures and Macros. (Writing programs for use with an assembler MASM), 8086 Interfacing – Interfacing 8086 with semiconductor memory, 8255, 8254/ 8243, 8251, 8279.

### **UNIT-V** **10L**

A/D and D/A converters, Numeric processor 8087, I/O processor 8089, Bus Interface (USB, PCI).

**Total 48 Lecture Hours**

