**CSE 208 MICROPROCESSORS**

**[3 1 0 4]**

1. 8086 FAMILY ASSEMBLY LANGUAGE PROGRAMMING:

8086 internal architecture, Introduction to programming the 8086, Addressing

modes, assembler and Assembler directives, Simple sequence programs, Jumps, Flags, and conditional jumps, Loop instructions, Instruction timing and delay loops.

(2.11-2.19, 3.7-3.9, 3.26-3.27, 4.5-4.13, 4.30, 4.31, Chapter 6 of Text Book1) (10 hrs)

2. STRINGS, PROCEDURES, AND MACROS:

The 8086 String instructions, Writing and Using Procedures and Macros.

(5.1-5.11, 5.16-5.39 of Text Book1) (6 hrs)

3. 8086 INTERRUPTS AND INTERRUPT APPLICATIONS:

8086 Interrupts and Interrupt Responses, 8259 Priority Interrupt Controller, 8254

Software-Programmable Timer/counter, Software interrupts: DOS 21h functions,

BIOS INT 10h display and input functions and Programming examples.

(8.1-8.11, 8.17-8.36 of Text Book 1 & 7.2,7.4.7.5 of Text Book2). (6 hrs)

4. 8086 SYSTEM CONNECTIONS TIMING:

Functional diagram, reset and wait state, Min and Max mode operation, Min and max mode input, output timing diagrams.

(7.12-7.41, 11.1-11.4 of Text Book1) (4 hrs)

5. DIGITAL INTERFACING:

8255- Programmable Parallel ports and Handshake Input/ Output, 8087 Math Coprocessor, ISA Bus, PCI Bus, USB Bus, Accelerates graphics port (AGP)

(9.1-9.6 of Text book 1, 15.1 to 15.5 of Text Book2) (8 hrs)

6. THE 80286, 80386, 80486, PENTIUM PROCESSORS:

Architecture, Real address and PVAM mode, Task protection and Task Switching, Paging,

(15.11-15.41, 16.2 of Text Book 1) (9 hrs)

7. 68000 MICROPROCESSOR:

Architecture, addressing modes, Instruction set, Simple assembly language programs.

(2.1-2.6 of Text Book3) (5 hrs)

**Text Books:**

1. Douglas V. Hall, “Microprocessors and Interfacing ”, Tata McGraw Hill Publications Ltd., Revised Second Edition 2006.
2. Barry B. Brey, “The Intel Microprocessors”, Seventh Edition, Prentice

Hall India, 2005.

1. Alan Clements, “Microprocessor system design 68000 Hardware ,

Software, and Interfacing” , PWS Publishing company, Third Edition, 1997.

**References:**

1. Lin Gibson,