

## CE403: MICROPROCESSORS AND INTERFACING

Teaching Scheme			Examination Scheme							
Lect	Prac	Total	Theory				Practical			Grand Total
			Int Ass	Sem End		Total	Int Ass	Sem End	Total	
				Marks	Hrs					
4	2	6	30	70	3	100	25	25	50	150

### Review of computer number systems, codes and digital devices:

#### Computers, microcomputers and microprocessors:

Computers, an introduction of 8086, 8088 & other microprocessors, 8086 internal architecture.

#### 8086 family assembly language programming:

Program development steps, constructing machine codes, ALP development tools, debugging, procedures, macros.

#### 8086 instruction set & assembler directives :

#### 8086 system connections, timing and troubleshooting:

8086 hardware review, addressing memory and ports in microcomputer systems, 8086 timing parameters, troubleshooting of simple 8086 based microcomputer.

#### Interrupts & interrupt service procedures :

8086 interrupts & interrupt responses, hardware interrupt applications, DOS interrupts and their services.

#### Digital Interfacing :

Programmable parallel ports and handshake I/O, Interfacing a microprocessor to keyboards, to alphanumeric displays

#### Introduction to other 16 and 32 bit Microprocessors .

#### Introduction to Microcontrollers .

### Reference Books:

1. Microprocessors & Interfacing – Programming & hardware B  
By D. V. Hall (TMH)
2. The 8088 AND 8086 microprocessors  
By Walter A. Trebel & Avtar Singh (PHI)
3. IBM PC assembly language and programming  
By Peter Abel
4. The Intel Microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, And Pentium Pro Processor. Architecture, Programming and Interfacing.  
By BARRY B. BREY (PHI)