Microprocessor (KCS403)		
Course Outcome (CO)		**Bloom's Knowledge Level (KL)**
At the end of course , the student will be able to understand		
CO 1	Apply a basic concept of digital fundamentals to Microprocessor based personal computer system.	K_3, K_4
CO 2	Analyze a detailed s/w & h/w structure of the Microprocessor.	K_2, K_4
CO 3	Illustrate how the different peripherals (8085/8086) are interfaced with Microprocessor.	K_3
CO 4	Analyze the properties of Microprocessors(8085/8086)	K_4
CO 5	Evaluate the data transfer information through serial & parallel ports.	K_5
DETAILED SYLLABUS		**3-1-0**
Unit	**Topic**	**Proposed Lecture**
I	Microprocessor evolution and types, microprocessor architecture and operation of its components, addressing modes, interrupts, data transfer schemes, instruction and data flow, timer and timing diagram, Interfacing devices.	**08**
II	Pin diagram and internal architecture of 8085 microprocessor, registers, ALU, Control & status, interrupt and machine cycle. Instruction sets. Addressing modes. Instruction formats Instruction Classification: data transfer, arithmetic operations, logical operations, branching operations, machine control and assembler directives.	**08**
III	Architecture of 8086 microprocessor: register organization, bus interface unit, execution unit, memory addressing, and memory segmentation. Operating modes. Instruction sets, instruction format, Types of instructions. Interrupts: hardware and software interrupts.	**08**
IV	Assembly language programming based on intel 8085/8086. Instructions, data transfer, arithmetic, logic, branch operations, looping, counting, indexing, programming techniques, counters and time delays, stacks and subroutines, conditional call and return instructions	**08**
V	Peripheral Devices: 8237 DMA Controller, 8255 programmable peripheral interface, 8253/8254programmable timer/counter, 8259 programmable interrupt controller, 8251 USART and RS232C.	**08**

Text books:

1. Gaonkar, Ramesh S , "Microprocessor Architecture, Programming and Applications with
2. 8085", Penram International Publishing.
3. Ray A K , Bhurchandi K M , "Advanced Microprocessors and Peripherals", TMH
4. Hall D V ,"Microprocessor Interfacing', TMH
5. Liu and, " Introduction to Microprocessor", TMH
6. Brey, Barry B, "INTEL Microprocessors", PHI
7. Renu Sigh & B.P. Gibson G A , " Microcomputer System: The 8086/8088 family'' ,PHI
8. Aditya P Mathur Sigh, "Microprocessor, Interfacing and Applications M Rafiqzzaman, "Microprocessors, Theory and Applications
9. J.L. Antonakos, An Introduction to the Intel Family of Microprocessors, Pearson, 1999