COURSE OUTCOMES:

S. NO	DESCRIPTION After successfully completing the course, students should be able to	BLOOM'S LEVEL
CS502.1	Describe hardware details of 8085 microprocessor with the related signals and their implications	PO1, PO2
CS502.2	Illustrate the interfacing of 8085 and develop assembly language programming in 8085	PO1, PO2, PO3
CS502.3	Compare the architecture of 8086 with 8085	PO1, PO2
CS502.4	Explain the architecture of 8051 microcontroller and carry out its programming	PO1, PO2, PO3
CS502.5	Familiarize the basics and applications of support IC and PIC microcontroller (16F877)	PO1, PO2

COURSE OUTCOMES VS POs MAPPING (DETAILED; HIGH: '3'; MEDIUM: '2'; LOW: '1'; NO CORRELATION: '-')**:**

S. No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C205.1	3	2	1	-	-	-	-	-	-	-	-	2	3	1
C205.2	3	2	2	-	-	-	-	-	-	-	-	2	3	1
C205.3	3	2	2	-	-	-	-	-	-	-	-	2	3	1
C205.4	3	1	-	-	-	-	-	-	-	-	-	1	3	1
C205.5	3	-	-	-	-	-	-	-	-	-	-	1	1	1
C205	**3**	**1.75**	**1.66**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.6**	**2.6**	**1**

* For Entire Course, PO& PSO Mapping

Lecture/ Tutorial No	Topics to be covered	References	Teaching Aid	Teaching Methodology
L1	Introduction on CO, PO, PSO, and mapping	Any	Board, LCD Projector, Marker, Duster	Lecture, PPT
L2	Introduction to Microprocessor & Microcontroller:	Te1 Te3	Board, LCD Projector, Marker, Duster	Lecture, PPT, Quiz, Assignment
L3	Architecture & pin description of 8085	Te1 Te3	Board, LCD Projector, Marker, Duster	Lecture, PPT, Quiz, Assignment
L4	Address & Data Demultiplexing, status & control signls	Te1 Te3	Board,Marker, Duster	Lecture, Quiz, Assignment
T1	TUTORIAL			
L5	Instruction Set of 8085 microprocessor	Te1 Te3	Board,Marker, Duster	Lecture, Quiz, Assignment
L6	Instruction Set of 8085 microprocessor	Te1 Te3	Board,Marker, Duster	Lecture, Quiz, Assignment
T2	TUTORIAL			
L7	Addressing modes of 8085 microprocessor	Te1 Te3	Board,Marker, Duster	Lecture, Quiz, Assignment
L8	Timing diagrams	Te1 Te3	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
T3	TUTORIAL			
L9	Assembly language programming	Te1 Te3	Board, Marker, Duster	Lecture, Quiz, Assignment
L10	Assembly language programming	Te1 Te3	Board, Marker, Duster	Lecture, Quiz, Assignment
T4	TUTORIAL			
L11	Counter & Time Delay	Te1 Te3	Board, Marker, Duster	Lecture, Quiz, Assignment
L12	Stack and subroutines	Te1 Te3	Board, Marker, Duster	Lecture, Quiz, Assignment
L13	Stack and subroutines	Te1 Te3	Board, Marker, Duster	Lecture, Quiz, Assignment
T5	TUTORIAL			
L14	Interrupts of 8085	Te1 Te3	Board, Marker, Duster	Lecture, Quiz, Assignment
L15	I/O Device Interfacing	Te1 Te3	Board,Marker, Duster	Lecture, Quiz, Assignment
L16	Serial and Parallel Data Transfer	Te1 Te3	Board,Marker, Duster	Lecture, Quiz, Assignment
T6	TUTORIAL			
L17	Introduction to 8086 microprocessor	Te1 R1	Board,Marker, Duster	Lecture, Quiz, Assignment
L18	Architecture and pin diagram of 8086 microprocessor	Te1 R1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L19	Interrupts of 8086 microprocessor	Te1	Board, Marker, Duster	Lecture, Quiz,

		R1		Assignment
T7	TUTORIAL			
L20	Introduction to 8051 microcontroller	Te1 Te2	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L21	Architecture & pin details of 8051 microcontroller	Te1 Te2	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L22	Addressing modes of 8051 microcontroller	Te1 Te2	Board, Marker, Duster	Lecture, Quiz, Assignment
T8	TUTORIAL			
L23	Instruction Set of 8051 microcontroller	Te1 Te2	Board, Marker, Duster	Lecture, Quiz, Assignment
L24	Instruction Set of 8051 microcontroller	Te1 Te2	Board, Marker, Duster	Lecture, Quiz, Assignment
L25	Assembly Language Programming of 8051 microcontroller	Te1 Te2	Board, Marker, Duster	Lecture, Quiz, Assignment
T9	TUTORIAL			
L26	Memory Interfacing with 8085	Te1 Te3	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L27	Memory Interfacing with 8086	Te1 R1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
T10	TUTORIAL			
L28	Support IC Chip 8255	Te1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L29	Support IC Chip 8251	Te1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L30	Support IC Chip 8237	Te1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L31	Support IC Chip 8259	Te1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
T11	TUTORIAL			
L32	Interfacing 8255 PPI with 8085	Te1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L33	Interfacing 8255 PPI with 8086	Te1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
L34	Introduction to PIC microcontroller (16F877)	Te1	Board, LCD Projector, Marker, Duster	Lecture, Quiz, Assignment
T12	TUTORIAL			
L35	Revision		Board, Marker, Duster	Questions

TEXTS :
1. Microprocessors and microcontrollers - N. Senthil Kumar, M. Saravanan and Jeevananthan (Oxford university press)
2. 8051 Microcontroller – K. Ayala (Cengage learning)
3. MICROPROCESSOR architecture, programming and Application with 8085 - R.Gaonkar (Penram international Publishing LTD.)
4.Microcontrollers:Principles&Applications , Ajit Pal, PHI 2011.
5.Naresh Grover, "Microprocessor comprehensive studies Architecture, Programming and Interfacing"Dhanpat Rai, 2003
6. 8051 Microprocessor –V. Udayashankara and M.S Mallikarjunaswami (TMH).

7. Microprocessor 8085 and its Interfacing—S Mathur (PHI)
8. An Introduction to Microprocessor and Applications –Krishna Kant (Macmillan)

Reference:
1. 8086 Microprocessor –K Ayala (Cengage learning)
2. The 8085 Microprocessor, Architecture, Programming and Interfacing- K Uday Kumar, B .S Umashankar (Pearson)
3. The X-86 PC Assembly language, Design and Interfacing - Mazidi, Mazidi and Causey (PEARSON)
4. The 8051 microcontroller and Embedded systems - Mazidi, Mazidi and McKinley (PEARSON)
5. Microprocessors – The 8086/8088, 80186/80386/80486 and the Pentium family – N. B. Bahadure (PHI).
6. The 8051 microcontrollers – Uma Rao

Websites:
1. www.embedded-computing.com
2. www.mcjournal.com
3. www.atmel.com
4. www.keil.com
5. http://8085projects.info/Interfacing-of-PIC-8259-with-8085.html