

# SIR C R REDDY COLLEGE FOR WOMEN, ELURU

## Annual Curricular Plan for the Academic Year 2022- 2023

<b>Name of the Lecturer:</b>	K.JYOTHSNA			
<b>Name of the Department:</b>	Electronics			
<b>Program</b>	B.Sc		<b>Group:</b>	M.E.CS
<b>Title of the Course:</b>	Digital electronics		<b>Hrs allotted:</b>	69
<b>Year</b>	I	<b>Semester</b>	II	
<b>Section</b>	I		<b>Course Code:</b>	21-BS227
			<b>Hours/Week</b>	5+2

Unit No. & Name	Hour	Day	Date	Topic to be Covered	Methodology Adopted	Remarks
UNIT-I: Number system and codes	1	Monday	01-05-23	Decimal number system	P1	-
	2	Tuesday	02-05-23	Binary number system	P1	-
	3	Wednesday	03-05-23	Hexa decimal number system	P1	-
	4	Thursday	04-05-23	BCD Code	P1	-
	5	Friday	05-05-23	Octal number system,	P1	-
	6,7	Saturday	06-05-23	IC Logic gates(Practical)	P2	-
	8	Monday	05-06-23	Gray to Binary conversion	P1	-
	9	Tuesday	06-06-23	Logic gates using discrete components	P1	-
	10	Wednesday	07-06-23	Binary to Gray Conversion	P1	-
	11	Thursday	08-06-23	1's complemental addition	P1	-
	12	Friday	09-06-23	2's Complemental addition,	P1	-
	13,14	Saturday	10-06-23	Logic gates using discrete components(practical)	P2	-
	15	Monday	12-06-23	2's Complemental subtraction	P1	-
	16	Tuesday	13-06-23	Universal gates NAND & NOR	P1	-
	17	Wednesday	14-06-23	1's Complement subtraction	P4	-

<b>UNIT-II: Boolean algebra and Theorems</b>	18	Thursday	15-06-23	Digital IC logic gates NAND,NOR,XOR	P1	-
	19	Friday	16-06-23	Universal gates NAND & NOR	P1	-
	20,21	Saturday	17-06-23	Universal gates NAND & NOR (Practical)	P2	-
	22	Monday	19-06-23	Sum of products	P1	-
	23	Tuesday	20-06-23	Minimization Technique	P1	-
	24	Wednesday	21-06-23	Karnaugh map method: 2 variable,3 variables	P1	-
	25	Thursday	22-06-23	Product of sums	P5	-
	26	Friday	23-06-23	Boolean Theorems	P1	-
	27,28	Saturday	24-06-23	Half Adder (practical)	P2	-
	29	Monday	26-06-23	Sum on Boolean theorems	P1	-
	30	Tuesday	27-06-23	De-Morgan's laws	P1	-
	31	Wednesday	28-06-23	Designing K-Maps 2 Variables	P1	-
	32	Friday	30-06-23	Designing K-Maps 3 Variables	P1	-
	33,34	Saturday	01-07-23	Full Adder (Practical)	P2	-
<b>UNIT-III: Combinational Digital Circuits</b>	35	Monday	03-07-23	Half Adder	P1	-
	36	Tuesday	04-07-23	Full Adder	P1	-
	37	Wednesday	05-07-23	Half Subtractor	P7	-
	38	Thursday	06-07-23	Full Subtractor	P1	-
	39	Friday	07-07-23	Parallel Binary Adder	P1	-
	40,41	Saturday	08-07-23	Half Subtractor (Practical)	P2	-
	42	Monday	10-07-23	Multiplexer & De-Multiplexer	P1	-
	43	Tuesday	11-07-23	Encoder & Decoder	P1	-
	44	Wednesday	12-07-23	TTL NAND gate	P1	-
	45	Thursday	13-07-23	Difference between CMOS & TTL	P1	-
	46	Friday	14-07-23	CMOS Logic(NOR gate)	P1	-
47,48	Saturday	15-07-23	Full Subtractor (Practical)	P2	-	

UNIT-IV: Sequential Digital Circuits	49	Monday	17-07-23	S-R Flip Flop(NAND & NOR)	P1	-
	50	Tuesday	18-07-23	D Flip flop	P8	-
	51	Wednesday	19-07-23	Edge Triggering JK Flip flop	P1	-
	52	Thursday	20-07-23	Master-Slave JK Flip flop	P1	-
	53	Friday	21-07-23	Conversion of Jk Flip flop into D & T FFs	P1	-
	54,55	Saturday	22-07-23	RS-Flip flop (practical)	P2	-
	56	Monday	24-07-23	Registers: Serial In serial Out	P1	-
	57	Tuesday	25-07-23	Registers: parallel In parallel Out	P1	-
	58	Wednesday	26-07-23	Counters: Asynchronous ripple counter(Mod-16)	P1	-
	59	Thursday	27-07-23	Counters: Asynchronous ripple counter(Mod-10)	P1	-
	60	Friday	28-07-23	Synchronous Counter-4 bit,RS-Flip flop	P1	-
	61	Monday	31-07-23	4-Bit Parallel binary counter	P1	-
	UNIT-V: Memory Devices	62	Tuesday	01-08-23	General memory operations	P1
63		Wednesday	02-08-23	ROM Memory	P6	-
64		Thursday	03-07-23	Static RAM Memory	P1	-
65		Friday	04-08-23	Dynamic RAM Memory	P1	-
66,67		Saturday	05-08-23	D,Jk-Flip flop (Practical)	P2	-
68		Monday	07-08-23	Qualitative-PROM,EPROM	P1	-
69		Tuesday	08-08-23	Qualitative-EEPROM,EAROM	P1	-

*K. Jyotsna*  
Signature of the Lecturer

*Y. Sridevi*  
Signature of the Lecturer in charge

*[Signature]*  
Signature of the Principal

P1- Lecture	P2- Demonstration	P3- Audio,Video	P4- Assignment	P5- Seminar
P6- Debate	P7- Quiz	P8- Group Discussion	P9- Jam	P10- PPT

## SIR C R REDDY COLLEGE FOR WOMEN, ELURU

### Annual Curricular Plan for the Academic Year 2022 - 2023

Name of the Lecturer:	Y. Sri Devi					
Name of the Department:	Electronics					
Program	B.SC			Group:	M.E.Cs	
Title of the Course:	Micro Controller & Interfacing			Hrs allotted:	64	
Year	II	Semester	IV		Course Code: 21-BS427-B	
Section	1			Hours/Week	4+2	
Unit No. & Name	Hour	Day	Date	Topic to be Covered	Methodology Adopted	Remarks
UNIT-I: Introduction to Micro Controller	1	Thursday	23-03-2023	Introduction of Micro Controller	P1	-
	2	Friday	24-03-2023	Comparison of micro Processor and micro controller	P1	-
	3	Saturday	25-03-2023	<i>Introduction on Evolution of micro Controller</i>	P1	-
	4	Monday	27-03-2023	Evolution of Micro Controllers from 4-bit to 32-bit	P1	-
	5	Tuesday	28-03-2023	Development Tools for Micro Controllers	P1	-
	6,7	Wenesday	29-03-2023	Addition of two 8-bit numbers(Practical)	P2	-
	8	Friday	31-03-2023	Development tools for micro controller	P5	-
	9	Saturday	01-04-2023	Assembler	P1	-
	10	Monday	03-04-2023	Compiler	P1	-
	11	Tuesday	04-04-2023	Simulator/Debugger	P1	-

UNIT-II: Micro Controller Architecture	12,13	Thursday	06-04-2023	Addition of two 8-bit numbers(Practical)	P2	-
	14	Saturday	08-04-2023	Overview & Block diagram of 8051	P1	-
	15	Monday	10-04-2023	Architecture of 8051	P1	-
	16	Tuesday	11-04-2023	Pin Diagram of 8051	P1	-
	17,18	Wenesday	12-04-2023	Subtraction of two 8-bit numbers(Practical)	P2	-
	19	Saturday	15-04-2023	Program counter and Memory Organization	P1	-
	20	Monday	17-04-2023	Data types and derivaties	P1	-
	21	Tuesday	18-04-2023	PSW Register	P4	-
	22,23	Wenesday	19-04-2023	Addition of two 16-bit numbers(Practical)	P2	-
	24	Friday	21-04-2023	Register banks & Stack	P1	-
	25	Monday	24-04-2023	Interrupts & Timers	P1	-
UNIT-III: Addressing Modes,Instruction Set of 8051	26	Tuesday	25-04-2023	Addressing Modes & accessing memory Using Addressing modes	P1	-
	27,28	Wenesday	26-04-2023	Multiplication of two 8-bit numbers(Practical)	P2	-
	29	Friday	28-04-2023	Instruction Set: Arithmetic, Logical,Simple bit	P1	-
	30	Saturday	29-04-2023	Instruction Set: Jump, Loop & call Instructions	P1	-
	31	Monday	01-05-2023	Uses of Instruction Set	P6	-
	32	Tuesday	02-05-2023	Timer/Counter Programming	P1	-

UNIT-IV: Assembly Level Programing	33,34	Wednesday	03-05-2023	Division of two 8-bit numbers(Practical)	P2	-
	35	Friday	05-05-2023	Introduction to Assembly level programming	P1	-
	36	Saturday	06-05-2023	Addition of Two 8-bit numbers	P1	-
	37	Monday	05-06-2023	Addition of Two 16-bit numbers	P1	-
	38	Tuesday	06-06-2023	Subtraction of two 8-bit numbers	P1	-
	39,40	Wednesday	07-06-2023	Largest number in an given array(Practical)	P2	-
	41	Friday	09-06-2023	Subtraction of two 16-bit numbers	P1	-
	42	Saturday	10-06-2023	Multiplication of Two 8-bit numbers	P8	-
	43	Monday	12-06-2023	Division of two 8-bit numbers	P1	-
	44	Tuesday	13-06-2023	Largest in an Array	P1	-
	45,46	Wednesday	14-06-2023	Smallest number in an given array(Practical)	P2	-
	47	Friday	16-06-2023	Smallest in an Array	P1	-
	UNIT-V: Interfacing and Application of Micro Controller	48	Saturday	17-06-2023	Introduction to Interfacing of 8255	P1
49		Monday	19-06-2023	Applications of Micro Controller	P1	-
50		Tuesday	20-06-2023	Interfacing of-PPI 8255	P1	-
51,52		Wednesday	21-06-2023	Repetition of Practicals	P1	-
53		Friday	23-06-2023	Interfacing Seven Segment Displays	P7	-
54		Saturday	24-06-2023	Introduction to LCD	P1	-
55		Monday	26-06-2023	displaying information on a LCD	P1	-
56		Tuesday	27-06-2023	LCD Interfacing	P1	-
57,58		Wednesday	28-06-2023	Practical Model exam conducted	P1	-
59		Friday	30-06-2023	Introduction to Stepper Motor	P1	-
60		Saturday	01-07-2023	Control of a Stepper motor	P1	-
61		Monday	03-07-2023	Applications of Stepper motor	P1	-
62		Tuesday	04-07-2023	Revision of Instruction Set	P1	-
63,64	Wednesday	05-07-2023	Practical Model exam conducted	P1	-	

*J. Sridhar*  
Signature of the Lecturer

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Signature of the Lecturer in charge

*[Signature]*  
Signature of the Principal

P1- Lecture	P2- Demonstration	P3- Audio,Video	P4- Assignment	P5- Seminar
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# SIR C R REDDY COLLEGE FOR WOMEN, ELURU

## Annual Curricular Plan for the Academic Year 2022 - 2023

Name of the Lecturer:	K. Jyothsna				
Name of the Department:	Electronics				
Program	B.SC			Group:	M.E.CS
Title of the Course:	Micro Processor systems			Hrs allotted:	60
Year	II	Semester	IV	Course Code:	21-BS427-A
Section	1			Hours/Week	4+2

Unit No. & Name	Hour	Day	Date	Topic to be Covered	Methodology Adopted	Remarks
UNIT-I: 8085 Architecture	1	Thursday	23-03-23	Introduction to Microprocessor	P1	-
	2	Friday	24-03-23	Introduction to Intel 8085 Micro processor Architecture	P1	-
	3	Saturday	25-03-23	Intel 8085 Micro Processor Architecture	P1	-
	4	Monday	27-03-23	Addition of two 8-bit numbers(Practical)	P2	-
	5,6	Wenesday	29-03-23	8085 Register Organigation	P5	-
	7	Friday	31-03-23	Introduction to Pin Configuration of 8085	P1	-
	8	Saturday	01-04-23	Instruction set: Data transfer & Arthimetic	P1	-
	9,10	Monday	03-04-23	Addition of two 16-bit numbers(Practical)	P2	-
	11	Thursday	06-04-23	Instruction Set: Logical, Branch control	P1	-
	12	Saturday	08-04-23	Addressing Modes	P1	-
	13,14	Monday	10-04-23	Subtraction of two 8-bit numbers(Practical)	P2	-
	15	Wenesday	12-04-23	Timing Diagrams	P1	-
	16	Thursday	13-04-23	Intrrrupts of 8085	P1	-

UNIT-II: Assembly Language Programming Using 8085	17	Saturday	15-04-23	Addition of two 8-bit numbers	P1	-
	18	Monday	17-04-23	Subtraction of two 16-bit numbers(Practical)	P2	-
	19,20	Wenesday	19-04-23	Addtion of Two 16-bit numbers	P1	-
	21	Thursday	20--04-23	Subtraction of Two 8-bit Numbers	P1	-
	22	Friday	21-04-23	Subtraction of Two 16-bit Numbers	P1	-
	23,24	Monday	24-04-23	Multiplication of two 8-bit numbers(Practical)	P2	-
	25	Wenesday	26-04-23	Multiplication of Two 8-bit Numbers	P1	-
	26	Thursday	27-04-23	Division of Two 8-bit Numbers	P1	-
	27	Friday	28-04-23	Largest and Smallest numbers in an Array	P6	-
	28	Saturday	29-04-23	Ascending and Decending Order of the given array of Numbers	P1	-
	29,30	Monday	01-05-23	Division of Two 8-bit Numbers(Practical)	P2	-
UNIT-III: 8086 Micro Processor	31	Wenesday	03-05-23	Introduction to 8086 Micro Processor	P1	-
	32	Thursday	04-05-23	8086 Architecture	P1	-
	33	Friday	05-05-23	Pin Discription of 8086	P1	-
	34	Saturday	06-05-23	Basic 8086 Configurations	P1	-
	35,36	Monday	05-06-23	Largest numbers in an Array(Practical)	P2	-
	37	Wenesday	07-06-23	Maximum Mode of 8086	P1	-
	38	Thursday	08-06-23	Minimum Mode of 8086	P1	-
	39	Friday	09-06-23	Instruction format	P1	-
	40	Saturday	10-06-23	Addressing modes	P1	-
	41,42	Monday	12-06-23	Smallest in an Array(Practical)	P2	-
	43	Wenesday	14-06-23	Interrupt Priority Management	P1	-



UNIT- IV I/O Interfaces	44	Thursday	15-06-23	Introduction to I/O Interfacing	P1	-
	45	Friday	16-06-23	Serial Communication	P1	-
	46	Saturday	17-06-23	Parallel Communication	P1	-
	47,48	Monday	19-06-23	Ascending Order of the given array of Numbers(Practical)	P2	-
	49	Wenesday	21-06-23	Keyboard and Display	P1	-
	50	Thursday	22-06-23	DMA Controller(8257)	P1	-
	51	Friday	23-06-23	Introduction to ARM Processor	P1	-
	52	Saturday	24-06-23	Introduction to 16/32 bit Processors	P1	-
	53,54	Monday	26-06-23	Descending Order of the given array of Numbers(Practical)	P2	-
	UNIT-V: ARM Processor	55	Wenesday	28-06-23	Arm Architecture	P1
56		Friday	30-06-23	ARM Organization	P8	-
57		Saturday	01-07-23	Arm based MCU's	P1	-
58,59		Monday	03-07-23	Repetition of practicals	P1	-
60		Wenesday	05-07-23	Instruction Set	P1	-

*K. Jollyra*  
Signature of the Lecturer

*Y. Saidevi*  
Signature of the Lecturer in charge

*[Signature]*  
Signature of the Principal

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# SIR C R REDDY COLLEGE FOR WOMEN, ELURU

## Annual Curricular Plan for the Academic Year 2022 - 2023

<b>Name of the Lecturer:</b>	K.Jyothsna				
<b>Name of the Department:</b>	Electronics				
<b>Program</b>	B.SC			<b>Group:</b>	M.E.CS
<b>Title of the Course:</b>	Value added course on "VLSI Design Using FPGA"			<b>Hrs allotted:</b>	30
<b>Year</b>	II	<b>Semester</b>	IV	<b>Course Code:</b>	22-07-3001
<b>Section</b>	1			<b>Hours/Week</b>	3+2

Unit No. & Name	Hour	Day	Date	Topic to be Covered	Methodology Adopted	Remarks
<b>UNIT-I: FPGA Introduction &amp; Structure of a MOS FET</b>	1	Friday	24-03-23	FPGA Introduction	P1	-
	2	Saturday	25-03-23	Full Custom design	P1	-
	3	Monday	27-03-23	Structure of a MOS FET	P1	-
	4	Tuesday	28-03-23	Gate array Design	P1	-
	5	Wednesday	29-03-23	Standard cell based design	P1	-
	6	Friday	31-03-23	Working of a MOS FET	P1	-
	7	Saturday	01-04-23	MOS FET current	P1	-
	8	Monday	03-04-23	Linear Region	P1	-
	9	Tuesday	04-04-23	Saturation Region, MOS FET Voltage characteristics	P1	-
	10	Thursday	06-04-23	MOS FET Voltage characteristics practical	P2	-

UNIT-II: VLSI Design-MOS Inverter	11	Saturday	08-04-23	VLSI Design	P1	-
	12	Monday	10-04-23	MOS Inverter	P1	-
	13	Tuesday	11-04-23	Resistive load Inverter	P1	-
	14	Wednesday	12-04-23	Inverter with n-type MOS FET, Depletion load NMOS	P1	-
	15	Thursday	13-04-23	Depletion load NMOS practical	P2	-
	16	Saturday	15-04-23	Enhancement load NMOS	P1	-
	17	Monday	17-04-23	Principle of Operation, Circuit operation	P1	-
	18	Tuesday	18-04-23	Enhancement load NMOS practical	P2	-
	19	Wednesday	19-04-23	Derive the Saturation load current	P1	-
UNIT-III: CMOS Inverter- Circuit, Operation and Description	20	Thursday	20-04-23	Derive the gate to source Voltage	P1	-
	21	Friday	21-04-23	CMOS Circuit practical	P2	-
	22	Monday	24-03-23	CMOS Operation, CMOS Description	P1	-
	23	Tuesday	25-04-23	CMOS practical	P2	-
	24	Wednesday	26-04-23	Combinational MOS Logic circuits	P1	-
	25	Thursday	27-04-23	CMOS Two-input NAND gate	P1	-
	26	Friday	28-04-23	Complex CMOS Logic gates & NMOS Depletion load	P1	-
	27	Saturday	29-04-23	Layout Technique Using Euler Graph Method	P1	-
	28	Monday	01-05-23	Sequential MOS Logic circuits	P1	-
	29	Tuesday	02-05-23	Clocked RS Latch based on NAND gate practical	P2	-
	30	Wednesday	03-05-23	CMOS D Latch Implementation	P1	-

*K. J. H. H. H.*  
Signature of the Lecturer

*Y. Sridewi*  
Signature of the Lecturer in charge

*[Signature]*  
Signature of the Principal

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