

Rubrics/TARGET LEVELS

TARGET FOR CONTINUOUS INTERNAL EVALUATION

60	LEVEL3	80	percent of students to get	60	percent marks
	LEVEL2	70	percent of students to get	60	percent marks
	LEVEL1	60	percent of students to get	60	percent marks

TARGET FOR SEMESTER END EXAM

40	LEVEL3	80	percent of students to get	50	percent marks
	LEVEL2	70	percent of students to get	50	percent marks
	LEVEL1	60	percent of students to get	50	percent marks

CO ATTAINMENT BY DIRECT METHODS for 80% From Direct sheet

		PERCENTAGE						LEVELS					
Wt	Tools	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
60	Internal	89	89	56	100	100	0	3	3	0	3	3	0
40	SEE Attainment	11	11	11	11	11		0	0		0	0	
100	TOTAL	58	58	38	64	64	NA	1.80	1.80	NA	1.80	1.80	NA

CO ATTAINMENT BY IN-DIRECT METHOD SURVEY for 20%- From INDIRECT Sheet

		PERCENTAGE						LEVELS					
Wt	Tools	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
100	Course End Survey	78	73	76	76	71	0	2	2	2	2	2	0

0.8*Direct + 0.2* Indirect only for this course

		PERCENTAGE						LEVELS					
FINAL CO ATTAINMENT		CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
		62	61	45	67	66	NA	1.84	1.84	NA	1.84	1.84	NA

DIRECT ATTAINMENT TO MAPPING SCALE

DIRECT ATTAINED	Program Outcomes														PSO			
	COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	COs	1	2	3	4
1.80	C103.1	1	2	0	0	-	-	-	-	-	-	-	1	C103.1	2	1	1	-
1.80	C103.2	2	2	2	-	-	-	-	-	-	-	-	1	C103.2	2	1	1	-
NA	C103.3	-	-	-	-	-	-	-	-	-	-	-	-	C103.3	-	-	-	-
1.80	C103.4	2	-	2	2	-	-	-	-	-	-	-	1	C103.4	2	1	1	-
1.80	C103.5	2	-	2	2	-	-	-	-	-	-	-	1	C103.5	2	1	1	-
NA	#REF!	-	-	-	-	-	-	-	-	-	-	-	-	#REF!	-	-	-	-
Average	C103	1.50	1.80	1.80	1.80	-	-	-	-	-	-	-	1.20	Average	1.80	1.05	1.20	

IN-DIRECT ATTAINMENT TO MAPPING SCALE

IN DIRECT	Program Outcomes													PSO			
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ATTAINED	COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	COs	1	2	3	4
2	C103.1	1	2	0	0	-	-	-	-	-	-	-	1	C103.1	2	1	1	-
2	C103.2	2	2	2	-	-	-	-	-	-	-	-	1	C103.2	2	1	1	-
2	C103.3	2	1	2	2	-	-	-	-	-	-	-	1	C103.3	2	1	1	-
2	C103.4	2	-	2	2	-	-	-	-	-	-	-	1	C103.4	2	1	1	-
2	C103.5	2	-	2	2	-	-	-	-	-	-	-	1	C103.5	2	1	1	-
0	#REF!	-	-	-	-	-	-	-	-	-	-	-	-	#REF!	-	-	-	-
Average	C103	1.73	1.56	2.00	2.00	-	-	-	-	-	-	-	1.33	Average	2.00	1.20	1.33	-

FINAL ATTAINMENT 80% Direct + 20% INDIRECT

COs		Program Outcomes												COs	PSO			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		1	2	3	4
C103.1	Final = 80%Direct + 20% Indirect	1	2	0	0	-	-	-	-	-	-	-	1	C103.1	2	1	1	-
C103.2		2	2	2	-	-	-	-	-	-	-	-	1	C103.2	2	1	1	-
C103.3		-	-	-	-	-	-	-	-	-	-	-	-	C103.3	-	-	-	-
C103.4		2	-	2	2	-	-	-	-	-	-	-	1	C103.4	2	1	1	-
C103.5		2	-	2	2	-	-	-	-	-	-	-	1	C103.5	2	1	1	-
#REF!		-	-	-	-	-	-	-	-	-	-	-	-	#REF!	-	-	-	-
C103	Average	2	2	2	2	-	-	-	-	-	-	-	1	Average	2	1	1	-



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DEPARTMENT OF CIVIL ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING																						
NAME		BHAVYA C H		SEM/SEC		4A		ODD/EVEN				Year of study		2023-24								
COURSE		Fluid Mechanics and Hydraulics		CODE		BCV402		EVEN				COURSE NAME		C103								
				MARKS FOR EACH IA QUESTION WISE Example: CO1 1st & 2nd Qn 1st IA				Assignment				TOTAL MARKS FOR EACH CO-Obtained and Maximum										
SI No	USN	NAME	1st IA		2nd IA		3rd IA		Assignment						TOTAL MARKS FOR EACH CO						Final IA	SEE
			Q1 & Q2	Q3 & Q4	Q1& Q2	Q3 & Q4	Q1 & Q2	Q3& Q4	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6		
			co1	co2	co3	co4	co5	co6														
MAXIMUM MARKS			15	15	15	15	15		10	10	10	10	10		25	25	25	25	25	0	50	50
1	1SG22CV001	Asmetha	12	13	0	14	14		10	10	10	10	10		22	23	10	24	24		40	4
2	1SG22CV003	Jayanth P	0	13	24	15	15		10	10	10	10	10		10	23	34	25	25		43	26
3	1SG22CV007	Shiva	15	13	18	14	14		10	10	10	10	10		25	23	28	24	24		42	10
4	1SG22CV006	Sarah William	15	15	21	15	15		10	10	10	10	10		25	25	31	25	25		45	18
5	1SG23CV400	Karthik G	14	11	0	14	14		10	10	10	10	10		24	21	10	24	24		40	5
6	1SG23CV401	Nikhil M K	14	4	6	13	13		10	10	10	10	10		24	14	16	23	23		38	11
7	1SG23CV402	Priyanka N	13	13	1	14	14		10	10	10	10	10		23	23	11	24	24		41	9
8	1SG23CV403	Sousheel	15	7	1	13	13		10	10	10	10	10		25	17	11	23	23		39	11
9	1SG23CV404	Varun Gowda	5	5	5	13	13		10	10	10	10	10		15	15	15	23	23		35	6
36																						
37																						
38																						
39																						


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NAME		BHAVYA C H	2023-24		4A			
COURSE		Fluid Mechanics and Hydraulics	EVEN		BCV402			
Assignment Types		Descriptive	Descriptive	Seminar	Case study			
		Quiz						
		Seminar						
		Puzzles						
		CaseStudy						
		Activity						
Sl. No.	USN	NAME	CO Wise Assignment Marks					
			CO1	CO2	CO3	CO4	CO5	CO6
Max Marks			10	10	10	10	10	0
1	1SG22CV001	Asmetha	10	10	10	10	10	0
2	1SG22CV003	Jayanth P	10	10	10	10	10	0
3	1SG22CV007	Shiva	10	10	10	10	10	0
4	1SG22CV006	Sarah William	10	10	10	10	10	0
5	1SG23CV400	Karthik G	10	10	10	10	10	0
6	1SG23CV401	Nikhil M K	10	10	10	10	10	0
7	1SG23CV402	Priyanka N	10	10	10	10	10	0
8	1SG23CV403	Sousheel	10	10	10	10	10	0
9	1SG23CV404	Varun Gowda	10	10	10	10	10	0


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NAME		BHAVYA C H						SEM/SEC		4A		study						
COURSE		Fluid Mechanics and Hydraulics						CODE		BCV402		NAME						
TARGET LEVEL				Internal Evaluation										Sem End Exam				
				LEVEL3	80	Percent of students to get				60	% marks		LEVEL3	80	Percent to get	50	% marks	
				LEVEL2	70	Percent of students to get				60	% marks		LEVEL2	70	Percent to get	50	% marks	
				LEVEL1	60	Percent of students to get				60	% marks		LEVEL1	60	Percent to get	50	% marks	
				Course Outcomes			CO1	CO2	CO3	CO4	CO5	CO6	level achieved equal for all COs					
C103		2023-24				No of students attempted			9	9	9	9	9	0	No of students attempted		9	
NUMBER OF STUDENTS SCORING MORE THAN 60 %MARKS								8	8	5	9	9	0	NUMBER OF STUDENTS SCORING MORE THAN 50 %MARKS		1		
PERCENTAGE OF STUDENTS SCORING MORE THAN 60 %MARKS								89	89	56	100	100	0	PERCENTAGE OF STUDENTSCORING MORE THAN 50 %MARKS		11		
TARGET LEVEL ACHIEVED								3.00	3.00	0	3.00	3.00	0	TARGET LEVEL ACHIEVED		0		
Sl. No.	USN	NAME	CO Wise Marks												COs Wise Marks		%	
			CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6	All CO Equal		All Cos	
Max Marks			25	25	25	25	25	0	MARKS ATTAINMENT IN %						50	%		
1	1SG22CV001	Asmetha	22	23	10	24	24	0	88	92	40	96	96		4	8		
2	1SG22CV003	Jayanth P	10	23	34	25	25	0	40	92	136	100	100		26	52		
3	1SG22CV007	Shiva	25	23	28	24	24	0	100	92	112	96	96		10	20		
4	1SG22CV006	Sarah William	25	25	31	25	25	0	100	100	124	100	100		18	36		
5	1SG23CV400	Karthik G	24	21	10	24	24	0	96	84	40	96	96		5	10		
6	1SG23CV401	Nikhil M K	24	14	16	23	23	0	96	56	64	92	92		11	22		
7	1SG23CV402	Priyanka N	23	23	11	24	24	0	92	92	44	96	96		9	18		
8	1SG23CV403	Sousheel	25	17	11	23	23	0	100	68	44	92	92		11	22		
9	1SG23CV404	Varun Gowda	15	15	15	23	23	0	60	60	60	92	92		6	12		

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CO ATTAINMENT SUMMARY FILE

NAME	Prof. Madhushree	SEM/SEC	8TH A & B	Year of study	2023-24	ODD/EVEN
COURSE	INTERNET OF THINGS	CODE	18CS81	COURSE NAME	C408	EVEN

COURSE OUTCOMES. At the end of the Course students will be able to

CO-1	C408.1	Interpret the impact and challenges posed by IoT networks leading to new architectural models.
CO-2	C408.2	Compare and contrast the deployment of smart objects and the technologies to connect them to network
CO-3	C408.3	Appraise the role of IoT protocols for efficient network communication.
CO-4	C408.4	Elaborate the need for Data Analytics and Security in IoT.
CO-5	C408.5	Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry
CO-6	C408.6	

Prerequisite Subjects: Computer Networks

COURSE ARTICULATION MATRIX-CO-PO MAPPING

CO-PSO Matrix

GRADUATE ATTRIBUTES	Apply Knowledge	Analysis	Design	Investigation	Modern Tools	Society	Environment	Ethics	Team Work	Communication	Proj Mgmt Finance	Life Long Learn	PSO1: Apply the knowledge gained from Mathematics, Basic Computing, Basic Sciences and Social Sciences in general and all Computer Science courses in particular to identify, formulate and solve real life engineering problems. PSO2:Identify the various analysis & design methodologies for facilitating development of high quality system software products with focus on performance optimization.				
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO	1	2		
C408.1	3	3	2	2	3	-	-	-	-	-	3	3	C408.1	3	3		
C408.2	3	2	2	2	3	-	-	-	-	-	3	3	C408.2	3	3		
C408.3	3	3	2	2	3	-	-	-	-	-	3	3	C408.3	3	3		
C408.4	3	2	2	2	3	-	-	-	-	-	3	3	C408.4	3	3		
C408.5	3	3	2	2	3	-	-	-	-	-	3	3	C408.5	3	3		
C408.6	-	-	-	-	-	-	-	-	-	-	-	-	C408.6	-	-		
Average	3.00	2.60	2.00	2.00	3.00	-	-	-	-	-	3.00	3.00	Average	3.00	3.00		

Mapping Corelation:	Low	Med	High	NO	L1: Remember	L2:Understanding	L3:Apply	L4:Analyze	L5:Evaluate
	1	2	3	-	L6:Create				

ATTAINMENT METHODS AND TOOLS

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DIRECT ATTAINMENT 80%								INDIRECT ATTAINMENT 20%										
TOOLS				Frequency & Mode				Weightage		TOOLS				Frequency				
Internal Evaluation				3 tests and Average				60		Course End Survey				once in Sem End				
Semester End Exam				End of semester by VTU equal for all CO				40										
Rubrics/TARGET LEVELS																		
TARGET FOR CONTINUOUS INTERNAL EVALUATION																		
60	LEVEL3	80	percent of students to get				60	percent marks										
	LEVEL2	70	percent of students to get				60	percent marks										
	LEVEL1	60	percent of students to get				60	percent marks										
TARGET FOR SEMESTER END EXAM																		
40	LEVEL3	80	percent of students to get				50	percent marks										
	LEVEL2	70	percent of students to get				50	percent marks										
	LEVEL1	60	percent of students to get				50	percent marks										
CO ATTAINMENT BY DIRECT METHODS for 80%From Direct sheet																		
		PERCENTAGE								LEVELS								
Wt	Tools	CO1	CO2	CO3	CO4	CO5	CO6			CO1	CO2	CO3	CO4	CO5	CO6			
60	Internal	80	78	91	89	87	0			2	2	3	3	3	0			
40	SEE Attainment	78	78	78	78	78				2	2	2	2	2				
100	TOTAL	79	78	86	85	83	NA			2.00	2.00	2.60	2.60	2.60	NA			
CO ATTAINMENT BY IN-DIRECT METHOD SURVEY for 20%- From INDIRECT Sheet																		
		PERCENTAGE								LEVELS								
Wt	Tools	CO1	CO2	CO3	CO4	CO5	CO6			CO1	CO2	CO3	CO4	CO5	CO6			
100	Course End Survey	0	0	0	90	91	90			0	0	0	3	3	3			
0.8*Direct + 0.2* Indirect only for this course																		
FINAL CO ATTAINMENT		PERCENTAGE								LEVELS								
		CO1	CO2	CO3	CO4	CO5	CO6			CO1	CO2	CO3	CO4	CO5	CO6			
		63	62	69	86	85	NA			1.60	1.60	2.08	2.68	2.68	NA			
DIRECT ATTAINMENT TO MAPPING SCALE																		
DIRECT ATTAINED	Program Outcomes														PSO			
	COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	COs	1	2		
2.00	C408.1	2	2	1	1	2	-	-	-	-	-	2	2	C408.1	2	2		
2.00	C408.2	2	1	1	1	2	-	-	-	-	-	2	2	C408.2	2	2		

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2.60	C408.3	3	3	2	2	3	-	-	-	-	-	3	3	C408.3	3	3		
2.60	C408.4	3	2	2	2	3	-	-	-	-	-	3	3	C408.4	3	3		
2.60	C408.5	3	3	2	2	3	-	-	-	-	-	3	3	C408.5	3	3		
NA	C408.6	-	-	-	-	-	-	-	-	-	-	-	-	C408.6	-	-		
Average	C408	2.36	2.05	1.57	1.57	2.36	-	-	-	-	-	2.36	2.36	Average	2.36	2.36	-	-
IN-DIRECT ATTAINMENT TO MAPPING SCALE																		
IN DIRECT ATTAINED	COs	Program Outcomes												COs	PSO			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		1	2	3	4
0	C408.1	0	0	0	0	0	-	-	-	-	-	0	0	C408.1	0	0		
0	C408.2	0	0	0	0	0	-	-	-	-	-	0	0	C408.2	0	0		
0	C408.3	0	0	0	0	0	-	-	-	-	-	0	0	C408.3	0	0		
3	C408.4	3	2	2	2	3	-	-	-	-	-	3	3	C408.4	3	3		
3	C408.5	3	3	2	2	3	-	-	-	-	-	3	3	C408.5	3	3		
3	C408.6	-	-	-	0	-	-	-	-	-	-	-	-	C408.6	-	-		
Average	C408	3.00	2.50	2.00	2.00	3.00	-	-	-	-	-	3.00	3.00	Average	3.00	3.00	-	-
FINAL ATTAINMENT 80% Direct + 20% INDIRECT																		
COs		Program Outcomes												COs	PSO			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		1	2	3	4
C408.1	Final = 80%Direct + 20% Indirect	2	2	1	1	2	-	-	-	-	-	2	2	C408.1	2	2		
C408.2		2	1	1	1	2	-	-	-	-	-	2	2	C408.2	2	2		
C408.3		2	2	1	1	2	-	-	-	-	-	2	2	C408.3	2	2		
C408.4		3	2	2	2	3	-	-	-	-	-	3	3	C408.4	3	3		
C408.5		3	3	2	2	3	-	-	-	-	-	3	3	C408.5	3	3		
C408.6		-	-	-	-	-	-	-	-	-	-	-	-	C408.6	-	-		
C408	Average	2	2	1	1	2	-	-	-	-	-	2	2	Average	2	2	-	-


 Professor & Head of the Department
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CO ATTAINMENT SUMMARY FILE

NAME	Mrs. RAMYA M		SEM/SEC	4	Year of study	2023-24	ODD / EVEN	
COURSE	MICROCONTROLLER		CODE	BEE403	Course Code	C210	EVEN	
COURSE OUTCOMES. At the end of the Course students will be able to							PO	PSO
CO-1	C210.1	Discuss the internal architecture, addressing modes of 8051					1,12	1
CO-2	C210.2	Utilize the concept of assembler, stack, flag register, loop, jump and call instructions to write assembly language program.					1,2,5,12	1,2
CO-3	C210.3	Develop 8051C programs for time delay, I/O bit manipulation, logic and arithmetic operations, data conversion and data serialization					1,2,5,12	1,2
CO-4	C210.4	Make use of the hardware connection of 8051 chip for programming its timers, serial ports and interrupts					1,2,12	1
CO-5	C210.5	Explain the Interfacing of 8051 with real-world devices.					1,2,12	1
CO-6	C210.6							
Prerequisite Subjects:		Mathematics, Basic Electrical Engineering, Power Generation and Economics, Transmission and distribution, Power System Analysis–1.						

COURSE ARTICULATION MATRIX-CO-PO MAPPING													CO-PSO Matrix			
GRADUATE ATTRIBUTES	Apply Knowledge	Analysis	Design	Investigation	Modern Tools	Society	Environment	Ethics	Team Work	Communication	Proj Mgmt Finance	Life Long Learn	PSO1: Apply fundamental knowledge to identify, formulate, design and investigate various problems of Electrical Machines, Power Electronics, Microcontroller, Control System, Power System and High Voltage Engineering. PSO2: Apply modern software tools for design, simulation and analysis of electrical and electronics systems, engage in lifelong learning and to successfully adapt in multidisciplinary environments. PSO3: Solve ethically and professionally various Electrical and Electronics Engineering problems in societal and environmental context.			
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO	1	2	3
C210.1	2	-	-	-	-	-	-	-	-	-	-	2	C210.1	2	-	-
C210.2	2	2	-	-	2	-	-	-	-	-	-	2	C210.2	2	2	-
C210.3	3	2	-	-	2	-	-	-	-	-	-	2	C210.3	2	2	-
C210.4	3	2	-	-	-	-	-	-	-	-	-	2	C210.4	2	-	-
C210.5	3	3	-	-	-	-	-	-	-	-	-	2	C210.5	2	-	-
C210.6													C210.6			
Average	2.60	2.25	-	-	2.00	-	-	-	-	-	-	2.00	Average	2.00	2.00	-
Mapping Correlation:			Low	Med	High	NO										
			1	2	3	-										

ATTAINMENT METHODS AND TOOLS					
DIRECT ATTAINMENT 80%			INDIRECT ATTAINMENT 20%		
TOOLS	Frequency & Mode	Weightage	TOOLS	Frequency	Weightage
Continuous Internal Evaluation	3 tests Average and Assignment	60	Course End Survey	once in Sem End	100%
Semester End Exam	End of semester by VTU equal for all CO	40			
Direct Total Calculation: 0.6*CIE + 0.4*SEE					

Rubrics/TARGET LEVELS					
TARGET FOR CONTINUOUS INTERNAL EVALUATION					
60	LEVEL 3	80	percent of students to get	60	percent marks
	LEVEL 2	70	percent of students to get	60	percent marks
	LEVEL 1	60	percent of students to get	60	percent marks
TARGET FOR SEMESTER END EXAM					
40	LEVEL 3	80	percent of students to get	50	percent marks
	LEVEL 2	70	percent of students to get	50	percent marks
	LEVEL 1	60	percent of students to get	50	percent marks

CO ATTAINMENT BY DIRECT METHODS for 80% From Direct sheet													
		PERCENTAGE						LEVELS					
Wt	Tools	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
60	CIE Attainment	96	63	92	94	92	-	3	1	3	3	3	0
40	SEE Attainment	56	56	56	56	56	-	0	0	0	0	0	0
100	TOTAL	80	60	78	79	78	-	1.80	0.60	1.80	1.80	1.80	NA
	TARGET	80	80	80	80	80	-						

for **PROF & HOD**
Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057

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Bangalore - 560 057

Total Calculation: 0.6*CIE + 0.4*SEE

CO ATTAINMENT BY IN-DIRECT METHOD SURVEY for 20%- From INDIRECT Sheet

Wt	Tools	PERCENTAGE						LEVELS					
		CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
100	Course End Survey	92	91	89	91	88	-	3	3	3	3	3	-

0.8*Direct + 0.2* Indirect only for this course

FINAL CO ATTAINMENT	PERCENTAGE						LEVELS					
	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
	82	66	80	81	80	NA	2.04	1.08	2.04	2.04	2.04	NA

DIRECT ATTAINMENT TO MAPPING SCALE

DIRECT ATTAINED	COs	Program Outcomes												COs	PSO		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		1	2	3
1.8	C210.1	1	-	-	-	-	-	-	-	-	-	-	1	C210.1	1	-	-
0.6	C210.2	0	0	-	-	0	-	-	-	-	-	-	0	C210.2	0	0	-
1.8	C210.3	2	1	-	-	1	-	-	-	-	-	-	1	C210.3	1	1	-
1.8	C210.4	2	1	-	-	-	-	-	-	-	-	-	1	C210.4	1	-	-
1.8	C210.5	2	2	-	-	-	-	-	-	-	-	-	1	C210.5	1	-	-
NA	C210.6	-	-	-	-	-	-	-	-	-	-	-	-	C210.6	-	-	-
Average	C210	1.40	1.2	-	-	0.8	-	-	-	-	-	-	1.0	Average	1	1	-

IN-DIRECT ATTAINMENT TO MAPPING SCALE

IN DIRECT ATTAINED	COs	Program Outcomes												COs	PSO		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		1	2	3
3	C210.1	2	-	-	-	-	-	-	-	-	-	-	2	C210.1	2	-	-
3	C210.2	2	2	-	-	2	-	-	-	-	-	-	2	C210.2	2	2	-
3	C210.3	3	2	-	-	2	-	-	-	-	-	-	2	C210.3	2	2	-
3	C210.4	3	2	-	-	-	-	-	-	-	-	-	2	C210.4	2	-	-
3	C210.5	3	3	-	-	-	-	-	-	-	-	-	2	C210.5	2	-	-
-	C210.6	-	-	-	-	-	-	-	-	-	-	-	-	C210.6	-	-	-
Average	C210	3	2	-	-	2	-	-	-	-	-	-	2	Average	2	2	-

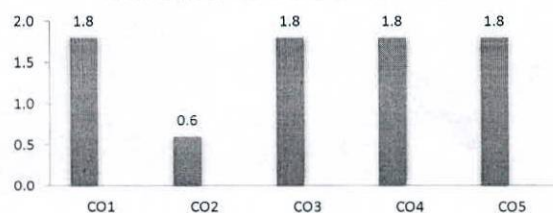
FINAL ATTAINMENT 80% Direct + 20% INDIRECT

COs		Program Outcomes												COs	PSO		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		1	2	3
C210.1	Final = 80% Direct + 20% Indirect	1	-	-	-	-	-	-	-	-	-	-	1	C210.1	1	-	-
C210.2		1	1	-	-	1	-	-	-	-	-	-	1	C210.2	1	1	-
C210.3		2	1	-	-	1	-	-	-	-	-	-	1	C210.3	1	1	-
C210.4		2	1	-	-	-	-	-	-	-	-	-	1	C210.4	1	-	-
C210.5		2	2	-	-	-	-	-	-	-	-	-	1	C210.5	1	-	-
C210.6		-	-	-	-	-	-	-	-	-	-	-	-	C210.6	-	-	-
C210	Average	1.64	1.37	-	-	1.04	-	-	-	-	-	-	1.23	Average	1.2	1.0	-

SUBJECT ANALYSIS

NAME	Mrs. RAMYA M			SEM/SEC	4	Year of study	2023-24	ODD / EVEN
COURSE	MICROCONTROLLER			CODE	BEE403	Course Code	C210	EVEN
CO	CAYm1 2022-23	CAY 2023-24	Analysis from Direct					
CO1	1.2	1.8						
CO2	0.6	0.6						
CO3	1.8	1.8						
CO4	1.8	1.8						
CO5	0.6	1.8						
CO6	---	NA						

ANALYSIS BY DIRECT METHOD



for PROF & HOD
Department of Electrical & Electronics Engineering
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SAPTHAGIRI COLLEGE OF ENGINEERING

Affiliated to VTU, Belagavi and Approved by AICTE, Delhi

Accredited by NAAC with "A" Grade and Accredited by NBA for CSE, ISE, ECE, EEE and ME branches

AN ISO 9001:2015 and 14001:2015 Certified Institution

No. 14/5, Chikkasandra, Hesarghatta Main Road, Bangalore - 560057.

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CO ATTAINMENT SUMMARY FILE

NAME OF FACULTY:	Prof. PRIYANKA M R	SEM./SEC.:	6th 'A' & 'B'	Year of study:	2023-24	ODD / EVEN:	
COURSE NAME:	DATA SCIENCE AND VISUALIZATION	SUB. CODE:	21CS644	COURSE CODE:		SCHEME:	21
COURSE OUTCOMES: At the end of the Course students will be able to							
CO-1	.1	Understand the data in different forms.				PO	PSO
CO-2	.2	Apply different techniques to Explore Data Analysis and the Data Science Process.				1,2,3,5,11	1,2
CO-3	.3	Analyze feature selection algorithms.				1,2,3,9	1,2
CO-4	.4	Evaluate data visualization tools and libraries and plot graphs				1,2,3,4,5,9,11	1,2
CO-5	.5	Develop different charts and include mathematical expressions				2,3,4,5	1,2
CO-6	.6						

Prerequisite Subjects:

COURSE ARTICULATION MATRIX-CO-PO MAPPING

CO-PSO Matrix

GRADUATE ATTRIBUTES												PSO1:Apply mathematical methodologies to solve problem, analyze ,data structure with suitable algorithm;PSO2:Design and evaluate computer components and information systems using technology with suitable platform PSO3:Build strong skills in learning new programming environments to automate things and simplify real world problems				
	Apply Knowledge															
	Analysis															
	Design															
	Investigation															
	Modern Tools															
	Society															
	Environment															
	Ethics															
	Team Work															
	Communication															
	Proj Mgmt Finance															
	Life Long Learn															
COS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO	1	2	3
.1	2	-	2	-	1	-	-	-	2	-	-		.1	1	1	
.2	1	2	2	-	1	-	-	-	2	-	2		.2	1	2	
.3	1	2	2	-	1	-	-	-	2	-	-		.3	1	2	
.4	1	3	2	2	1	-	-	-	-	-	2		.4	1	2	
.5		2	2		3								.5	1	2	
.6													.6			
Average	1.25	2.25	2.00	2.00	1.40	-	-	-	2.00	-	2.00	-	Average	1.00	1.80	-



Principal
Kannur College

Dr H.R Ranganatha
Prof. & H.O.D

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Bangalore-560 057

Mapping Corelation:	Low	Med	High	NO	L1: Remember	L2:Understanding	L3:Apply	L4:Analyze	L5:Evaluate
	1	2	3	-	L6:Create				

ATTAINMENT METHODS AND TOOLS					
DIRECT ATTAINMENT (80%)			INDIRECT ATTAINMENT (20%)		
TOOLS	Frequency & Mode	Weightage	TOOLS	Frequency	Weight
Continuous Internal Evaluation	Average of 3 tests and Assignment	50	Course End Survey	once in Sem End	100%
Semester End Exam	End of sem. by VTU equal for all CO	50			
Direct Total Calculation: 0.5*CIE + 0.5*SEE					

Rubrics/TARGET LEVELS					
TARGET FOR CONTINUOUS INTERNAL EVALUATION AND ASSIGNMENT					
50	LEVEL 3	80	percent of students to get	60	percent marks
	LEVEL 2	70	percent of students to get	60	percent marks
	LEVEL 1	60	percent of students to get	60	percent marks

TARGET FOR SEMESTER END EXAM					
50	LEVEL 3	80	percent of students to get	50	percent marks
	LEVEL 2	70	percent of students to get	50	percent marks
	LEVEL 1	60	percent of students to get	50	percent marks

Note: If the target level 3 is achieved increase target levels for next year.

CO ATTAINMENT BY DIRECT METHODS for 80% From Direct sheet													
		PERCENTAGE						LEVELS					
Wt	Tools	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
50	CIE attainment	100	100	100	97	100		3	3	3	3	3	
50	SEE Attainment												
100	TOTAL	####	####	####	####	####		####	####	####	####	####	
	TARGET	80	80	80	80	80		3.00	3.00	3.00	3.00	3.00	3.00
	Total Calculation: 0.5*CIE +0.5*SEE												

CO ATTAINMENT BY IN-DIRECT METHOD SURVEY for 20%- From INDIRECT Sheet													
		PERCENTAGE						LEVELS					
Wt	Tools	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
100	Course End Survey	94	93	99	99	99		3	3	3	3	3	

0.8*Direct + 0.2* Indirect only for this course													
FINAL CO ATTAINMENT	PERCENTAGE							LEVELS					
	CO1	CO2	CO3	CO4	CO5	CO6		CO1	CO2	CO3	CO4	CO5	CO6
	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA

Dr H.R Ranganaina
Prof. & H.O.D

Dept.of Information Science & Engg
Sapthagiri College of Engineering

DIRECT ATTAINMENT TO MAPPING SCALE

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DIRECT ATTAINED	Program Outcomes													PSO			
	COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	COs	1	2	3
#VALUE!	.1	-	-	-	-	-	-	-	-	-	-	-	-	.1	-	-	-
#VALUE!	.2	-	-	-	-	-	-	-	-	-	-	-	-	.2	-	-	-
#VALUE!	.3	-	-	-	-	-	-	-	-	-	-	-	-	.3	-	-	-
#VALUE!	.4	-	-	-	-	-	-	-	-	-	-	-	-	.4	-	-	-
#VALUE!	.5	-	-	-	-	-	-	-	-	-	-	-	-	.5	-	-	-
	.6	-	-	-	-	-	-	-	-	-	-	-	-	.6	-	-	-
Average	0	-	-	-	-	-	-	-	-	-	-	-	-	Average	-	-	-

IN-DIRECT ATTAINMENT TO MAPPING SCALE																	
IN DIRECT ATTAINED		Program Outcomes													PSO		
	COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	COs	1	2	3
3	.1	2.0	-	2.0	-	1.0	-	-	-	2.0	-	-	0.0	.1	1.0	1.0	0.0
3	.2	1.0	2.0	2.0	-	1.0	-	-	-	2.0	-	2.0	0.0	.2	1.0	2.0	0.0
3	.3	1.0	2.0	2.0	-	1.0	-	-	-	2.0	-	-	0.0	.3	1.0	2.0	0.0
3	.4	1.0	3.0	2.0	2.0	1.0	-	-	-	-	-	2.0	0.0	.4	1.0	2.0	0.0
3	.5	0	2	2	0	3	0	0	0	0	0	0	0	.5	1	2	0
	.6	-	-	-	-	-	-	-	-	-	-	-	-	.6	-	-	-
Average	0	1.3	2.3	2.0	2.0	1.4	-	-	-	2.0	-	2.0	-	Average	1.0	1.8	-

FINAL ATTAINMENT 80% Direct + 20% INDIRECT																	
COs	Final = 80%Direct + 20% Indirect	Program Outcomes													PSO		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	COs	1	2	3
.1		-	-	-	-	-	-	-	-	-	-	-	-	.1	-	-	-
.2		-	-	-	-	-	-	-	-	-	-	-	-	.2	-	-	-
.3		-	-	-	-	-	-	-	-	-	-	-	-	.3	-	-	-
.4		-	-	-	-	-	-	-	-	-	-	-	-	.4	-	-	-
.5		-	-	-	-	-	-	-	-	-	-	-	-	.5	-	-	-
.6		-	-	-	-	-	-	-	-	-	-	-	-	.6	-	-	-
0		Average	-	-	-	-	-	-	-	-	-	-	-	-	Average	-	-

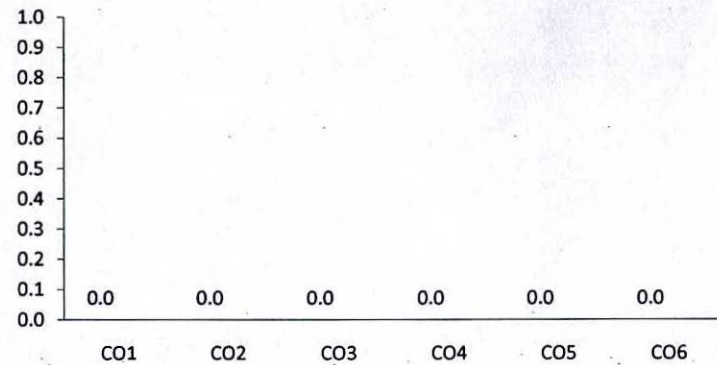
SUBJECT ANALYSIS						
NAME	Prof. PRIYANKA M R			SEM/SEC	6th 'A' & 'B'	Year of study
COURSE	DATA SCIENCE AND VISUALIZATION			CODE	21CS644	COURSE NAME
						2023-24
						ODD/EVEN
						SCHEME:
CO	CAYm1	CAY	Analysis from Direct Method			
	2021-22	2023-24				
CO1		#VALUE!				
CO2		#VALUE!				
CO3		#VALUE!				
CO4		#VALUE!				

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CO5		#VALUE!	
CO6			

ANALYSIS BY DIRECT METHOD



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