



2.6.2 Attainment of Programme outcomes and course outcomes are evaluated by the Institution

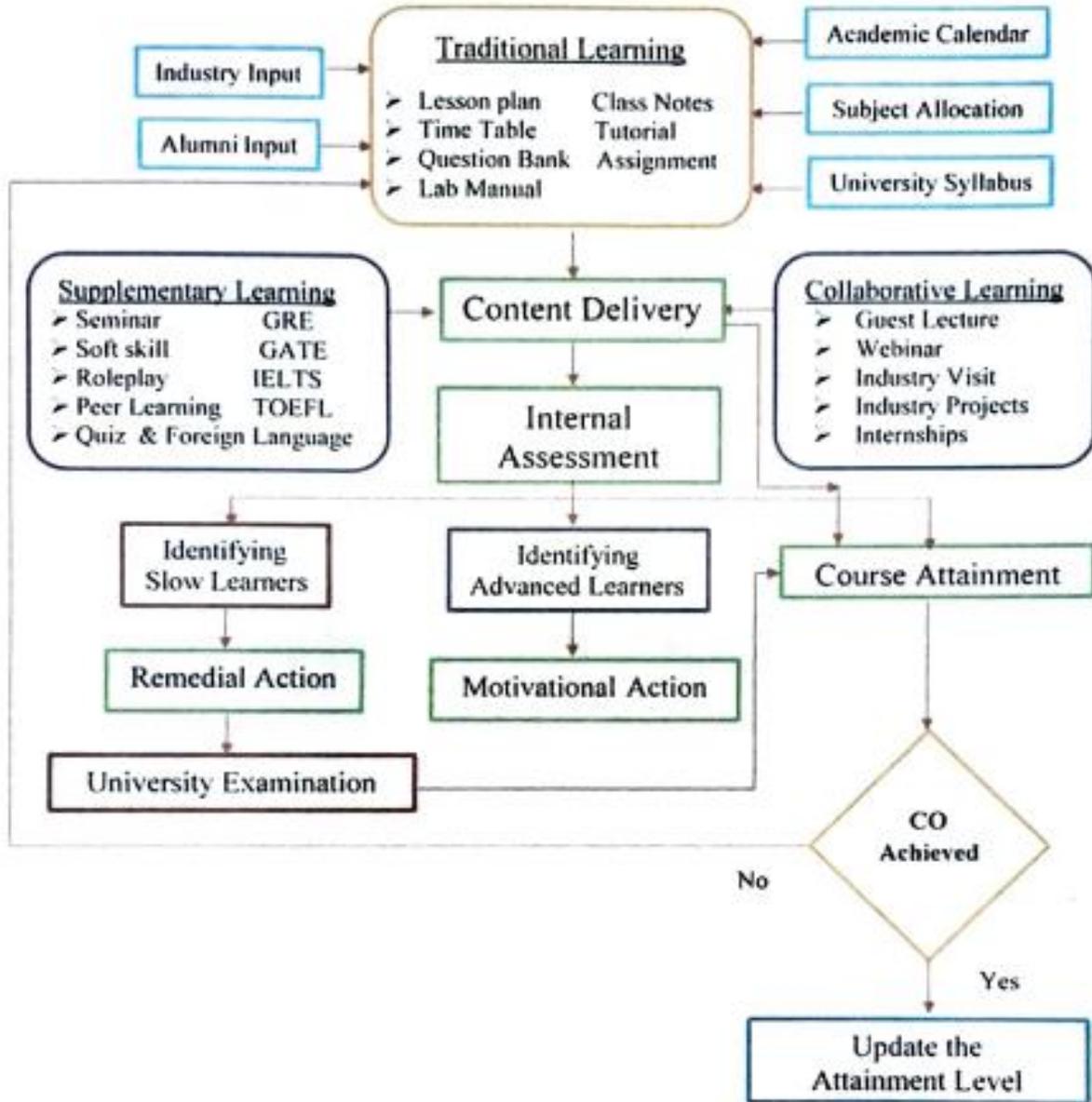
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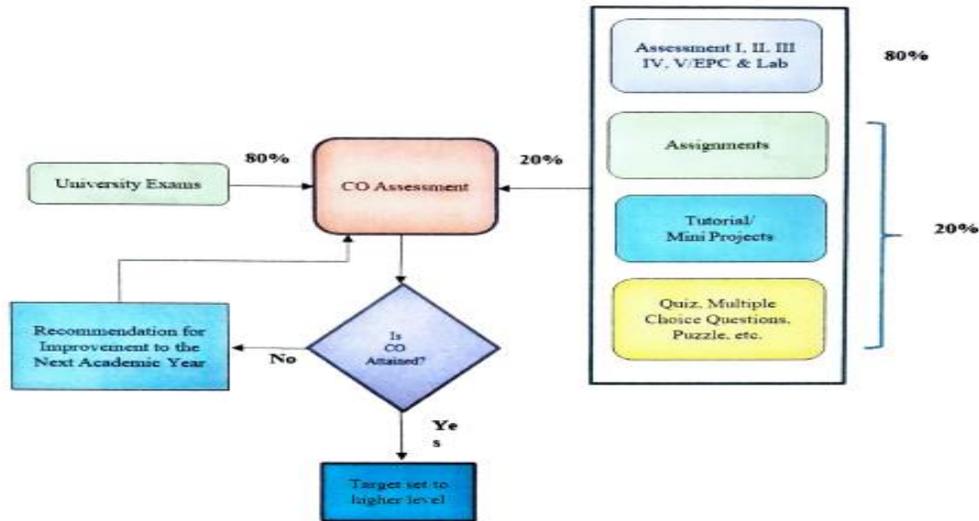
1. Process to improve Teaching and learning process



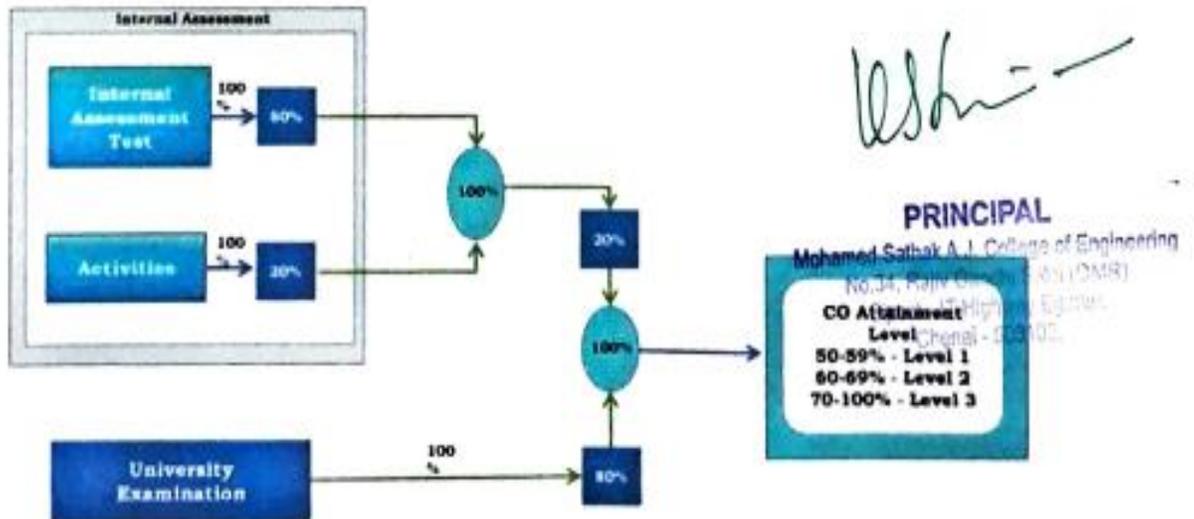
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2. Co Attainment Process



3. CO Assessment Process





MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



4. Sample CO Attainment for Internal Assessment, University & Overall

Mohamed Sathak A J College of Engineering																			
Department of Electronics and Communication Engineering																			
CO Attainment Format																			
Year/Sem		IV/VII																	
Subject Code/Name		OMF751/ Lean Six Sigma																	
Pass%/Class Avg %																			
Subject Target		50%																	
No of Students		25																	
INTERNAL ASSESMENT										INTERNAL ASSESMENT - II					CO3	CO4	Univ Grade		
CO No.		CO3	CO3	CO3	CO4	CO4	CO4	CO3	CO3	CO3	CO4	CO4	Total						
S.No	REG NO	NAME	PA1	PA2	PA3	PA4	PA5	PA6	PB1	PB2	PB3	PB4	Total						
			2	2	2	2	2	2	12	12	12	12	60						
1	311820106001	Abinaya K	2	1	2	2	2	2	10	12	10	12	55	90.63%	93.33%	A			
2	311820106002	Abitha B	0	0	2	2	2	2	6	12	12	12	50	65.63%	100.00%	B+			
3	311820106003	Aflal Ahamed M	2	1	2	1	2	2	8	2	0	2	22	53.13%	23.33%	B+			
4	311820106004	Ahmad Syed Semar							9	9	9	9	36	62.50%	60.00%	B			
5	311820106005	Amudeshwaran S	2	1	2	1	2	2	8	9	0	9	36	75.00%	46.67%	B+			
6	311820106006	Basharathulla A	2	2	2	2	2	1	4	10	6	10	41	65.63%	70.00%	A			
7	311820106007	Carol Persy N	2	2	2	2	2	2	10	8	0	8	38	78.13%	46.67%	B+			
8	311820106009	Janani E	1	1	2	2	2	2	7	12	10	12	51	75.00%	93.33%	B+			
9	311820106010	Jaseem Mohamed P								0		0	0	3.13%	0.00%	A			
10	311820106011	Kishore S	2	1	2	0	1	2	5	10	7	10	40	65.63%	66.67%	B+			
11	311820106013	Madhivanan R	2	1	2	1	2	2	9	8	0	8	35	68.75%	43.33%	A			
12	311820106014	Mohamed Mukshith N	2	1	2	2	2	2	9	10	9	10	49	81.25%	83.33%	A			
13	311820106016	Nirmal K	2	1	2	1	2	2	0	6	9	6	31	37.50%	66.67%	B+			
14	311820106017	Poosathishkumar M	2	0	1	2	2	0	0	8	3	8	26	34.38%	50.00%	A			
15	311820106018	Safirin S	2	2	2	2	2	1	4	10	6	10	41	65.63%	70.00%	B+			
16	311820106020	Sathesh Kumar V	2	2	2	2	2	2	12	12	12	12	60	100.00%	100.00%	B+			
17	311820106021	Shahrukh Fakrudeen K	2	2	2	2	2	2	12	9	11	9	53	90.63%	86.67%	A+			
18	311820106022	Shaik Abdulla A	2	1	2	1	2	2	0	8	9	8	35	43.75%	73.33%	B			
19	311820106025	Thanveer Sheriff	2	0	1	2	2	0	0	10	3	10	30	40.63%	56.67%	U			
20	311820106301	Bala Krishnan.S	1	1	1	0	1	0	5	10	0	8	27	62.50%	30.00%	U			
21	311820106302	Fouzja Jabeen S P	2	1	2	1	2	2	0	5	9	5	29	34.38%	63.33%	B+			
22	311820106303	Girish .R	2	0	1	2	2	0	0	0	3	0	10	9.38%	23.33%	B+			
23	311820106305	Kamali.D	2	1	2	1	2	2	0	10	9	10	39	50.00%	80.00%	A			
24	311820106306	Mohamed Nayeem B	2	2	2	2	2	1	4	8	6	8	37	62.50%	63.33%	A			
25	311820106701	Kishore.R	0	0	0	0	0	0	0	10	10	5	25	31.25%	50.00%	A			
														17	18	23			
		TARGET												25	25	25			
		ATTAINMENT												68.00%	72.00%	92.00%			

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Mohamed Sathak A J College of Engineering Department of Electronics and Communication Eng													
CO Attainment Format													
Year/Sem		IV/VII											
Subject Code/Name		OMF751/ Lean Six Sigma											
Pass%/Class Avg %													
Subject Target		50%											
No of Students		25											
INTERNAL ASSESSMENT			Activities- Assignment/Tutorial/MCQ/Quiz/Mini Proj					CO1	CO2	CO3	CO4	CO5	Univ Grade
CO No.			A-I	A-II	A-III	A-IV	A-V						
S.No	REG NO	NAME	10	10	10	10	10						
1	311820106001	Abinaya K	10	8	9	9	10	93.75%	91.38%	90.63%	93.33%	96.43%	A
2	311820106002	Abitha B	10	9	9	9	10	87.50%	89.66%	65.63%	100.00%	100.00%	B+
3	311820106003	Aflal Ahamed M	7	5	7	8	8	37.50%	31.03%	53.13%	23.33%	21.43%	B+
4	311820106004	Ahmad Syed Semar	8	8	7	9	10	46.88%	27.59%	62.50%	60.00%	71.43%	B
5	311820106005	Amudeshwaran S	9	5	9	10	9	50.00%	43.10%	75.00%	46.67%	21.43%	B+
6	311820106006	Basharathulla A	9	7	8	8	9	71.88%	50.00%	65.63%	70.00%	17.86%	A
7	311820106007	Carol Persy N	10	7	9	7	10	81.25%	46.55%	78.13%	46.67%	100.00%	B+
8	311820106009	Janani E	9	9	8	9	8	81.25%	86.21%	75.00%	93.33%	78.57%	B+
9	311820106010	Jaseem Mohamed P	10	9	9	10	9	25.00%	39.66%	3.13%	0.00%	85.71%	A
10	311820106011	Kishore S	10	9	8	10	9	59.38%	68.97%	65.63%	66.67%	21.43%	B+
11	311820106013	Madhivanan R	10	9	9	9	9	53.13%	44.83%	68.75%	43.33%	0.00%	A
12	311820106014	Mohamed Mukshith N	10	10	9	9	9	81.25%	87.93%	81.25%	83.33%	100.00%	A
13	311820106016	Nirmal K	10	8	9	8	5	53.13%	51.72%	37.50%	66.67%	92.86%	B+
14	311820106017	Poosathishkumar M	9	7	8	9	9	56.25%	60.34%	34.38%	50.00%	100.00%	A
15	311820106018	Safin S	10	9	9	9	10	59.38%	67.24%	65.63%	70.00%	71.43%	B+
16	311820106020	Sathesh Kumar V	10	10	8	9	10	100.00%	98.28%	100.00%	100.00%	100.00%	B+
17	311820106021	Shahrukh Fakrudeen K	10	10	8	8	10	81.25%	67.24%	90.63%	86.67%	42.86%	A+
18	311820106022	Shaik Abdulla A	10	9	9	9	10	75.00%	62.07%	43.75%	73.33%	0.00%	B
19	311820106025	Thanveer Sheriff	10	6	9	7	9	71.88%	50.00%	40.63%	56.67%	7.14%	U
20	311820106301	Bala Krishnan.S	10	8	9	8	8	46.88%	41.38%	62.50%	30.00%	100.00%	U
21	311820106302	Fouzia Jabeen S P	0	9	9	7	5	59.38%	53.45%	34.38%	63.33%	92.86%	B+
22	311820106303	Girish .R	0	8	10	9	9	31.25%	34.48%	9.38%	23.33%	100.00%	B+
23	311820106305	Kamali.D	10	10	9	9	10	59.38%	53.45%	50.00%	80.00%	100.00%	A
24	311820106306	Mohamed Nayeem B	0	9	9	9	10	53.13%	70.69%	62.50%	63.33%	100.00%	A
25	311820106701	Kishore.R	6	8	10	6	6	25.00%	22.41%	31.25%	50.00%	3.57%	A
			23	25	25	25	25	19	16	17	18	16	23
		TARGET	25	25	25	25	25	25	25	25	25	25	25
		ATTAINMENT	1	1	1	1	1	76.00%	64.00%	68.00%	72.00%	64.00%	92.00%
			COi Attainment %-IA+AA%(80+20)					79.20%	71.20%	74.40%	77.60%	71.20%	
			COi Attainment Level					3	3	3	3	3	
			CO Attainment - Internal					74.72%					
			CO Attainment - External (Univ Pass %)					92%					
			CO Attainment					88.544					

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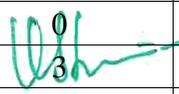
5. Sample CO Attainment for a Programme:

Department of Electronics and Communication Engineering

R-2017

Batch-2020-24

S.No	Course	Internal Assessment		University		Total
		Attainment %	Attainment level	Attainment %	Attainment level	
1	C101	95%	3	92%	3	3
2	C102	87.6%	3	92%	3	3
3	C103	81%	3	73%	3	3
4	C104	87%	3	85%	3	3
5	C105	86%	3	85%	3	3
6	C106	88%	3	88%	3	3
7	C107	100%	3	100.00%	3	3
8	C108	100%	3	97.00%	3	3
9	C109	100%	3	100.00%	3	3
10	C110	98%	3	96.00%	3	3
11	C111	94%	3	92.00%	3	3
12	C112	93%	3	92.00%	3	3
13	C113	93%	3	92.00%	3	3
14	C114	98%	3	96.00%	3	3
15	C115	76%	3	100.00%	3	3
16	C116	85%	3	100.00%	3	3
17	C201	77%	3	94%	3	3
18	C202	74%	3	94%	3	3
19	C203	73%	3	94%	3	3
20	C204	81%	3	94%	3	3
21	C205	74%	3	91%	3	3
22	C206	73%	3	97%	3	3
23	C207	96%	3	91%	3	3
24	C208	99%	3	94%	3	3
25	C209	93%	3	97%	3	3
26	C210	80%	3	30%	0	2.4
27	C211	89%	3	70%	3	3
28	C212	85%	3	61%	2	2.8
29	C213	82%	3	50%	1	2.6
30	C214	78%	3	63%	2	2.8
31	C215	80%	3	60%	2	2.8

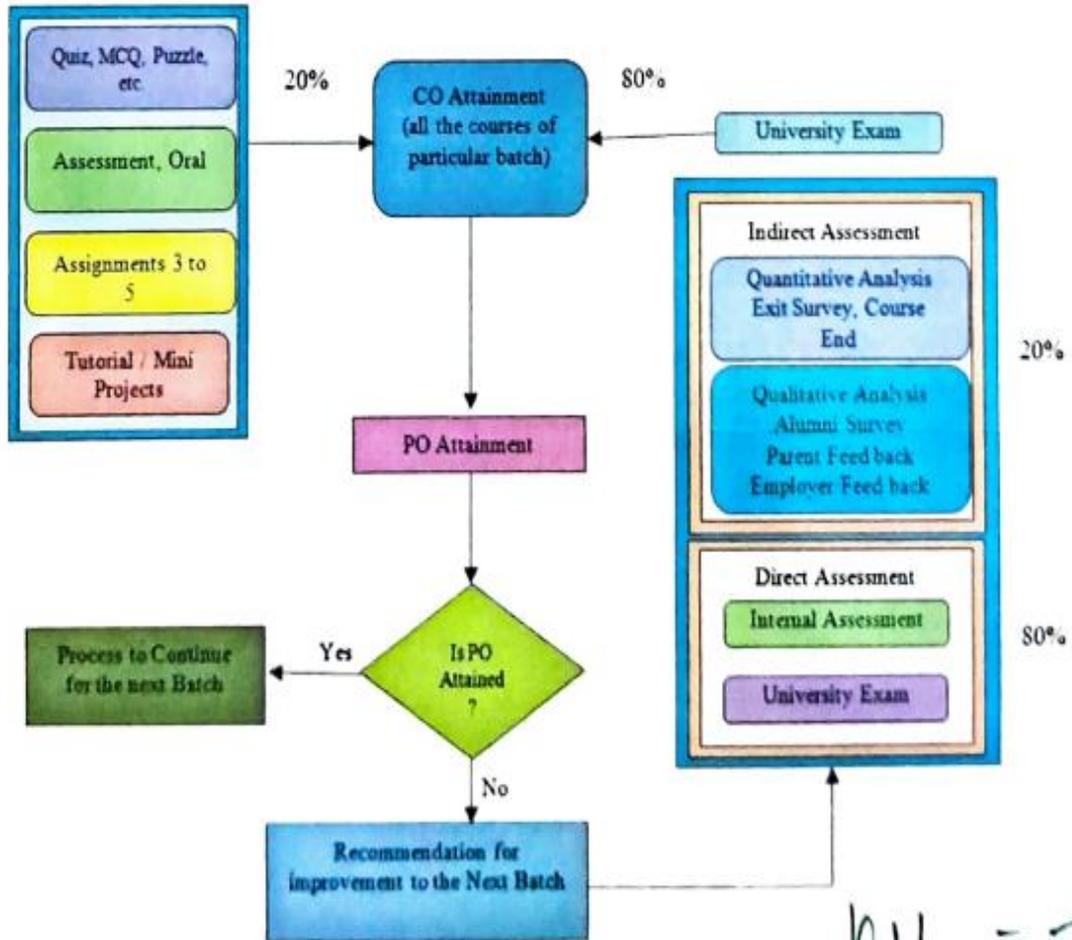

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32	C216	97%	3	87%	3	3
33	C217	96%	3	87%	3	3
34	C301	78%	3	42%	0	2.4
35	C302	80%	3	55%	1	2.6
36	C303	82%	3	58%	1	2.6
37	C304	79%	3	61%	2	2.8
38	C305	80%	3	77%	3	3
39	C306	76%	3	77%	3	3
40	C307	94%	3	81%	3	3
41	C308	91%	3	77%	3	3
42	C309	92%	3	77%	3	3
43	C310	88%	3	85%	3	3
44	C311	88%	3	59%	1	2.6
45	C312	85%	3	78%	3	3
46	C313	83%	3	85%	3	3
47	C314		0		0	0
48	C315	79%	3	59%	1	2.6
49	C316	97%	3	100%	3	3
50	C317	97%	3	100%	3	3
51	C318	99%	3	100%	3	3
52	C319	97%	3	100%	3	3
53	C401	63%	2	72%	3	2.2
54	C402	73%	3	64%	2	2.8
55	C403	74%	3	52%	1	2.6
56	C404	73%	3	72%	3	3
57	C405		0		0	0
58	C406	75%	3	92%	3	3
59	C407	95%	3	100%	3	3
60	C408	95%	3	100%	3	3
61	C409	73%	3	84%	3	3
62	C410	75%	3	84%	3	3
63	C411	92%	3	100%	3	3



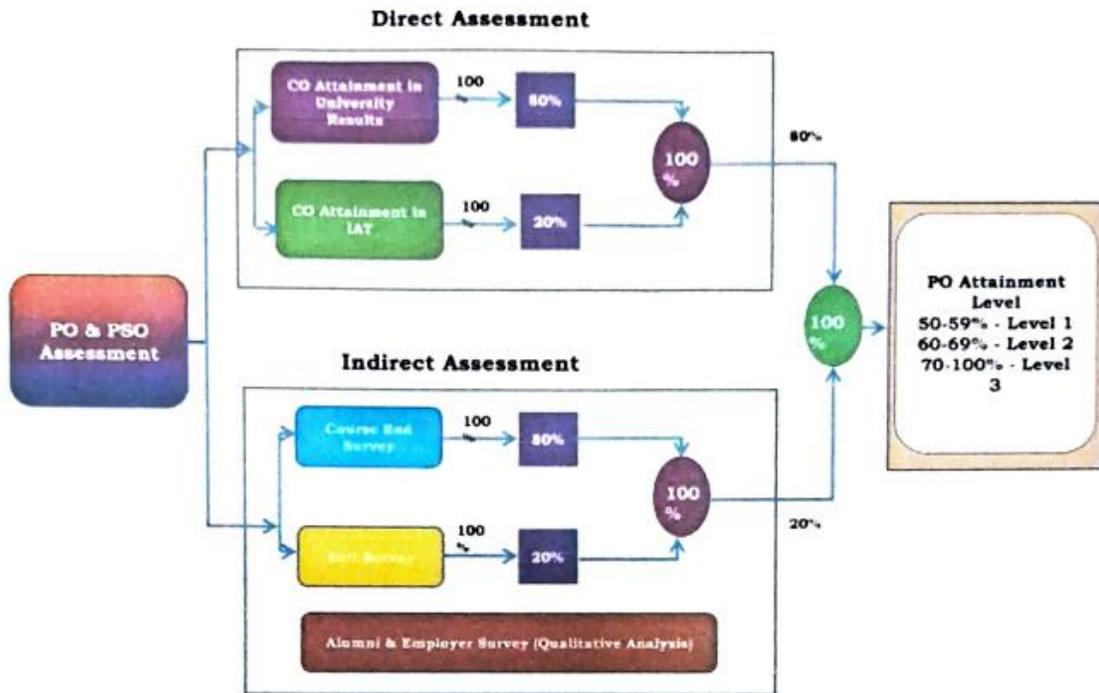
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6. PO & PSO Attainment Process




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7. PO & PSO Assessment Process



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8. Sample PO Attainment for Direct Assessment

P+A1:P200 Attainment for Course - Direct																
Department: Electronics and Communication Engineering																
Co-PO matrices of course as given in 3.1.2(SAR) EC8094 SATELLITE COMMUNICATION																
CO-PO matrices of course as given in 3.1.2(SAR)																
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2		
C410.1	3	3	3													
C410.2	3	3	3													
C410.3	3	3	3										3			
C410.4	3	2	3										3			
C410.5	3	3	3										3			
	3	2.8	3										3			
CO-PO Attainment of the course for Internal assessment																
COs	CO Attainment, %	CO Result - Y/N	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C410.1	78%	Y	78%	78%	78%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C410.2	75%	Y	75%	75%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C410.3	72%	Y	72%	72%	72%	0%	0%	0%	0%	0%	0%	0%	0%	0%	72%	0%
C410.4	75%	Y	75%	50%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	75%	0%
C410.5	72%	Y	72%	72%	72%	0%	0%	0%	0%	0%	0%	0%	0%	0%	72%	0%
Average			75%	70%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	44%	0%
CO-PO Attainment of the course for University																
Course Name	Pass %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
SAT	84%	84%	84%	84%									0%	84%		
CO-PO Attainment of the course - Direct																
Attainment %			82%	81%	82%	0%	0%	0%	0%	0%	0%	0%	0%	0%	76%	0%
Attainment Level			3	3	3	0	0	0	0	0	0	0	0	0	3	0

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9. Sample PO Attainment for In-Direct Assessment

PO Attainment for Course - Indirect																
Department:		Electronics and Communication Engineering				Year/Sem: IV/VIII				Academic Year:2023-2024						
Subject Code/Name:		EC8094 SATELLITE COMMUNICATION				Faculty Names: Dr.G.Sivaranjani AP/ECE										
CO-PO matrices of course as given in 3.1.2(SAR)																
		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	
C410.1		3	3	3												
C410.2		3	3	3												
C410.3		3	3	3										3		
C410.4		3	2	3										3		
C410.5		3	3	3										3		
		3	2.8	3										3		
CO-PO Attainment of the course for CES																
COs	CES Attainment, %	CO Result - Y/N	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C410.1	77%	Y	77%	77%	77%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C410.2	82%	Y	82%	82%	82%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C410.3	79%	Y	79%	79%	79%	0%	0%	0%	0%	0%	0%	0%	0%	0%	79%	0%
C410.4	80%	Y	80%	53%	80%	0%	0%	0%	0%	0%	0%	0%	0%	0%	80%	0%
C410.5	82%	Y	82%	82%	82%	0%	0%	0%	0%	0%	0%	0%	0%	0%	82%	0%
Average			80%	75%	80%	0%	0%	0%	0%	0%	0%	0%	0%	0%	48%	0%
CO-PO Attainment of the course from Exit Survey																
Course Name	Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
SAT	81%	81%	81%	81%										81%		
CO-PO Attainment of the course - InDirect																
Attainment %		80%	76%	80%	0%	0%	69%	0%	0%	0%	0%	0%	0%	55%	0%	
Attainment Level		3	3	3	0	0	2	0	0	0	0	0	0	1	0	

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10. Course End survey Format

Mohamed Sathak A J College of Engineering				
Course End Survey				
Name of the Subject with Subject Code:			EC8691- Microprocessor and Microcontroller	
The Course end survey is a questionnaire on student experiences distributed at the conclusion of each Course. The purpose of this survey is to help us to understand how well this Course enabled the students to learn, and to improve this Course delivery in the future.				
Name:		Univ. Reg. No :		
Department: ECE		Year/Semester :		
II. Comments on materials presented and quality of teaching				
Parameters on Course delivery	Excellent	Good	Average	Poor
Overall the lectures presented were				
The hand out material for Each unit was				
II. Assessment of Course Outcomes:				
The Course outcomes are statements that describe the expected accomplishments by the student at the end of the Course. Please rate each of them in terms of your preparedness for your end semester examinations.				
Course Outcomes	Level of Preparedness / achievement			
	Excellent (>8)	Good (6 – 8)	Fair (5- 6)	Poor (<5)
CO – I				
CO – II				
CO – III				
CO – IV				
CO – V				
Signature of the Student				



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11. Exit Survey Format

Exit survey Evaluation									
PO No	PO Description						Total	weighte d Avg	% of Attainm ent
		Poor	Satisfactory	Good	Very Good	Excellent			
		1	2	3	4	5			
PO1	Ability to apply the knowledge of mathematics, science, engineering fundamentals to solve engineering problems.			8	8	9	25	4.04	80.8
PO2	Ability to Identify , review research literature and analyze Engineering problems.			6	10	9	25	4.12	82.4
PO3	Ability to design solutions for complex engineering problemswith appropriate consideration for the public health and safety, and the			10	7	8	25	3.92	78.4
PO4	Ability to conduct experiments,analyse data, interpret data and synthesise the information to provide valid conclusions.			9	9	7	25	3.92	78.4
PO5	Ability to Create, select and use modern tools in developing solutions.		3	4	8	10	25	4	80
PO6	Ability to apply reasoning to evaluate societal, health, safety, legal and cultural issuesand the consequent responsibilities relevant to the professional engineering practice..			7	9	9	25	4.08	81.6
PO7	Ability to understand the impact of the engineering solutions in societal and environmental contexts and the need for sustainable development.		2	3	7	13	25	4.24	84.8
PO8	Abilityto apply ethical principles in your responsibilities			5	9	11	25	4.24	84.8
PO9	Ability to Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings			10	9	6	25	3.84	76.8
PO10	Ability to articulate ideas, communicate effectively, in writing and verbally.			6	10	9	25	4.12	82.4
PO11	Ability to work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			6	7	12	25	4.24	84.8
PO12	Ability to engage in independent and life-long learning			7	9	9	25	4.08	81.6
							Average		81.4



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