



POORNIMA

COLLEGE OF ENGINEERING

An autonomous institution approved by RTU, AICTE & UGC • NAAC A+ Accredited



ATTAINMENT PROCESS

ISI-6, RIICO Institutional Area, Sitapura, Jaipur-302022 (Rajasthan)
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Dr. Mahesh Bunde
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ISI-6, RIICO Institutional Area
Sitapura, JAIPUR

Poornima College of Engineering envisions creation of knowledge-based society with scientific temper and team-spirit. The institute aims at holistic development of the student to meet global competitive challenges. The institute practices Outcome Based Education for all undergraduate offered programs and this practice starts with defining Course Outcomes (COs) for each course using Bloom's Taxonomy and mapping with Program Outcomes (POs), Program Specific Outcomes (PSOs), finding curriculum gaps and planning beyond curriculum contents & activities.

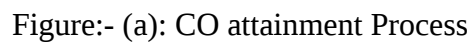
The Institute and Department Vision & Mission, Program Educational Objectives (PEOs), POs, PSOs and COs are displayed on the institution website (www.pce.poornima.org) and disseminated in the departments via flex, Posters in the department laboratories, lecture theatres, tutorial rooms, notice boards, faculty rooms, HOD cabin, department corridors, library, department newsletters, Institute annual magazine, Institute prospectus, faculty course file and laboratory manuals. These are discussed and finalized through various committees representing various stakeholders.

Zero lecture of the each course includes details of COs, POs, PSOs & PEOs along with Department Vision & Mission statements and the Sessions on "Outcome Based Education" are conducted in orientation programs for the newly joined faculties & admitted students.

Attainment of POs and COs are evaluated:

Process of attainment evaluation of COs and POs are continuous, real time and comprehensive at PCE. PCE has laid down unique OBE process in the Institute wherein student wise attainment is evaluated and analyzed continuously. After defining Course Outcomes (COs) of each course, COs are mapped with POs and PSOs on the scale of 1 to 3, where '1' is used for weak mapping, "3" is used for strong mapping and "-" is used for no mapping. COs are defined in generic form considering whole contents of a course as one unit and targeting attainments of cognitive domain POs. Some of the COs are mapped to POs of affective domain and psychomotor domain assessed through activity based learning. Faculty sets criteria for target in each course and evaluates attainments in continuous mode. At each stage of assessment gaps are identified and action to be taken is decided, in case target achieved, criteria for target is set to higher level.

As per the RTU guidelines the evaluation process of students for practical and theory exams are segregated in to two components namely internal assessment and external assessment components. Process of attainment of COs and POs is shown in Figures (a) & Figure (b).



POs and PSOs Attainment

The attainment of Program Outcome (POs) and Program Specific Outcome (PSOs) is calculated through direct and indirect assessment tools.

- Direct attainment of POs/ PSOs is obtained from attainment of COs and Los. COs are defined for theory courses while Learning Outcome (LO) are defined for laboratory, seminars, projects and activity based learning. COs & LOs altogether maps with all PO (i.e. PO1 to PO12), likewise attainments of all COs & LOs leads to attainments of POs and PSOs. Targets for POs/PSOs after mapping all COs and LOs always comes as less than 3. This leads to planning of beyond curriculum activities such as trainings, internships, industry visits, workshops etc. There activities are planned and the attainments are measured through rubrics. As there is student wise attainment process, the students are categorized as best performing, good and weaker students. More focus is given weaker students so that they move from weaker to good and best performance groups. Separate activities and inputs are planned for such groups. The indirect attainment POs/PSOs is calculated through surveys and feedbacks from the stakeholders. The survey form is used to take feedback from stakeholder at the end of the semester/ activity. The survey form carries questions from relative PO/PSO and participants asked to fill their responses at a scale of 1 to 5. On the basis of responses received from stakeholders and counting scale values the attainment of PO/PSO is calculated. Overall indirect attainment is calculated by taking average of all the activities/feedbacks of individual PO/PSO.
- Overall PO or PSO attainment is calculated by considering 80% weightage from direct and 20% weightage from indirect attainment.
- Further attainments such as performance in competitions, hackathons, placements etc. are linked with POs and PSOs.
- Evaluation process of PO/PSO is unique and precise.

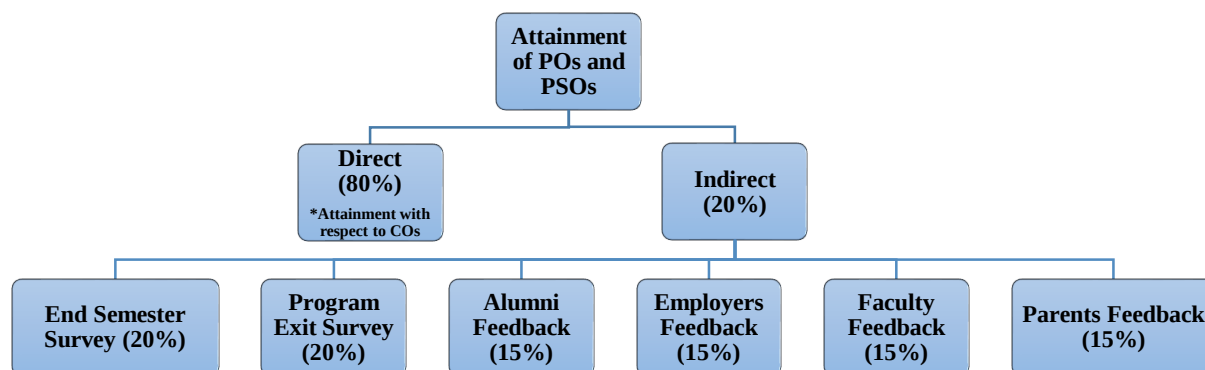


Figure:- (b): POs/PSOs Attainment



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Approved by AICTE
Affiliated to Rajasthan Technical University, Kota
Recognized by UGC under Section 2(f) of the UGC Act, 1956

CO, PO, PSO Attainment Calculation (Sample)

ISI-6, RIICO Institutional Area, Sitapura, Jaipur-302022 (Rajasthan)

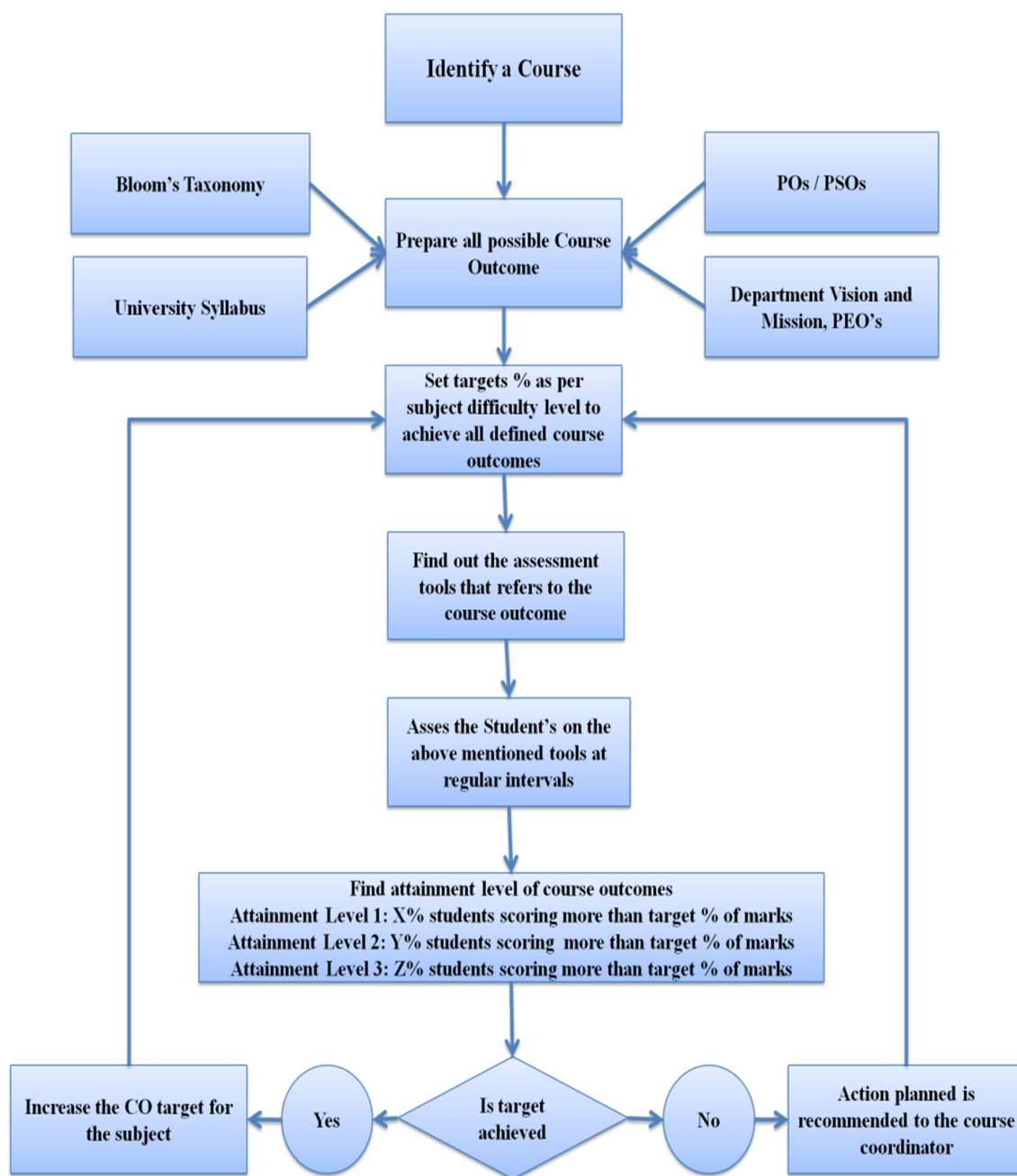
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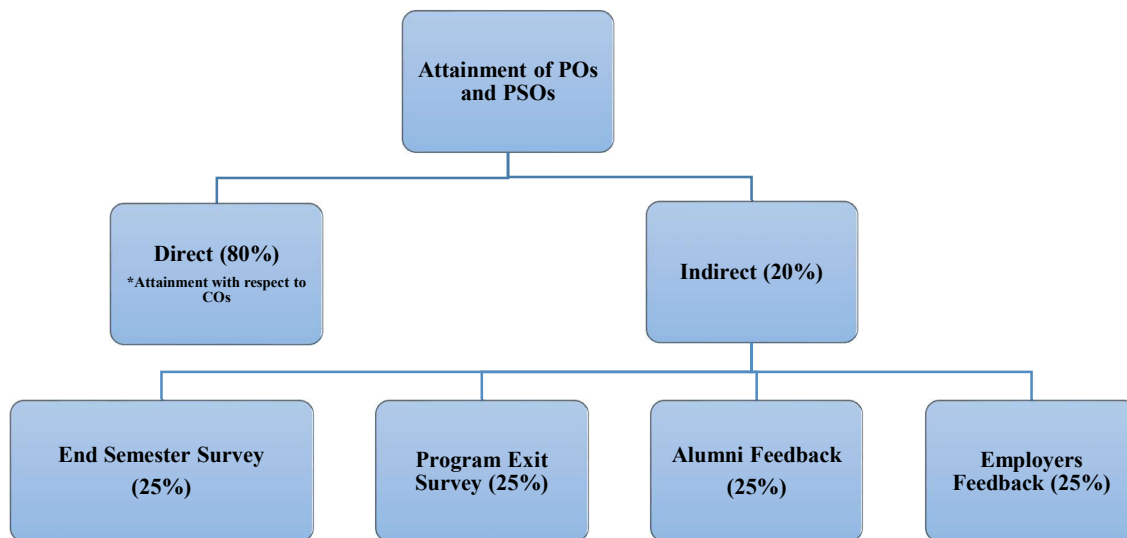
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CO Attainment Process


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PO / PSO Attainment

Assessment Tools Used:

- I Mid Term
- II Mid Term
- Class Test
- OBT
- Quiz
- RTU
- End Semester Survey
- Program Exit Survey
- Alumni Feedback
- Employers Feedback


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	Total			1,034	36	780	31	883	36	851	36	845	30	782	837	962	0	931	39
	Overall Classwise CO Attainment			86.17	3.00	70.86	2.82	67.32	2.77	70.88	3.00	84.50	3.00	71.09	63.75	80.17		71.64	3.00
	COUNT			12	12	11	11	13	13	12	12	10	10	11	12	12	0	13	13
	Student Attainment Level 3			12			3	18		12		10							12
	Student Attainment Level 2 %			100			81.818181	76.9230769		100		100							100
	Student Attainment Level 2			0			2	3		0		0							0
	Student Attainment Level 2%			0			18.1818182	23.0769231		0		0							0
	Student Attainment Level 1			0			0	0		0		0							0
	Student Attainment Level 1%			0			0	0		0		0							0
	GAP ANALYSIS																		
	CO Attainments	Overall CO	Gap																
	Mid I Attainment	2.82	0.18																
	Mid II Attainment	2.77	0.23																
	RTU Component	3.00	0.00																
	Attainments	3.00	0.00																
	DZ Attainments	3.00	0.00																
	Overall CO Attainment	3.00	0.00																
	Target	3																	
	Gap Identified																		
	Action to be taken																		

Instructions

- Please check all fields information and fill up correctly. You will have to bring relevant information from previous sheets. While pasting select pasting values only. (Grey Color)
- You are required to fill relevant data of student name, registration no. with reference to specific

CO Attainment: PGP (3EE3-04), Overall analysis, III Sem, EE, Session 2021-22 (Batch 2020-24)

POORNIMA COLLEGE OF ENGINEERING,JAIPUR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	15

PO / PSO Attainment: B.Tech. (Electrical Engineering), Session 2021-22 (Batch 2020-24) (till I sem)

	Total	1318	900	1153	890	822	944	0	928	921	412	0	0	0	920	33	0	0	920	33	982	361	56	452	869	471	0	928	461	412	0	0	0	694	21	
	Count	18	18	18	18	18	18	0	18	18	18	0	0	0	18	18	0	0	18	18	51.1	1.63	54.5	53.4	56	25.1	48.3	26.2	51.6	25.6	22.9	0	0	0	18	18
	Average	73.2	50	64.4	49.5	45.6	52.4		51.6	51.1	22.9				51.1	1.63			51.1	1.63	54.5	53.4	56	25.1	48.3	26.2	51.6	25.6	22.9				58.6	1.17		
	Attainment Level 3 Count	16	7	15	8	3	10	0	0	0	0	0	0	0	0	0	0	0	0	10	8	1	0	6	0	0	0	0	0	0	0	0	0	0	0	
	Attainment Level 2%	88.89	38.89	83.33	44.44	16.67	55.56		0.00	0.00	0.00				0.00				0.00	55.56	44.44	100.00	0.00	33.33	0.00		0.00	0.00	0.00				0.00			
	Attainment Level 2 Count	18	17	16	15	15	17	0	13	12	0	0	0	0	14				14		17	16	1	0	15	0	0	13	0	0	0	0	0	3		
	Attainment Level 2%	100.00	94.44	88.89	83.33	83.33	94.44		72.22	66.67	0.00				77.78				77.78		94.44	88.89	100.00	0.00	83.33	0.00		72.22	0.00	0.00				16.67		
	Attainment Level 1 Count	0	1	2	3	2	1	0	5	6	18	0	0	0	4				4		1	2	0	18	3	18	0	5	18	18	0	0	0	15		
	Attainment Level 1%	0.00	0.06	0.11	0.17	0.17	0.06		0.28	0.33	1.00				0.22				0.22		0.06	0.11	0.00	1.00	0.17	1.00		0.28	1.00	1.00				0.83		
	Attainment (X)Students getting level 3)	88.89	38.89	83.33	44.44	16.67	55.56		0.00	0.00	0.00				0.00				0.00	55.56	44.44	100.00	0.00	33.33	0.00		0.00	0.00	0.00				0.00			
	Target Achieved	YES	NO	YES	NO	NO	YES	NO	YES	NO	NO	YES	YES	YES	NO				YES		NO	NO	YES	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES	YES	NO	
	PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3																				
Target SEM I	1.08	1.08																																		
Mid Term II Attainments	0.93	0.55																																		
Mid Term I Attainments	1.12	0.62																																		
End Course Survey	1.82	1.50																																		
RTU Attainments	1.27	0.75																																		
Overall	1.13	0.61																																		
SEM Gap	0.22	0.35																																		
Mapping																																				
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3																					
101.1	1																																			
101.2	2																																			
101.3	3																																			
101.4		2																																		
101.5																																				
102.1	1												2																							
102.2	2												2																							
102.3	3												1																							
102.4		2											2																							
102.5																																				
103.1								2																												
103.2						2																														

POORNIMA COLLEGE OF ENGINEERING, JAIPUR																										
Department of Electrical Engineering																										
NBA Process Implementation, Session 2020-21																										
PO Attainment Sheet																										
Batch 2020-2024 Semester II- RTU Component -Mid III-End Course Survey																										
Section		Category-A						Level 3						Level 2						Level 1						
		Internal (MD I/ MD II/ Survey Lab/Seminar/Project- Internal >80% >70%						60 % of students getting > 50-60 % of students getting > 60% marks						50-80% 50-70-%						40-50 % of students getting > <50% <50% 0%-30%						
		RTU 50%-100% Marks 55-100%						50%-30% Marks 50%-40%																		
		Overall						Overall						Overall						Overall						
		Q. No.						PO1						PO2												
		Max. Marks.																								
		OO:No.																								
		2011 2012 2013 2014 2015 2016 2017 2018 2019 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019																								

PO / PSO Attainment: Analysis, B.Tech. (Electrical Engineering), Session 2021-22 (Batch 2020-24) (till III sem)

PO / PSO Attainment: B.Tech. (Electrical Engineering), Session 2021-22 (Batch 2020-24) (till IV sem)

PO / PSO Attainment: Analysis, B.Tech. (Electrical Engineering), Session 2021-22 (Batch 2020-24) (till IV sem)

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