



POORNIMA

COLLEGE OF ENGINEERING

Promoted by Shanti Education Society, Affiliated to Rajasthan Technical University & Approved by AICTE

Department of Information Technology

Session 2021-22

CO, PO and PSO Target and Attainment and Observations and Action Taken Report (IT)

1.1 CO-Target and Attainment

S. No.	Course Code	Course Name	Batch	Year	Average Target	Average Attainment
1	1FY2-01	Engineering Mathematics-I	2021-25	I Year	2.10	2.55
2	1FY2-03	Engineering Chemistry			1.60	2.66
3	1FY1-04	Communication Skills			1.80	2.94
4	1FY3-07	Basic Mechanical Engineering			1.40	2.84
5	1FY3-08	Basic Electrical Engineering			2.00	2.89
6	1FY2-21	Engineering Chemistry Lab			1.87	2.97
7	1FY1-22	Language Lab			2.00	2.94
8	1FY3-26	Basic Electrical Engineering Lab			2.83	2.98
9	1FY3-25	Manufacturing Practices Workshop			1.87	2.97
10	1FY3-28	Computer Aided Engineering Graphics			1.62	2.93
11	2FY2-01	Engineering Mathematics-II			2.00	2.24
12	2FY2-02	Engineering Physics			2.00	1.95
13	2FY1-05	Human Values			2.20	2.67
14	2FY3-06	Programming for Problem Solving			2.00	2.77
15	2FY3-09	Basic Civil Engineering			2.00	2.74
16	2FY2-20	Engineering Physics Lab			1.34	2.92
17	2FY1-23	Human Values Activities and Sports			1.80	2.74
18	2FY3-24	Computer Programming Lab			1.37	2.97
19	2FY3-27	Basic Civil Engineering Lab			1.87	2.89
20	2FY3-29	Computer Aided Machine Drawing			1.87	2.85
21	3IT1-03	Managerial Economics and Financial Accounting	2020-24	II Year	2.43	2.87
22	3IT4-05	Data Structures and Algorithms			2.50	2.45
23	3IT3-04	Digital Electronics			2.62	2.82
24	3IT4-06	Object Oriented Programming			2.79	2.65
25	3IT4-07	Software Engineering			2.45	2.83
26	3IT2-01	Advanced Engineering Mathematics			2.26	2.87
27	3IT4-23	Software Engineering Lab			2.28	2.97
28	3IT4-21	Data Structures and Algorithms Lab			2.07	3.00

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29	3IT4-24	Digital Electronics Lab			2.20	2.94
30	3IT4-22	Object Oriented Programming Lab			2.66	2.89
31	3IT7-30	Industrial Training			2.10	2.90
32	4IT2-01	Discrete Mathematics Structure			2.22	2.95
33	4IT1-02	Technical Communication			2.28	2.94
34	4IT3-04	Principle of Communication			2.40	2.98
35	4IT4-05	Database Management System			2.88	2.97
36	4IT4-06	Theory of Computation			2.80	2.98
37	4IT4-07	Data Communication and Computer Networks			2.80	2.97
38	4IT4-21	Linux Shell Programming Lab			2.67	2.97
39	4IT4-22	Database Management System Lab			2.38	2.94
40	4IT4-23	Network Programming Lab			2.50	3.00
41	4IT4-24	Java Lab			2.18	2.97
42	4IT4-25	Web Technology Lab			2.37	2.91
43	5IT3-01	Microprocessor And Interfaces	2019-23	III Year	3.00	2.13
44	5IT4-02	Compiler Design			2.70	2.33
45	5IT4-03	Operating System			2.67	2.21
46	5IT4-04	Computer Graphics & Multimedia			2.53	2.03
47	5IT4-05	Analysis of Algorithms			2.71	2.27
48	5IT5-12	Software Testing and Project Management			2.40	2.73
49	5IT4-21	Computer Graphics & Multimedia Lab			2.41	2.81
50	5IT4-22	Compiler Design Lab			2.41	2.48
51	5IT4-23	Analysis of Algorithms Lab			2.80	2.77
52	5IT4-24	Advanced Java Lab			2.42	2.70
53	5IT7-30	Industrial Training			3.00	2.91
54	6IT3-01	Digital Image Processing			2.90	2.81
55	6IT4-02	Machine Learning			2.80	2.89
56	6IT4-03	Information Security System			2.80	2.73
57	6IT4-04	Computer Architecture and Organization			2.70	2.89
58	6IT4-05	Artificial Intelligence			2.60	2.45
59	6IT4-06	Distributed System			2.60	2.03
60	6IT5-12	Cloud Computing			2.63	2.70
61	6IT4-21	Digital Image Processing Lab			2.40	2.75
62	6IT4-22	Machine Learning Lab			2.30	2.60
63	6IT4-23	Python Lab			2.38	2.46
64	6IT4-24	Mobile Application Development Lab			2.38	2.58



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65	7IT4-01	Big Data Analytics	2018-22	IV Year	2.70	2.91
66	7EE6-60.1	Electrical Machines and Drives (OPEN ELECTIVE)			2.90	2.75
67	7ME6-60.2	Quality Management (OPEN ELECTIVE)			2.90	2.75
68	7EC6-60.1	Principle of Electronic communication (OPEN ELECTIVE)			2.90	2.75
69	7EC6-60.2	Micro and Smart System Technology (OPEN ELECTIVE)			2.90	2.75
70	7CE6-60.1	Environmental Impact Analysis (OPEN ELECTIVE)			2.90	2.75
71	7CE6-60.2	Disaster Management (OPEN ELECTIVE)			2.90	2.75
72	7IT4-21	Big Data Analytics Lab			2.90	2.55
73	7IT4-22	Cyber Security Lab			2.90	2.35
74	7IT7-30	Industrial Training			2.90	1.85
75	7IT7-40	Seminar			2.90	1.13
76	8IT4-01	Internet of Things			2.80	2.70
77	8EE6-60.1	Energy Audit and Demand side management (OPEN ELECTIVE)			2.85	2.75
78	8EE6-60.2	Soft Computing (OPEN ELECTIVE)			2.86	2.81
79	8ME6-60.1	Operations Research (OPEN ELECTIVE)			2.86	2.81
80	8ME6-60.2	Simulation Modeling and Analysis (OPEN ELECTIVE)			2.86	2.81
81	8EC6-60.1	Industrial and Biomedical applications of RF Energy (OPEN ELECTIVE)			2.86	2.81
82	8CE6-60.1	Composite Materials (OPEN ELECTIVE)			2.86	2.81
83	8CE6-60.2	Fire and Safety Engineering (OPEN ELECTIVE)			2.86	2.81
84	8IT4-21	Internet of Things Lab			2.87	2.78
85	8IT4-22	Software Testing and Validation Lab			2.87	2.30
86	8IT7-50	Project			2.87	2.60

1.2 PO and PSO-Target and Attainment

S. No.	PO and PSO	Batch	Year	Average Target	Average Attainment
1	PO1: Engineering knowledge	2021-25	I Year	1.78	0.86
2	PO2: Problem analysis			1.63	0.55
3	PO3: Design/development of solutions			1.42	0.50
4	PO4: Conduct investigations of complex problems.			1.05	0.29
5	PO5: Modern tool usage			1.33	0.74
6	PO6: The engineer and society			1.19	0.67
7	PO7: Environment and sustainability			1.74	0.92
8	PO8: Ethics			2.40	1.10

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9	PO9: Individual and team work.			1.26	0.78
10	PO10: Communication			2.29	1.04
11	PO11: Project management and finance			1.33	0.35
12	PO12: Life-long learning			1.53	0.68
13	PSO1 -Analyze, design algorithms and software applications			1.82	0.51
14	PSO2-apply knowledge of contemporary areas			1.76	0.48
15	PSO3-modern programming languages and open source platforms	2020-24	II Year	1.38	0.62
16	PO1: Engineering knowledge			1.99	1.16
17	PO2: Problem analysis			1.66	0.88
18	PO3: Design/development of solutions			1.42	0.68
19	PO4: Conduct investigations of complex problems.			1.09	0.55
20	PO5: Modern tool usage			1.29	0.61
21	PO6: The engineer and society			1.12	0.48
22	PO7: Environment and sustainability			1.49	0.77
23	PO8: Ethics			2.29	1.29
24	PO9: Individual and team work.			1.26	0.71
25	PO10: Communication			1.98	0.94
26	PO11: Project management and finance			1.33	0.58
27	PO12: Life-long learning			1.54	0.83
28	PSO1 -Analyze, design algorithms and software applications			1.69	0.71
29	PSO2-apply knowledge of contemporary areas			1.90	0.89
30	PSO3-modern programming languages and open source platforms			1.51	0.70
31	PO1: Engineering knowledge	2019-23	III Year	2.23	1.36
32	PO2: Problem analysis			1.71	1.08
33	PO3: Design/development of solutions			1.47	0.88
34	PO4: Conduct investigations of complex problems.			1.24	0.72
35	PO5: Modern tool usage			1.53	0.93
36	PO6: The engineer and society			1.33	0.59
37	PO7: Environment and sustainability			1.49	0.62
38	PO8: Ethics			2.03	1.00
39	PO9: Individual and team work.			1.46	0.69
40	PO10: Communication			1.9	0.90
41	PO11: Project management and finance			1.39	0.60
42	PO12: Life-long learning			1.71	0.92



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43	PSO1 -Analyze, design algorithms and software applications			1.55	0.83
44	PSO2-apply knowledge of contemporary areas			1.76	0.92
45	PSO3-modern programming languages and open source platforms			1.64	0.89
46	PO1: Engineering knowledge	2018-22	IV Year	2.74	1.77
47	PO2: Problem analysis			2.62	1.58
48	PO3: Design/development of solutions			2.45	1.59
49	PO4: Conduct investigations of complex problems.			2.31	1.36
50	PO5: Modern tool usage			2.32	1.44
51	PO6: The engineer and society			1.96	0.89
52	PO7: Environment and sustainability			1.67	0.78
53	PO8: Ethics			2.02	1.24
54	PO9: Individual and team work.			2.12	1.09
55	PO10: Communication			2.10	1.07
56	PO11: Project management and finance			2.28	1.16
57	PO12: Life-long learning			2.28	1.39
58	PSO1 -Analyze, design algorithms and software applications			2.30	1.32
59	PSO2-apply knowledge of contemporary areas			1.99	1.22
60	PSO3-modern programming languages and open source platforms			2.19	1.37

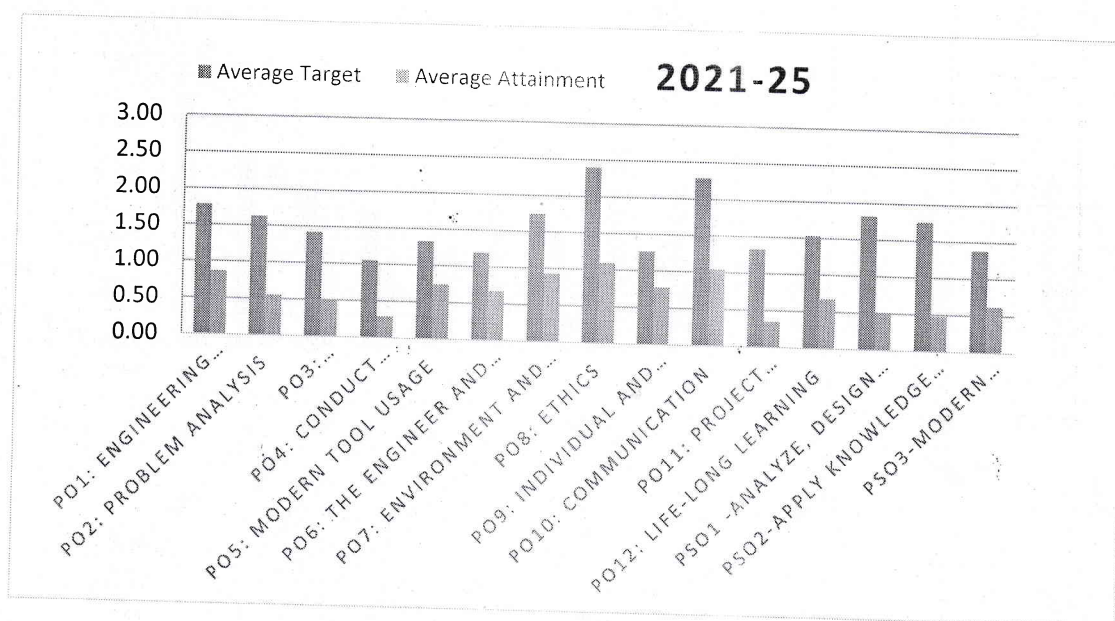


Figure 1.1: Analysis of PO and PSO Attainment (2021-25)



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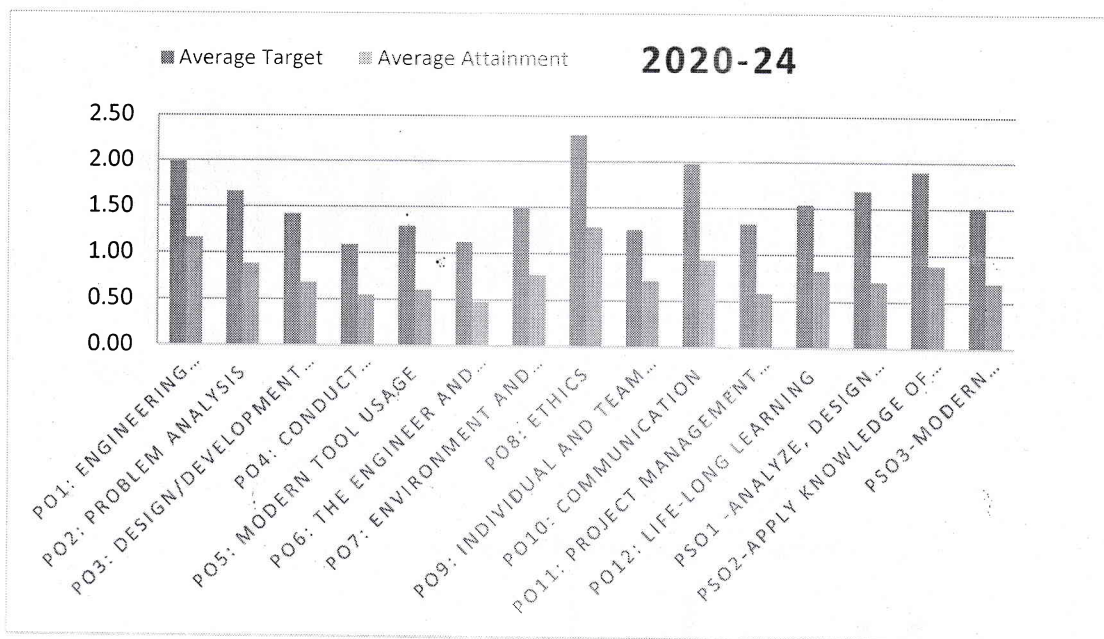


Figure 1.2: Analysis of PO and PSO Attainment (2020-24)

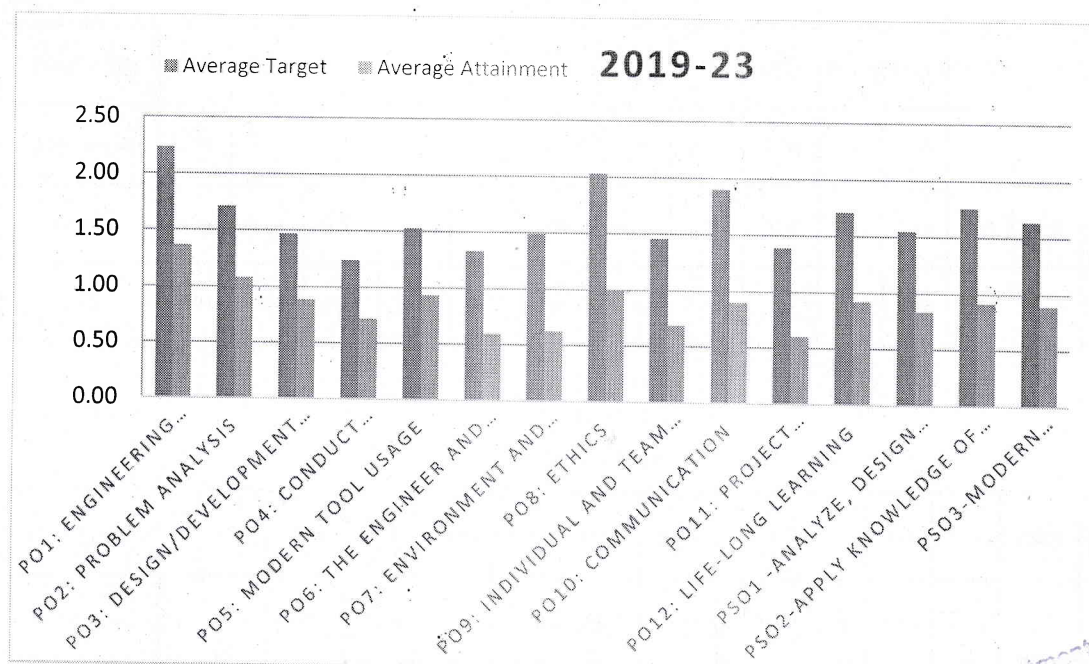


Figure 1.3: Analysis of PO and PSO Attainment (2019-23)



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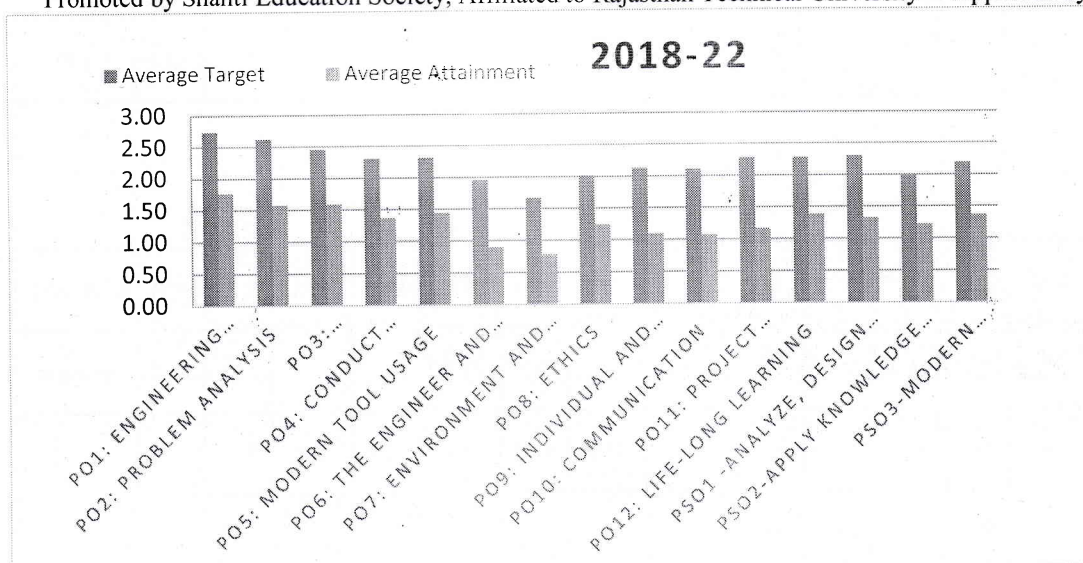


Figure 1.4: Analysis of PO and PSO Attainment (2018-22)

1.3 Analysis of PO and PSO Attainment

Table 1.1

Batch 2021-25

POs / PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO 2	PSO3
Attainment	1.78	1.63	1.42	1.05	1.33	1.19	1.74	2.40	1.26	2.29	1.33	1.53	1.82	1.76	1.38
Target	0.86	0.55	0.50	0.29	0.74	0.67	0.92	1.10	0.78	1.04	0.35	0.68	0.51	0.48	0.62
Gap	0.92	1.08	0.92	0.76	0.59	0.52	0.82	1.30	0.48	1.25	0.98	0.85	1.31	1.28	0.76

Table 1.2

Batch 2020-24

POs / PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO 2	PSO3
Attainment	1.99	1.66	1.42	1.09	1.29	1.12	1.49	2.29	1.26	1.98	1.33	1.54	1.69	1.90	1.51
Target	1.16	0.88	0.68	0.55	0.61	0.48	0.77	1.29	0.71	0.94	0.58	0.83	0.71	0.89	0.70

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Gap	0.83	0.78	0.74	0.54	0.68	0.64	0.72	1.00	0.55	1.04	0.75	0.71	0.98	1.01	0.81
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Table 1.3

Batch 2019-23

POs / PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO 2	PSO3
Attainment	2.23	1.71	1.47	1.24	1.53	1.33	1.49	2.03	1.46	1.90	1.39	1.71	1.55	1.76	1.64
Target	1.36	1.08	0.88	0.72	0.93	0.59	0.62	1.00	0.69	0.90	0.60	0.92	0.83	0.92	0.89
Gap	0.87	0.63	0.59	0.52	0.60	0.74	0.87	1.03	0.77	1.00	0.79	0.79	0.72	0.84	0.75

Table 1.3

Batch 2018-22

POs / PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO 2	PSO3
Attainment	2.74	2.62	2.45	2.31	2.32	1.96	1.67	2.02	2.12	2.10	2.28	2.28	2.30	1.99	2.19
Target	1.77	1.58	1.59	1.36	1.44	0.89	0.78	1.24	1.09	1.07	1.16	1.39	1.32	1.22	1.37
Gap	0.97	1.04	0.86	0.95	0.88	1.07	0.89	0.78	1.03	1.03	1.12	0.89	0.98	0.77	0.82

1.4 Observations

Table 1.5: Achieved Level of PO / PSO (Batch 2021-25)

PO / PSO	Achieved Level
PO2, PO3, PO4, PO7, PO8, PO10, PO11, PO12 PSO1, PSO2 and PSO3	Below Average (<50%)
PO5, PO6, PO7 and PO9	Average (>=50% but <70%)
-	Above Average (>=70%)

Batch (2021-25): After analysis of the table 1.5 of PO / PSO attainment for batch 2021-25, it has been observed that the attainment level of PO-2, 3, 4, 7, 8, 10, 11, 12 and PSO 1, 2, 3 are falling below average. PO-5, 6, 7, 9 are attainment on average level.

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Table 1.6: Achieved Level of PO / PSO (Batch 2020-24)

PO / PSO	Achieved Level
PO3, PO5, PO6, PO10, PO11, PSO1, PSO2, PSO3	Below Average (<50%)
PO1, PO2, PO4, PO7, PO8, PO9, PO12,	Average ($\geq 50\%$ but $< 70\%$)
-	Above Average ($\geq 70\%$)

Batch (2020-24): After analysis of the table 1.6 of PO / PSO attainment for batch 2020-24, it has been observed that the attainment level of PO-3, 5, 6, 10, 11 and PSO-1, 2, 3 are falling below average. PO-1, 2, 4, 7, 8, 9, 12 are attainment on average level.

Table 1.7: Achieved Level of PO / PSO (Batch 2019-23)

PO / PSO	Achieved Level
PO6, PO7, PO8, PO9, PO10, PO11 PSO1, PSO2 and PSO3	Below Average (<50%)
PO1, PO2, PO3, PO4, PO5 and PO12	Average ($\geq 50\%$ but $< 70\%$)
-	Above Average ($\geq 70\%$)

Batch (2019-23): After analysis of the table 1.6 of PO / PSO attainment for batch 2019-23, it has been observed that the attainment level of PO-6, 7, 8, 9, 10, 11 and PSO-1, 2, 3 are falling below average. PO- 1, 2, 3, 4, 5, 12 are attainment on average level.

Table 1.8: Achieved Level of PO / PSO (Batch 2018-22)

PO / PSO	Achieved Level
PO6 and PO7	Below Average (<50%)
PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2, PSO3	Average ($\geq 50\%$ but $< 70\%$)
-	Above Average ($\geq 70\%$)

Batch (2018-22): After analysis of the table 1.6 of PO / PSO attainment for batch 2018-22, it has been observed that the attainment level of PO- 6, 7 are falling below average PO- 1, 2, 3, 4, 5, 8, 9, 10, 11, 12 And PSO- 1, 2, 3 are attainment on average level.

1.5 Actions Taken

- Expert sessions from industry and academia were conducted to enhance PO1, PO2, PO3 and PO4.
- Technical presentation is included as a component for assigning internal marks to improve PO10.
- Project work is assigned to them in SHG group to improve PO11 and PO12.
- Organizing events through associations/clubs as a team to enhance PO9.
- Organizing dept. / college functions as a team to boost PO9.


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