



VEER BAHADUR SINGH PURVANCHAL UNIVERSITY
JAUNPUR, 222003 (U.P.)
vbspu.ac.in

2.6.2 Attainment of Programme Outcomes, Programme Specific Outcomes and Course Outcomes are evaluated by the institution

Department of Electrical Engineering, UNSIET, VBSPU Jaunpur
The following are Graduate Attributes for UG Engineering Programme:
Program Outcomes (POs)

PO#	Graduate Attributes	PO statements
1	Engineering knowledge:	Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2	Problem analysis:	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3	Design/development of solutions	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4	Conduct investigations of complex problems	Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5	Modern tool usage	Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6	The Engineer and society	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7	Environment and sustainability	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8	Ethics	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9	Individual and team work	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10	Communication	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11	Project management and finance:	Demonstrate knowledge and under own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12	Life-long learning	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

परीक्षा नियन्त्रक
विश्वविद्यालय

Re
V.B.S. Purvanchal University
Jaunpur



PEOs

Program Educational Objectives (PEOs):

Sl.No.	PEO#	Program educational objectives
1	PEO1	To produce competent electrical engineering graduates with a strong foundation design, analytics and problem solvingskills for successful professional careers in industry, research and public service.
2	PEO2	To provide a stimulating research environment so as to motivate the students for higher studies and innovation in thespecific and allied domains of electrical engineering.
3	PEO3	To encourage the graduates to practice the profession following ethical codes, social responsibility and accountability.
4	PEO4	To train students to communicate effectively in multidisciplinary environment.
5	PEO5	To imbibe an attitude in the graduates for life-long learning process.

PSOs

Program Specific Outcomes(PSOs):


Sl.No.	PSO#	Program Specific Outcomes
1	PSO1	To empower the students of Electrical Engineering with professional and competitive skills by the integration of regularacademic and Industry interaction as per the needs of industry.
2	PSO2	To incorporate research environment and innovation projects towards assimilation of global technology in order to meet needs of automation and articulate a higher education system of ethics and mind set for a realistic education.

COs & Course Articulation Matrix (CAM): Course- Power System-I (5th Semester)

Course Outcome		Knowledge Level, KL
Upon the completion of the course, the student will be able to:		
CO1	Describe the working principle and basic components of conventional power plants as well as the other aspects of power generation.	K2
CO2	Recognize elements of power system and their functions, as well as compare the different types of supply systems. Illustrate different types of conductors, transmission lines and various performance parameters of transmission line for short, medium and long transmission line.	K4
CO3	Calculate sag and tension in overhead lines with and without wind and ice loading. Classify different type of insulators, determine potential distribution over a string of insulator, string efficiency and its improvement.	K4
CO4	Compute the inductance and capacitance of single phase, three phase lines with symmetrical and unsymmetrical spacing, Composite conductors-transposition, bundled conductors, and understand the effect of earth on capacitance of transmission lines.	K4
CO5	Elucidate different types of cables and assess the Resistance and capacitance parameters of cables, grading of cables and compare overhead lines and cables.	K4

KL- Bloom's Knowledge Level (K1, K2, K3, K4, K5, K6)

K1 - Remember K2 - Understand K3 - Apply K4 - Analyze K5 - Evaluate K6 - Create


 Registrar
 V.B.S. Purvanchal University
 Jaunpur
 परीक्षा नियन्त्रक
 वी० बा० सिंह पूर्वांचल विश्वविद्यालय



VEER BAHADUR SINGH PURVANCHAL UNIVERSITY
JAUNPUR, 222003 (U.P.)
vbspu.ac.in

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
KEE501.1	1	2	1	2	3	2	2				1	3	3	1
KEE501.2	1	3	1	3	1						2	3	3	1
KEE501.3	2	3	2	2	2						2	3	3	2
KEE501.4	2	3	1	3	2						2	3	3	1
KEE501.5	1	3	1	2	1						1	3	3	1
Avg	1.4	2.8	1.2	2.4	1.8	0.4	0.4	0.0	0.0	0.0	1.6	3	3	1.2

Mapping (average scores) of course (Power System-I) with POs

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
KEE501	1.4	2.8	1.2	2.4	1.8	0.4	0.4	0.0	0.0	0.0	1.6	3	3	1.2

Regd
V.B.S. Purvanchal University
Jaunpur

परीक्षा नियन्त्रक
वी० बा० सिंह पूर्वांचल विश्वविद्यालय
जाँनपुर



VEER BAHADUR SINGH PURVANCHAL UNIVERSITY
JAUNPUR, 222003 (U.P.)
vbspu.ac.in

Department of Electrical Engineering, UNSIET, VBSPU Jaunpur
The following are Graduate Attributes for PG Engineering Programme:
Program Outcomes (POs)

Sl. No.	PO#	PO statements
1	PO1	Ability to apply the enhanced knowledge in advanced technologies for modeling, analyzing and solving contemporary issues in power sector with a global perspective.
2	PO2	Ability to critically analyze and carry out detailed investigation on multifaceted complex Problems in area of Power Systems and envisage advanced research in thrust areas.
3	PO3	Ability to identify, analyze and solve real-life engineering problems in the area of Power Systems and provide strategic solutions satisfying the safety, cultural, societal and environmental aspects/ needs.
4	PO4	Ability for continued pursuance of research and to design, develop and propose theoretical and practical methodologies towards research and development support for the Power System infrastructure.
5	PO5	Ability to develop and utilize modern tools for modeling, analyzing and solving various Engineering problems related to Power Systems.
6	PO6	Willingness and ability to work in a team of engineers/ researchers with mutual understandings to take unsophisticated challenges, in the field of Power Systems, lead Model Curriculum of Engineering & Technology PG Courses and motivate the group to inculcate multidisciplinary and collaborative approach.
7	PO7	Willingness and ability to take up administrative challenges including the management of various projects of interdisciplinary nature and carry out the same in an efficient manner giving due consideration to societal, environmental, economical and financial factors.
8	PO8	Ability to express ideas clearly and communicate orally as well as in writing with others in an effective manner, adhering to various national and international standards and practices for the documentation and presentation of the contents.

PEOs

Program Educational Objectives (PEOs):

Sl.No.	PEO#	Program educational objectives
1	PEO1	To produce Power System post graduates, who are employable in public and private industries/ Institutes/Organizations, or pursue higher education.
2	PEO2	To prepare post graduates who have the ability to identify and address current and future problems in the domain of Power System.
3	PEO3	To inculcate research attitude and lifelong learning among the Post graduates.

परीक्षा नियंत्रक
वी० बी० सिंह पूर्वांचल विश्वविद्यालय
जाँपुर

Registrar
V.B.S. Purvanchal University
Jaunpur



PSOs

Program Specific Outcomes (PSOs):

Sl.No.	PSO#	Program Specific Outcomes
1	PSO1	Apply technical concepts to investigate complex power system scenarios and arrive at possible solutions, by applying the acquired theoretical and practical knowledge..
2	PSO2	Apply the technical skills in solving the real world problems relevant to social, ethical, economic and environmental issues in the emerging fields of Power System.

COs & Course Articulation Matrix (CAM):

Course- Smart Grids (1st Semester)

Course Objectives:- Students will be able to:

CO1. Understand concept of smart grid and its advantages over conventional grid

CO2. Know smart metering techniques

CO3. Learn wide area measurement techniques

CO4. Understanding the problems associated with integration of distributed generation & its solution through smartgrid.

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
MPSE104.1	3	2	3	1					3	2
MPSE104.2	3	3	2	2					2	1
MPSE104.3	3	2	3	1					2	3
MPSE104.4	3	2	3	3	1				2	3
Avg	3	2.25	2.75	1.75	0.25	0.0	0.0	0.0	2.25	2.25

Mapping (average scores) of course (Smart Grids) with POs

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
MPSE104	3	2.25	2.75	1.75	0.25	0.0	0.0	0.0	2.25	2.25

परीक्षा नियन्त्रक
वी० बा० सिंह पूर्वांचल विश्वविद्यालय
जाँनपुर

Registrar
V.B.S. Purvanchal University
Jaunpur

CO, PO and PSO Correlation for M.Tech 1st Semester (Power System) 2019-20

High Power Converters (EMP12)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q2	Q4						
Max. Marks		1	1	3	2		7			
Atul Pandey	1951601	1	1	2	2	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1	1	2	2	6	7	0.8571429	3	1
Omkar	1951603	1	1	3	2	7	7	1	3	1
Piyush Kumar yadav	1951604	1	1	2	2	6	7	0.8571429	3	1
Prashant Gautam	1951605		1	2	2	5	6	0.8333333	3	1
Raina Kumari	1951606	1	1	2	2	6	7	0.8571429	3	1
Shashank Yadav	1951607	1	1	2	2	6	7	0.8571429	3	1
Vinod Kumar Yadav	1951608	1	1	2	2	6	7	0.8571429	3	1
								AVG	AVG	ATTAINED
		7	8	17	16	48		0.872	3.00	1

CO2										
		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q3	Q5	Q2						
Max. Marks		2	3	1	2		8			
Atul Pandey	1951601	1	2	1	2	6	8	0.75	3	1
Dharmendra Yadav	1951602	2	2	1	2	7	8	0.875	3	1
Omkar	1951603	2	2		2	6	7	0.85714286	3	1
Piyush Kumar yada	1951604	2	3	1	2	8	8	1	3	1
Prashant Gautam	1951605	2	3	1	2	8	8	1	3	1
Raina Kumari	1951606	2	2	1	2	7	8	0.875	3	1
Shashank Yadav	1951607	2	3	1	2	8	8	1	3	1
Vinod Kumar Yadav	1951608	2	2	1	2	7	8	0.875	3	1
								AVG	AVG	ATTAINED
								0.904	3.00	1

CO3

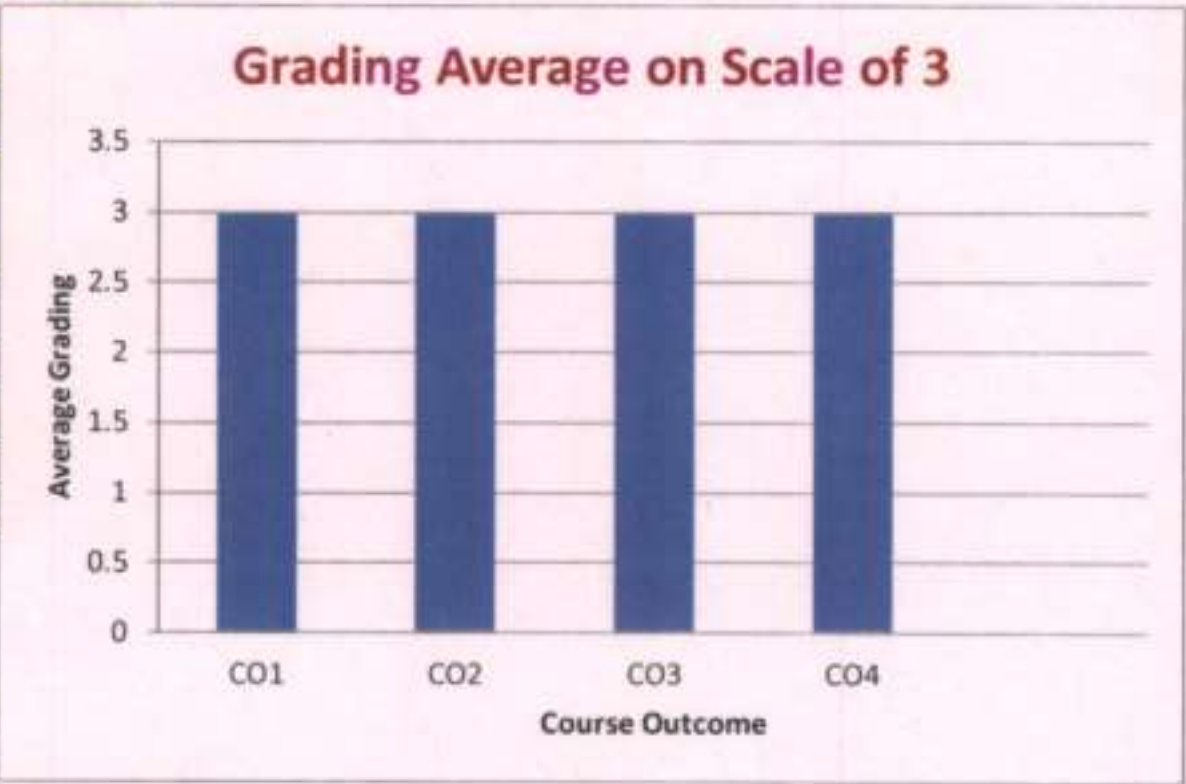
		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q1	Q4						
Questions									
Max. Marks		1	3	3		7			
Atul Pandey	1951601	1	2	3	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1	2	3	6	7	0.8571429	3	1
Omkar	1951603	1	3	3	7	7	1	3	1
Piyush Kumar yadav	1951604	1	2	3	6	7	0.8571429	3	1
Prashant Gautam	1951605	1	1	3	5	7	0.7142857	3	1
Raina Kumari	1951606	1	3	3	7	7	1	3	1
Shashank Yadav	1951607		2	3	5	6	0.8333333	3	1
Vinod Kumar Yadav	1951608	1	3	3	7	7	1	3	1
							AVG	AVG	ATTAINED
							0.890	3.00	1

CO4

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q3	Q5						
Questions									
Max. Marks		2	3	3		8			
Atul Pandey	1951601	2	2	3	7	8	0.875	3	1
Dharmendra Yadav	1951602	1	2	3	6	8	0.75	3	1
Omkar	1951603	2	2	3	7	8	0.875	3	1
Piyush Kumar yadav	1951604	2	3	3	8	8	1	3	1
Prashant Gautam	1951605	2	2	3	7	8	0.875	3	1
Raina Kumari	1951606	2	1	3	6	8	0.75	3	1
Shashank Yadav	1951607	2	2	3	7	8	0.875	3	1
Vinod Kumar Yadav	1951608	2	2	3	7	8	0.875	3	1
							AVG	AVG	ATTAINED
							0.859	3.00	1

Total No. of Sudents for Batch 8

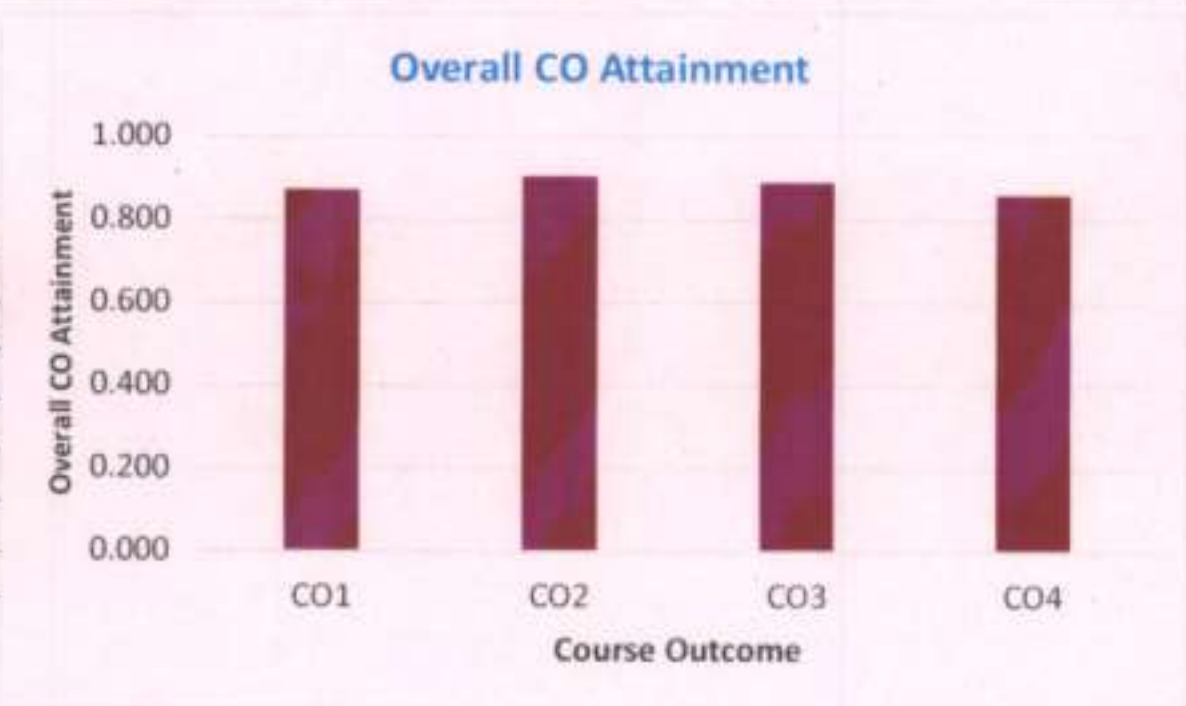
Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.87202
CO2	3	1			0.90402
CO3	3	1			0.88988
CO4	3	1			0.85938



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.872
CO2	0.904
CO3	0.890
CO4	0.859



[Handwritten signature]

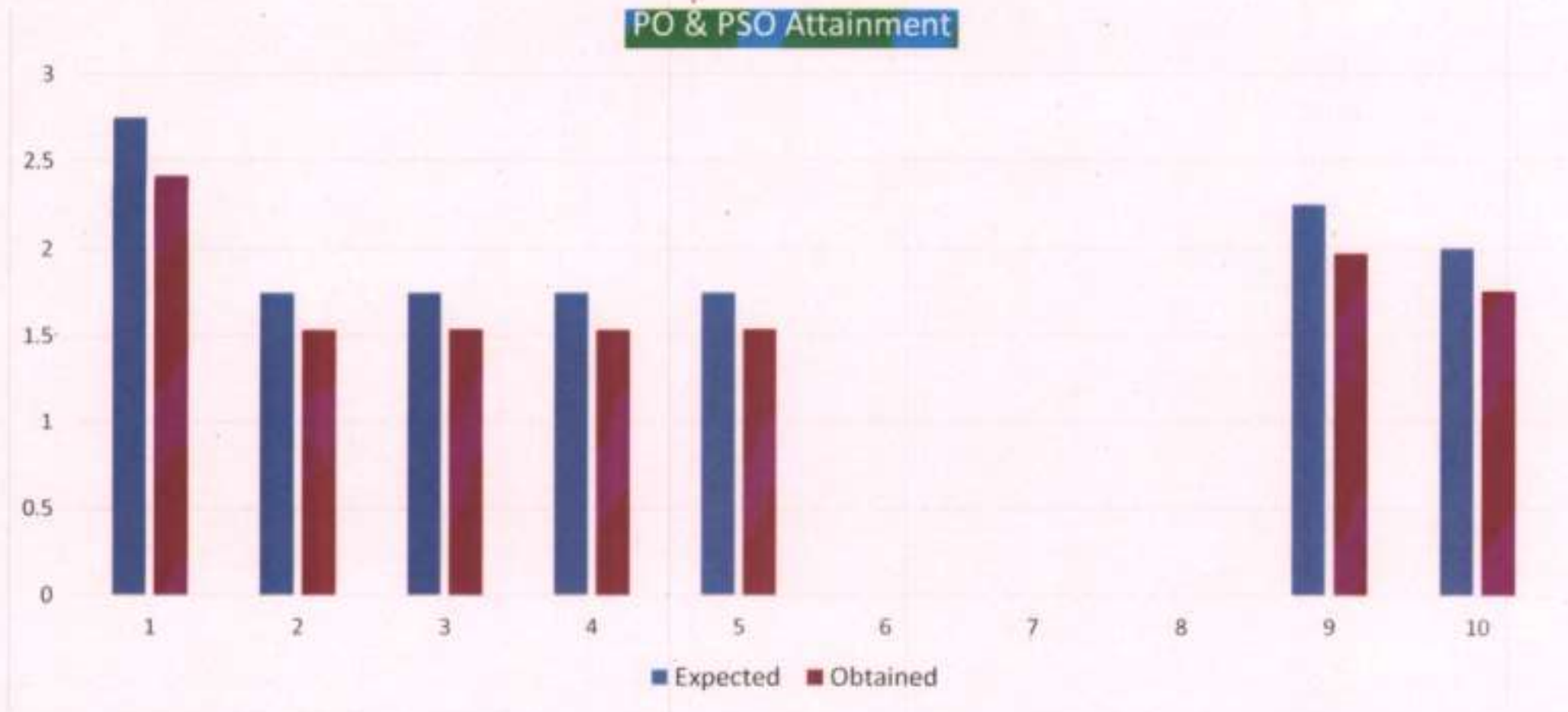
CO, PO and PSO correlation												
Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Learn the characteristics of PSDs such as SCRs, GTOs, IGBTs and use them in practical systems	3	1	1	1	1				2	1
	CO2	Knowledge of working of multi-level VSIs, DC-DC switched mode converters, cyclo-converters and PWM techniques and the ability to use them properly	2	1	2	1	2				1	1
	CO3	Acquire knowledge of power conditioners and their applications	3	2	1	2	1				3	3
	CO4	Ability to design power circuit and protection circuit of PSDs and converters	3	3	3	3	3				3	3
		Expected	2.75	1.75	1.75	1.75	1.75	0	0	0	2.25	2

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Learn the characteristics of PSDs such as SCRs, GTOs, IGBTs and use them in practical systems	2.61607	0.87202381	0.87202381	0.87202381	0.87202381				1.74404762	0.87202381
	CO2	Knowledge of working of multi-level VSIs, DC-DC switched mode converters, cyclo-converters and PWM techniques and the ability to use them properly	1.80804	0.90401786	1.80803571	0.90401786	1.80803571				0.90401786	0.90401786
	CO3	Acquire knowledge of power conditioners and their applications	2.66964	1.7797619	0.88988095	1.7797619	0.88988095				2.66964286	2.66964286
	CO4	Ability to design power circuit and protection circuit of PSDs and converters	2.57813	2.578125	2.578125	2.578125	2.578125				2.578125	2.578125
		Obtained	2.41797	1.53348214	1.53701637	1.53348214	1.53701637	0	0	0	1.97395833	1.75595238

%PO	0.87926	0.87627551	0.87829507	0.87627551	0.87829507	0	0	0	0.87731481	0.87797619
-----	---------	------------	------------	------------	------------	---	---	---	------------	------------



PO & PSO Attainment



CO, PO and PSO Correlation for M.Tech 1st Semester (Power System)

Power System Analysis (EMP1)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Atul Pandey	1951601	1	2	2	2	7	8	0.875	3	1
Dharmendra Yadav	1951602	1	1	2	2	6	8	0.75	3	1
Omkar	1951603	1	2	2	2	7	8	0.875	3	1
Piyush Kumar yadav	1951604	1	1	2	2	6	8	0.75	3	1
Prashant Gautam	1951605	1	2	2	2	7	8	0.875	3	1
Raina Kumari	1951606	1	1	2	2	6	8	0.75	3	1
Shashank Yadav	1951607	1	1	2	2	6	8	0.75	3	1
Vinod Kumar Yadav	1951608	1	1	3	2	7	8	0.875	3	1
								AVG	AVG	ATTAINED
		8	11	17	16	52		0.813	3.00	1

CO2										
		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
Questions		Q2	Q4	Q1						
Max. Marks		1	3	1	2		7			
Atul Pandey	1951601	1		1	2	4	4	1	3	1
Dharmendra Yadav	1951602	1	2	1	2	6	7	0.85714286	3	1
Omkar	1951603	1	2	1	2	6	7	0.85714286	3	1
Piyush Kumar yada	1951604	1	2	1	2	6	7	0.85714286	3	1
Prashant Gautam	1951605	1	2	1	2	6	7	0.85714286	3	1
Raina Kumari	1951606	1	2	1	2	6	7	0.85714286	3	1
Shashank Yadav	1951607	1		1	2	4	4	1	3	1
Vinod Kumar Yadav	1951608	1	2	1	2	6	7	0.85714286	3	1
								AVG	AVG	ATTAINED
								0.893	3.00	1

CO3

		T2	Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q4						
Max. Marks		3	2		5			
Atul Pandey	1951601	2	2	4	5	0.8	3	1
Dharmendra Yadav	1951602	3	2	5	5	1	3	1
Omkar	1951603	3	2	5	5	1	3	1
Piyush Kumar yadav	1951604	1	2	3	5	0.6	3	1
Prashant Gautam	1951605	2	2	4	5	0.8	3	1
Raina Kumari	1951606	3	2	5	5	1	3	1
Shashank Yadav	1951607	2	2	4	5	0.8	3	1
Vinod Kumar Yadav	1951608	2	2	4	5	0.8	3	1
						AVG	AVG	ATTAINED
						0.850	3.00	1

CO4

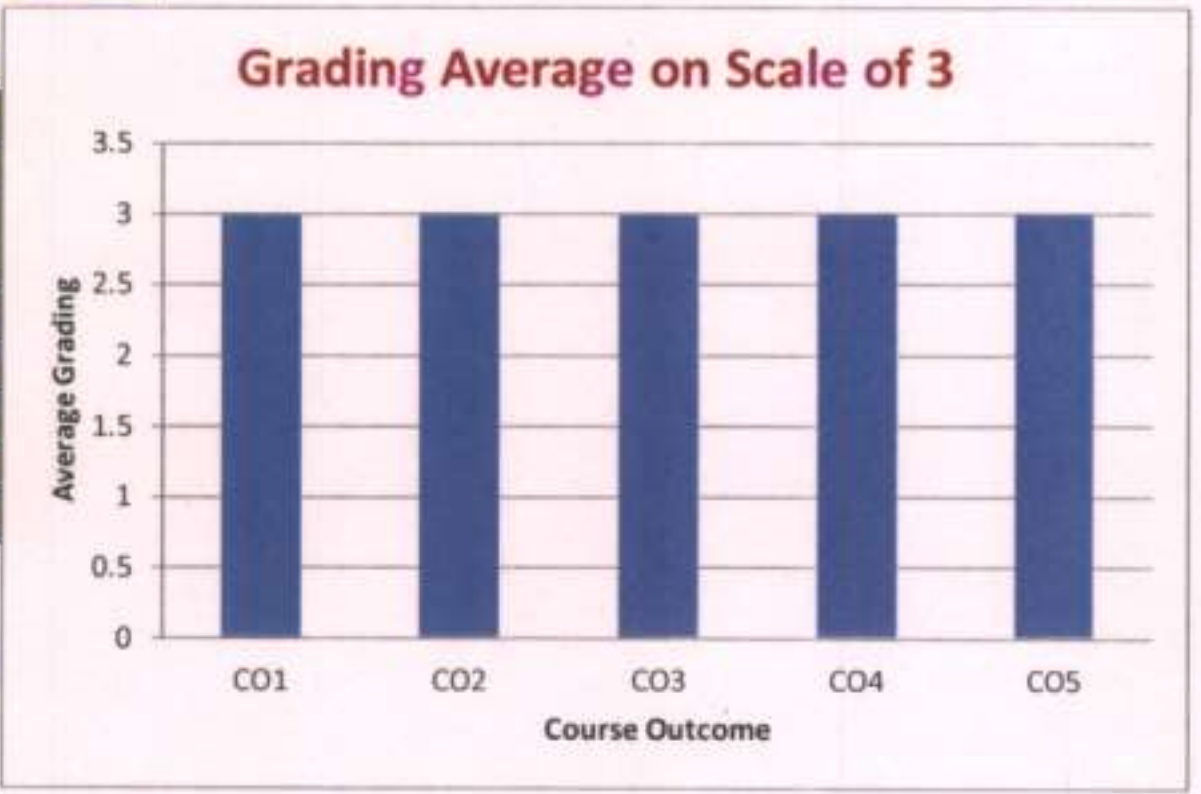
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q2	Q3						
Max. Marks		1	2	2		5			
Atul Pandey	1951601	1	2	2	5	5	1	3	1
Dharmendra Yadav	1951602	1	2	2	5	5	1	3	1
Omkar	1951603	1	1	2	4	5	0.8	3	1
Piyush Kumar yadav	1951604	1	2	2	5	5	1	3	1
Prashant Gautam	1951605		2	2	4	4	1	3	1
Raina Kumari	1951606	1	1	2	4	5	0.8	3	1
Shashank Yadav	1951607	1	2	2	5	5	1	3	1
Vinod Kumar Yadav	1951608	1	2	2	5	5	1	3	1
							AVG	AVG	ATTAINED
							0.950	3.00	1

CO5

			Assignment A1	Total Marks of attempted questions	Total Marks	Percntage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q5						
Max. Marks		3	2		5			
Atul Pandey	1951601	2	2	4	5	0.8	3	1
Dharmendra Yadav	1951602	1	2	3	5	0.6	3	1
Omkar	1951603	3	2	5	5	1	3	1
Piyush Kumar yadav	1951604	3	2	5	5	1	3	1
Prashant Gautam	1951605	2	2	4	5	0.8	3	1
Raina Kumari	1951606	2	2	4	5	0.8	3	1
Shashank Yadav	1951607	2	2	4	5	0.8	3	1
Vinod Kumar Yadav	1951608	3	2	5	5	1	3	1
						AVG	AVG	ATTAINED
						0.850	3.00	1

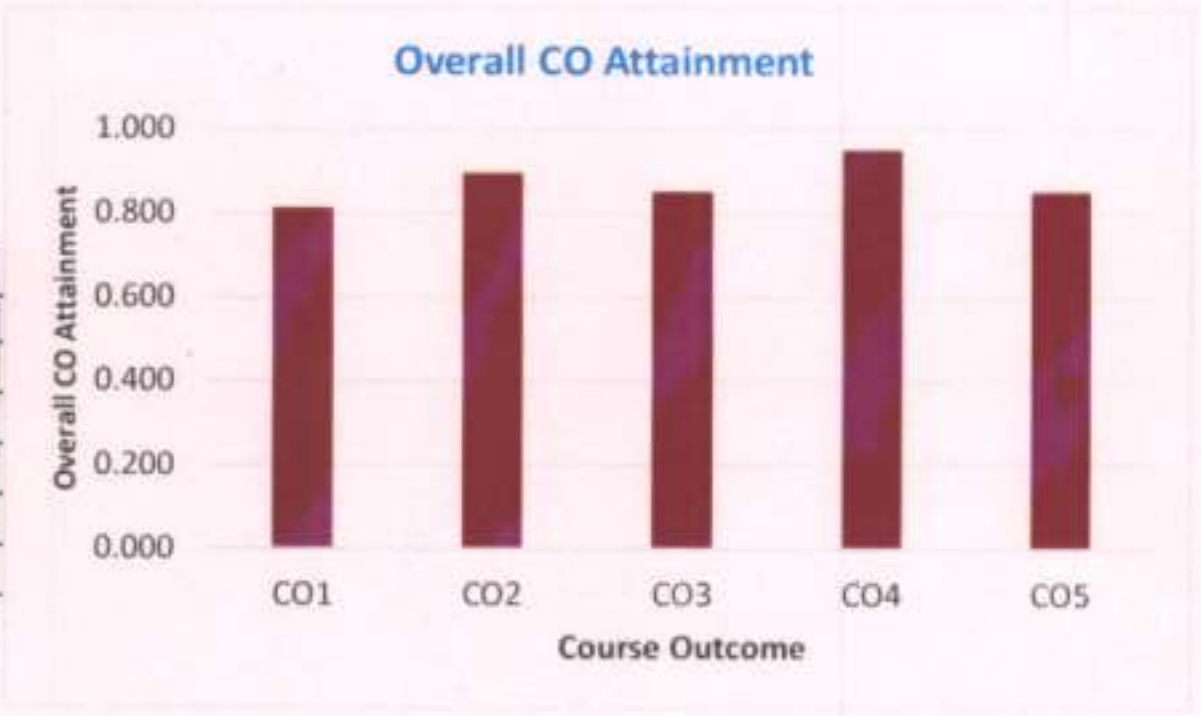
Total No. of Students for Batch 8

Course Outcomes	Grading AVG on Scale of 3	Attainment			Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.81250
CO2	3	1			0.89286
CO3	3	1			0.85000
CO4	3	1			0.95000
CO5	3	1			0.85000



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y
CO5	100.00%	Y

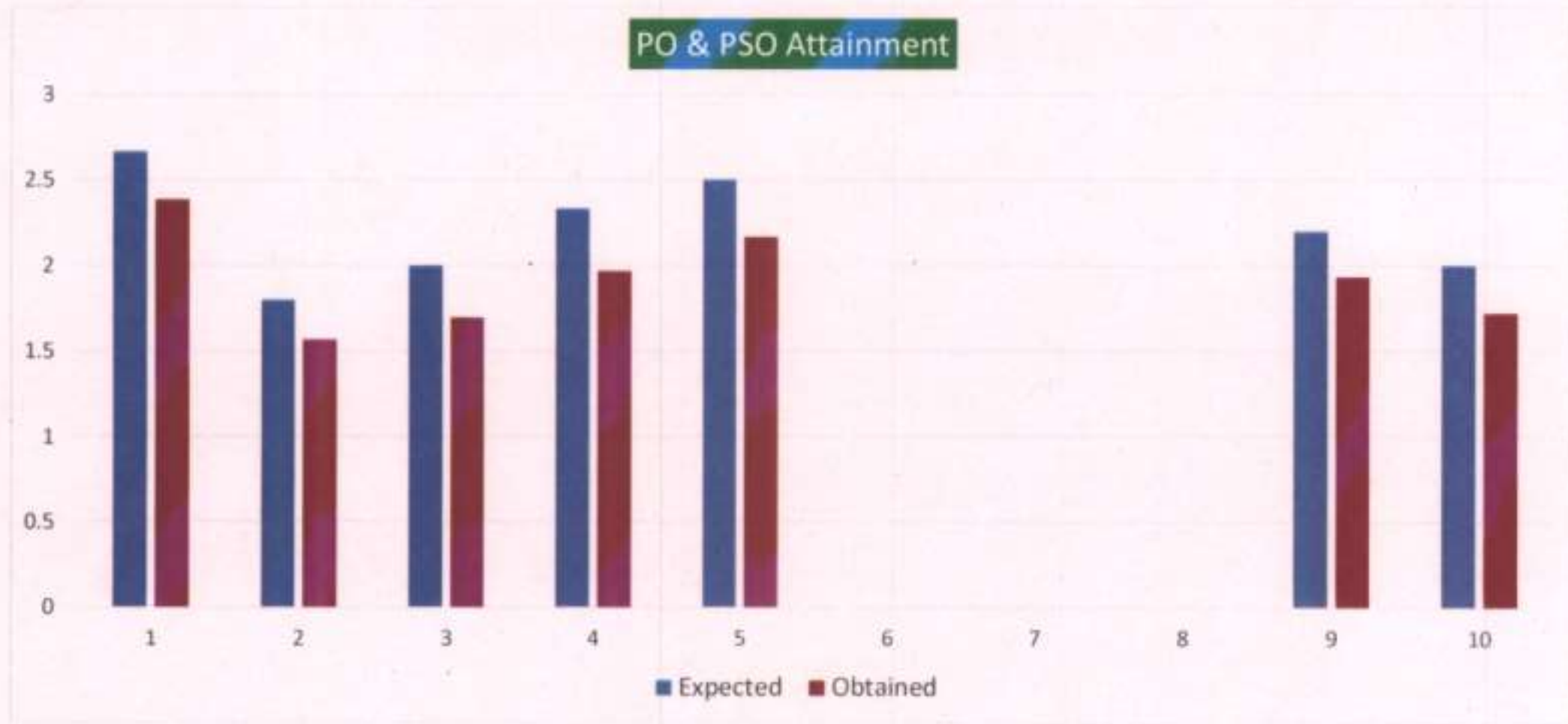


CO	Overall(Direct method) Overall CO Attainment
CO1	0.813
CO2	0.893
CO3	0.850
CO4	0.950
CO5	0.850

CO, PO and PSO correlation

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Able to calculate voltage phasors at all buses , given the data using various methods of load flow	2	2		1	3				3	2
	CO2	Able to calculate fault currents in each phase	3	2			2				3	2
	CO3	Rank various contingencies according to their severity		1	2	3	3				1	2
	CO4	Estimate the bus voltage phasors given various quantities viz. power flow, voltages, taps , CB status etc	3	2			2				3	1
	CO5	Estimate closeness to voltage collapse and calculate PV curves using continuation power flow		2	2	3					1	3
Expected			2.666667	1.8	2	2.33333333	2.5	0	0	0	2.2	2

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Able to calculate voltage phasors at all buses , given the data using various methods of load flow	1.625	1.625		0.8125	2.4375				2.4375	1.625
	CO2	Able to calculate fault currents in each phase	2.678571	1.78571429			1.785714286				2.67857143	1.78571429
	CO3	Rank various contingencies according to their severity		0.85	1.7	2.55	2.55				0.85	1.7
	CO4	Estimate the bus voltage phasors given various quantities viz. power flow, voltages, taps , CB status etc	2.85	1.9			1.9				2.85	0.95
	CO5	Estimate closeness to voltage collapse and calculate PV curves using continuation power flow		1.7	1.7	2.55					0.85	2.55
Obtained			2.384524	1.57214286	1.7	1.97083333	2.168303571	0	0	0	1.93321429	1.72214286
%PO			0.894196	0.8734127	0.85	0.84464286	0.867321429	0	0	0	0.87873377	0.86107143



[Handwritten signature]

CO, PO and PSO Correlation for M.Tech 1st Semester (Power System)

Power System Dynamics-I (EMP2)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Atul Pandey	1951601	1	2	3	2	8	8	1	3	1
Dharmendra Yadav	1951602	1	1	2	2	6	8	0.75	3	1
Omkar	1951603		2	2	2	6	7	0.8571429	3	1
Piyush Kumar yadav	1951604	1	1	3	2	7	8	0.875	3	1
Prashant Gautam	1951605	1	1	3	2	7	8	0.875	3	1
Raina Kumari	1951606	1	2	2	2	7	8	0.875	3	1
Shashank Yadav	1951607	1	2	2	2	7	8	0.875	3	1
Vinod Kumar Yadav	1951608	1	2	2	2	7	8	0.875	3	1
								AVG	AVG	ATTAINED
		7	13	19	16	55		0.873	3.00	1

CO2										
Questions		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q2	Q4	Q1						
Max. Marks		1	3	1	2		7			
Atul Pandey	1951601		2	1	2	5	6	0.833333333	3	1
Dharmendra Yadav	1951602	1	2	1	2	6	7	0.85714286	3	1
Omkar	1951603	1	3	1	2	7	7	1	3	1
Piyush Kumar yada	1951604	1	2	1	2	6	7	0.85714286	3	1
Prashant Gautam	1951605	1	1	1	2	5	7	0.71428571	3	1
Raina Kumari	1951606	1	2		2	5	6	0.833333333	3	1
Shashank Yadav	1951607		2		2	4	5	0.8	3	1
Vinod Kumar Yadav	1951608	1	3	1	2	7	7	1	3	1
								AVG	AVG	ATTAINED
								0.862	3.00	1

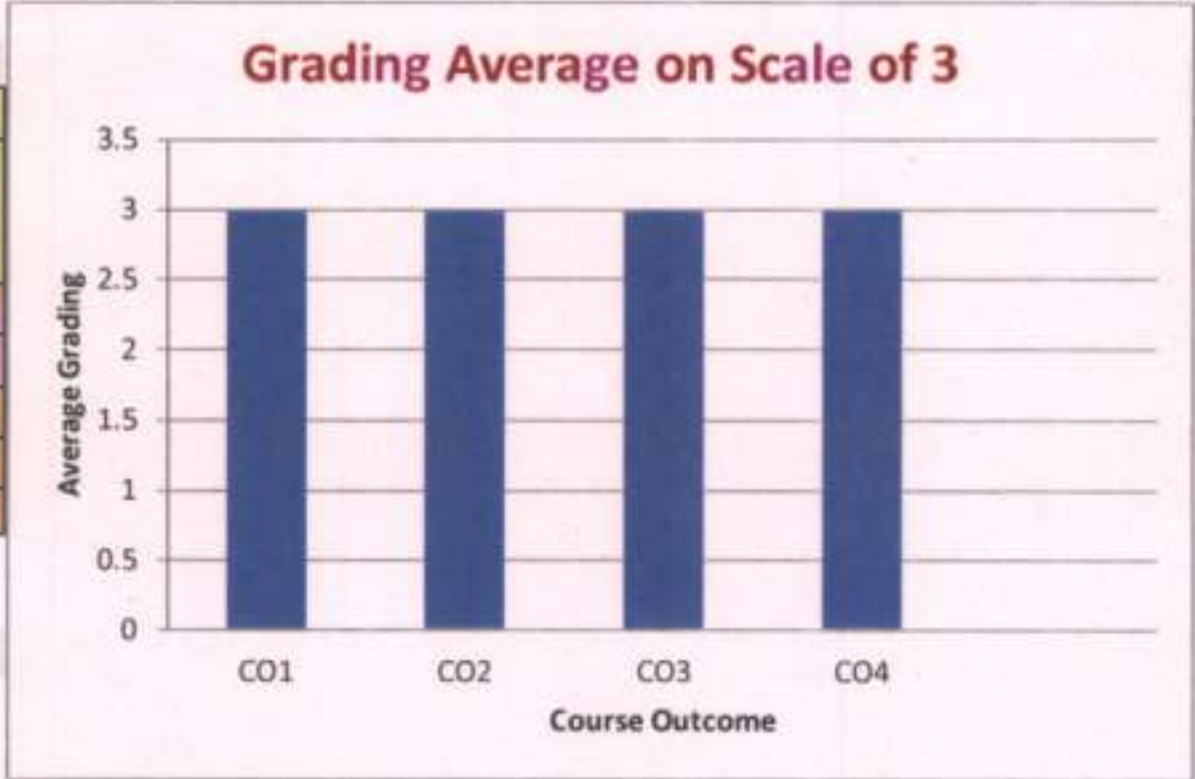
CO3

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q2	Q4						
Questions									
Max. Marks		1	3	3		7			
Atul Pandey	1951601	1	2	3	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1	2	3	6	7	0.8571429	3	1
Omkar	1951603	1	2	3	6	7	0.8571429	3	1
Piyush Kumar yadav	1951604	1	3	3	7	7	1	3	1
Prashant Gautam	1951605	1	2	3	6	7	0.8571429	3	1
Raina Kumari	1951606	1	2	3	6	7	0.8571429	3	1
Shashank Yadav	1951607	1	3	3	7	7	1	3	1
Vinod Kumar Yadav	1951608	1	2	3	6	7	0.8571429	3	1
							AVG	AVG	ATTAINED
							0.893	3.00	1

CO4									
		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q3	Q5						
Max. Marks		2	3	3		8			
Atul Pandey	1951601	1	2	3	6	8	0.75	3	1
Dharmendra Yadav	1951602	1	3	3	7	8	0.875	3	1
Omkar	1951603	2	3	3	8	8	1	3	1
Piyush Kumar yadav	1951604	2	1	3	6	8	0.75	3	1
Prashant Gautam	1951605	2	2	3	7	8	0.875	3	1
Raina Kumari	1951606	2	2	3	7	8	0.875	3	1
Shashank Yadav	1951607	2	2	3	7	8	0.875	3	1
Vinod Kumar Yadav	1951608	2	1	3	6	8	0.75	3	1
							AVG	AVG	ATTAINED
							0.844	3.00	1

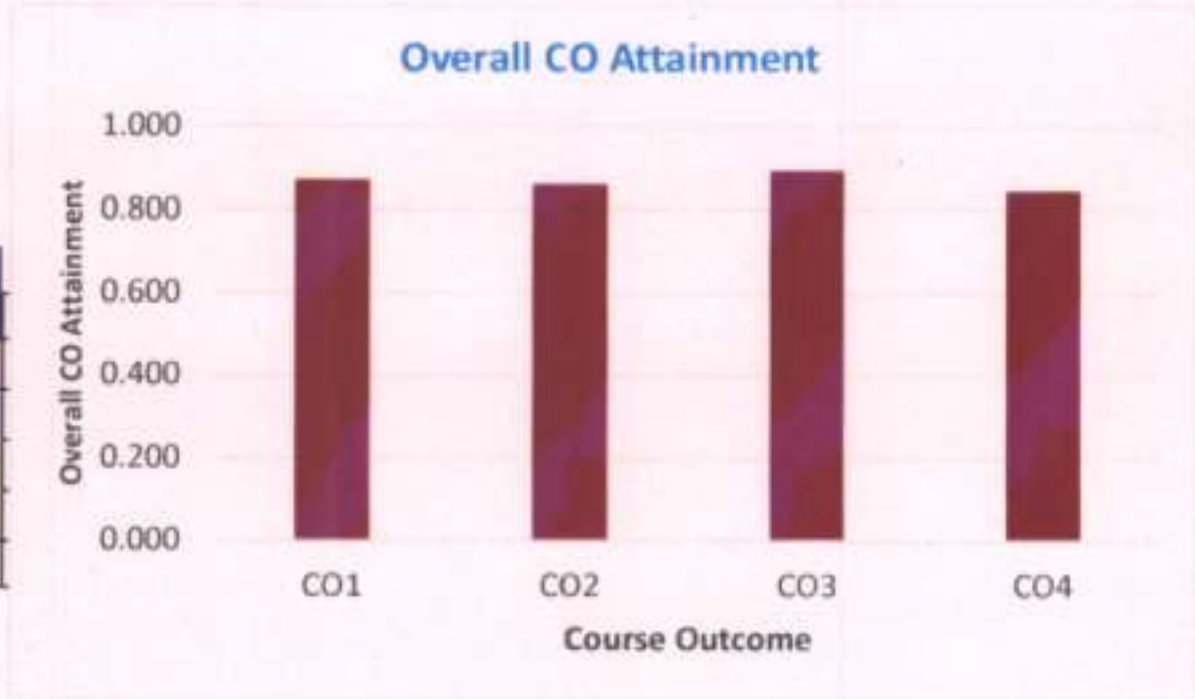
Total No. of Sudents for Batch **8**

Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional
		Distribution			Overall CO Attainment %
		3	2	1	
CO1	3	1			0.87277
CO2	3	1			0.86190
CO3	3	1			0.89286
CO4	3	1			0.84375



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

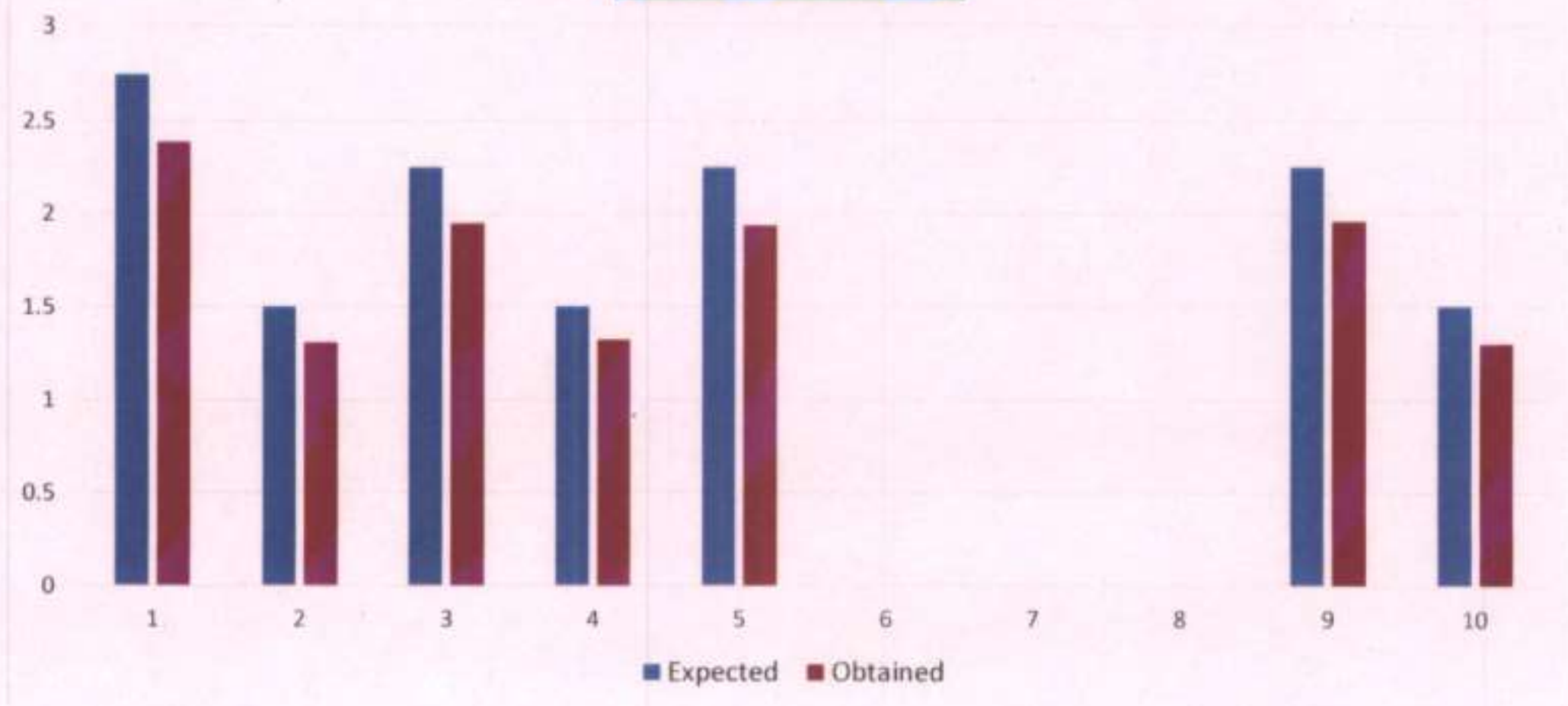


Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.873
CO2	0.862
CO3	0.893
CO4	0.844

CO, PO and PSO correlation												
Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand the modeling of synchronous machine in details	3	2	3		2				2	1
	CO2	Carry out simulation studies of power system dynamics using MATLAB-SIMULINK, MI POWER	2	1	3	1	3				1	3
	CO3	Carry out stability analysis with and without power system stabilizer (PSS)	3	2	1	2	1				3	1
	CO4	Understand the load modeling in power system	3	1	2		3				3	1
Expected			2.75	1.5	2.25	1.5	2.25	0	0	0	2.25	1.5

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand the modeling of synchronous machine in details	2.618304	1.74553571	2.61830357		1.745536				1.74553571	0.87276786
	CO2	Carry out simulation studies of power system dynamics using MATLAB-SIMULINK, MI POWER	1.72381	0.86190476	2.58571429	0.86190476	2.585714				0.86190476	2.58571429
	CO3	Carry out stability analysis with and without power system stabilizer (PSS)	2.678571	1.78571429	0.89285714	1.78571429	0.892857				2.67857143	0.89285714
	CO4	Understand the load modeling in power system	2.53125	0.84375	1.6875		2.53125				2.53125	0.84375
Obtained			2.387984	1.30922619	1.94609375	1.32380952	1.938839	0	0	0	1.95431548	1.29877232
%PO			0.868358	0.87281746	0.86493056	0.88253968	0.861706	0	0	0	0.86858466	0.86584821

PO & PSO Attainment



Signature

CO, PO and PSO Correlation for M.Tech 1st Semester (Power System)

Research Methodology & IPR (EMP14)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Atul Pandey	1951601		2	2	2	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1	2	3	2	8	8	1	3	1
Omkar	1951603	1		2	2	5	6	0.8333333	3	1
Piyush Kumar yadav	1951604	1		3	2	6	6	1	3	1
Prashant Gautam	1951605	1	2	2	2	7	8	0.875	3	1
Raina Kumari	1951606	1	2		2	5	5	1	3	1
Shashank Yadav	1951607	1	1	3	2	7	8	0.875	3	1
Vinod Kumar Yadav	1951608		2	3	2	7	7	1	3	1
								AVG	AVG	ATTAINED
		6	11	18	16	51		0.930	3.00	1

CO2										
		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Atul Pandey	1951601	1	2	1	2	6	7	0.85714286	3	1
Dharmendra Yadav	1951602	1		1	2	4	4	1	3	1
Omkar	1951603	1	3	1	2	7	7	1	3	1
Piyush Kumar yada	1951604	1	3	1	2	7	7	1	3	1
Prashant Gautam	1951605		3	1	2	6	6	1	3	1
Raina Kumari	1951606	1	3	1	2	7	7	1	3	1
Shashank Yadav	1951607	1	2		2	5	6	0.83333333	3	1
Vinod Kumar Yadav	1951608		3		2	5	5	1	3	1
								AVG	AVG	ATTAINED
								0.961	3.00	1

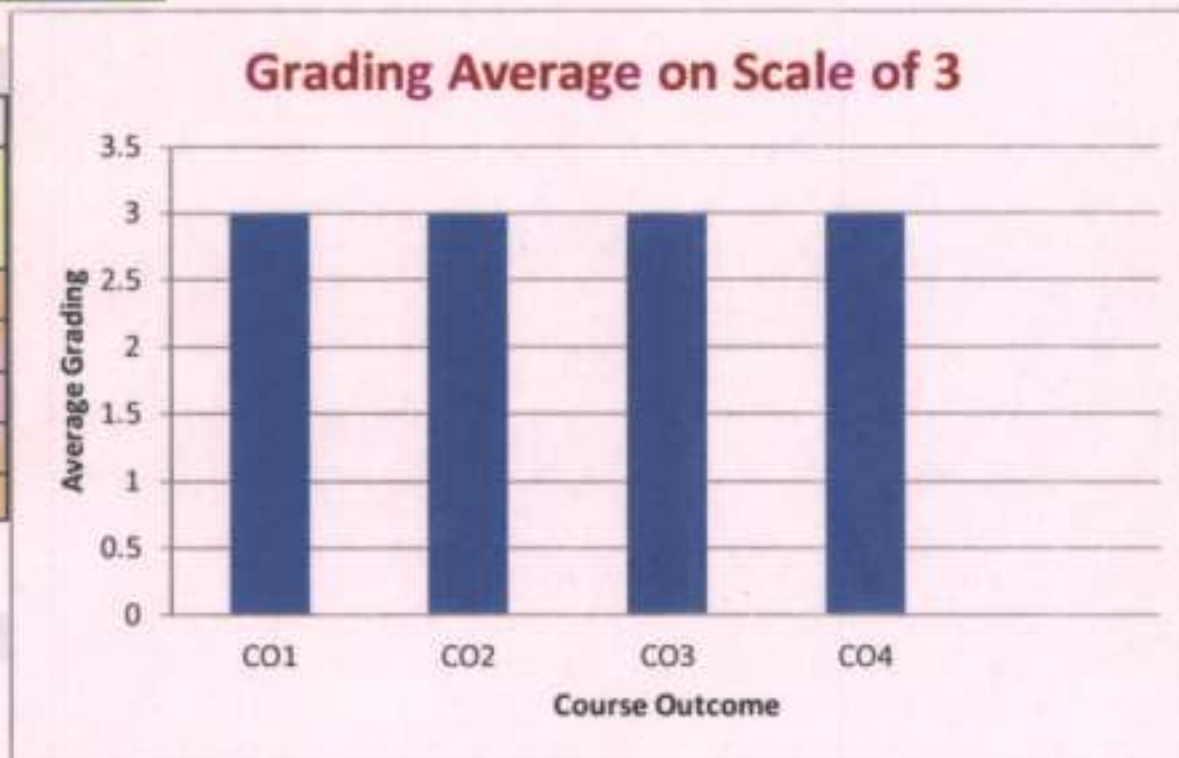
CO3

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q1	Q4						
Questions									
Max. Marks		1	3	3		7			
Atul Pandey	1951601	1	2	3	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1	3	3	7	7	1	3	1
Omkar	1951603	1	3	3	7	7	1	3	1
Piyush Kumar yadav	1951604	1		3	4	4	1	3	1
Prashant Gautam	1951605		3	3	6	6	1	3	1
Raina Kumari	1951606	1		3	4	4	1	3	1
Shashank Yadav	1951607		3	3	6	6	1	3	1
Vinod Kumar Yadav	1951608	1	3	3	7	7	1	3	1
							AVG	AVG	ATTAINED
							0.982	3.00	1

CO4									
		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q3	Q5						
Max. Marks		2	3	3		8			
Atul Pandey	1951601	2		3	5	5	1	3	1
Dharmendra Yadav	1951602	2		3	5	5	1	3	1
Omkar	1951603	2	1	3	6	8	0.75	3	1
Piyush Kumar yadav	1951604	2	2	3	7	8	0.875	3	1
Prashant Gautam	1951605		3	3	6	6	1	3	1
Raina Kumari	1951606	2	3	3	8	8	1	3	1
Shashank Yadav	1951607		3	3	6	6	1	3	1
Vinod Kumar Yadav	1951608		3	3	6	6	1	3	1
							AVG	AVG	ATTAINED
							0.953	3.00	1

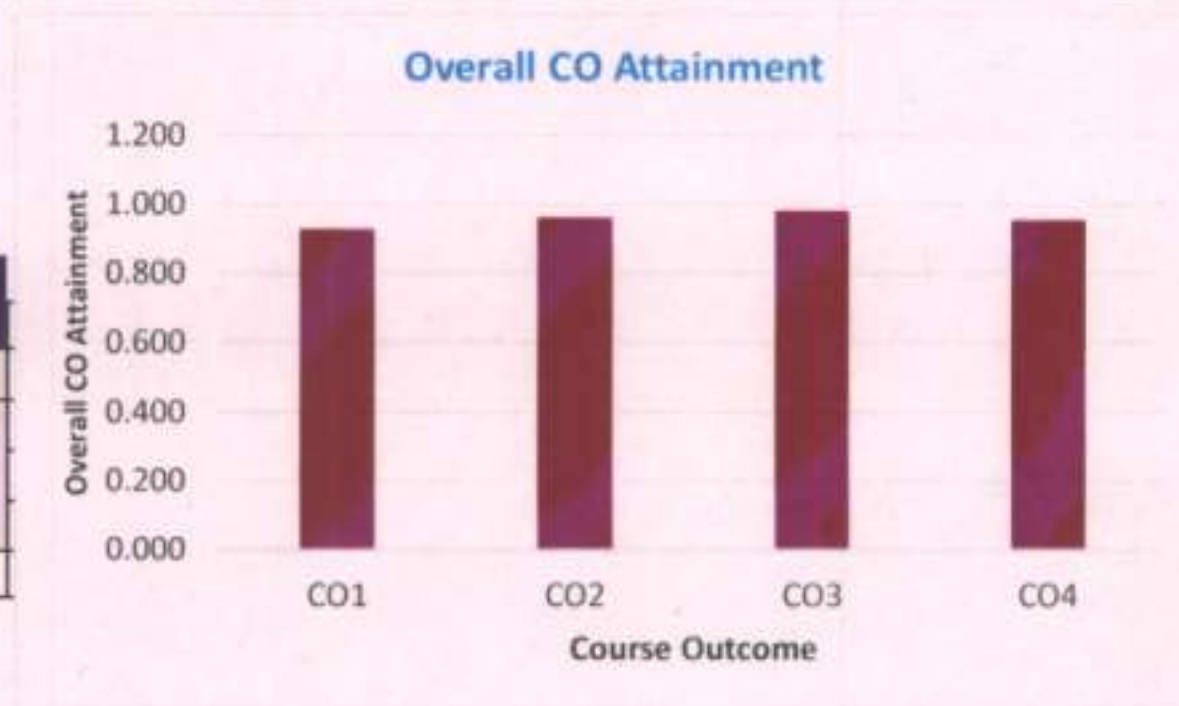
Total No. of Sudents for Batch 8

Course Outcomes	Grading AVG on Scale of	Attainment			Sessional
		Distribution			Overall CO Attainment %
		3	2	1	
CO1	3	1			0.93006
CO2	3	1			0.96131
CO3	3	1			0.98214
CO4	3	1			0.95313



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

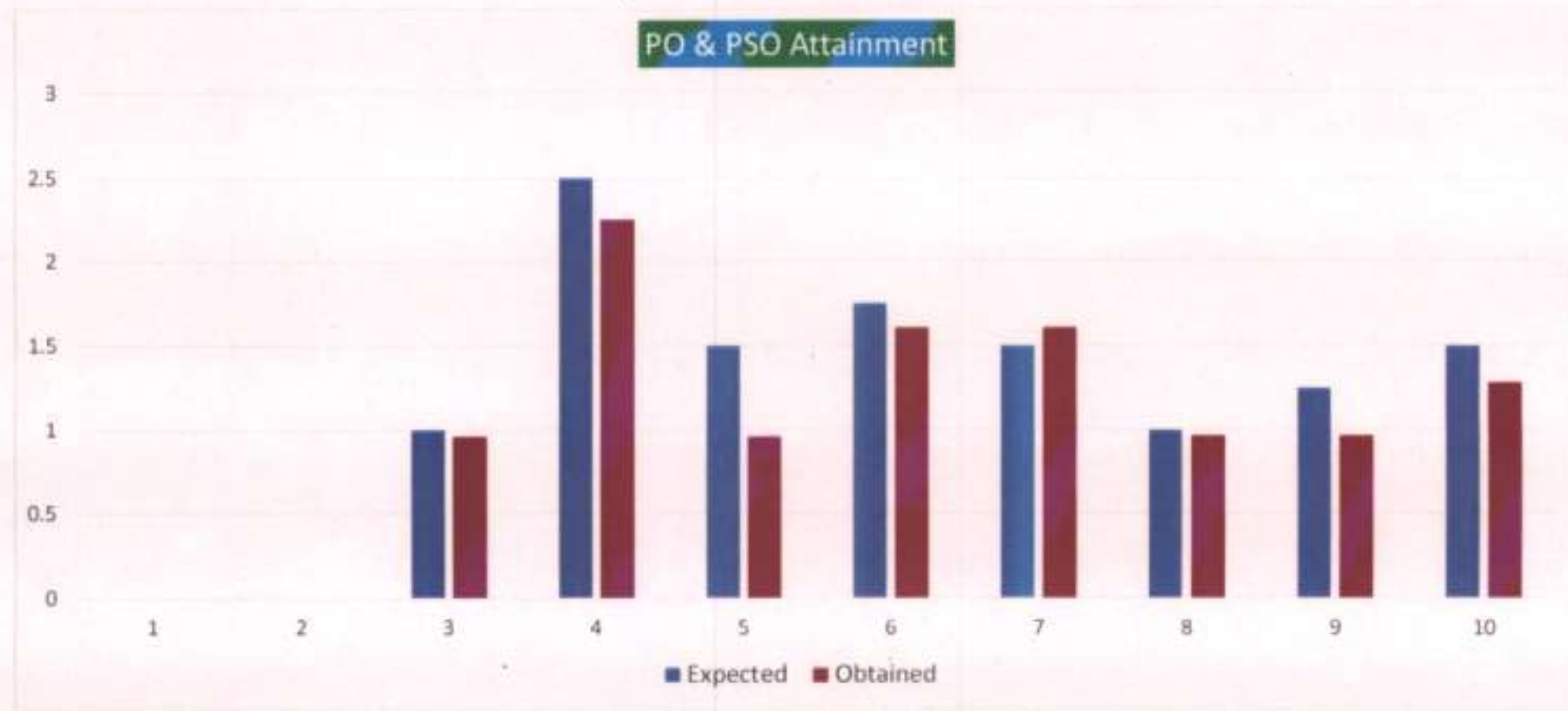


Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.930
CO2	0.961
CO3	0.982
CO4	0.953

CO, PO and PSO correlation

Course	CO	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
EMP7	CO1	Understand research problem formulation, Analyze research related information and Follow research ethics			1	3	2	2	1	1	2	2
	CO2	Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.			1	3	1	1	1	1	1	2
	CO3	Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.				2		2	2	1	1	1
	CO4	Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.				2		2	2	1	1	1
		Expected	0	0	1	2.5	1.5	1.75	1.5	1	1.25	1.5

Course	CO	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PS01	PS02
EMP7	CO1	Understand research problem formulation, Analyze research related information and Follow research ethics			0.930059524	2.790178571	1.860119048	1.860119048	0.930059524	0.930059524	1.860119048	1.860119048
	CO2	Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.			0.961309524	2.883928571	0.961309524	0.961309524	0.961309524	0.961309524	0.961309524	1.922619048
	CO3	Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.				1.964285714		1.964285714	1.964285714	0.982142857	0.982142857	0.982142857
	CO4	Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.				1.90625		1.90625	1.90625	0.953125	0.953125	0.953125
Obtained			0	0	0.961309524	2.251488095	0.961309524	1.610615079	1.610615079	0.965525794	0.965525794	1.285962302
%PO			0	0	0.961309524	0.900595238	0.640873016	0.920351474	1.073743386	0.965525794	0.772420635	0.857308201



9

CO, PO and PSO Correlation for M.Tech 1st Semester (Power System)

Smart Grids (EMP7)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Atul Pandey	1951601		2	2	2	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1		3	2	6	6	1	3	1
Omkar	1951603	1	1	2	2	6	8	0.75	3	1
Piyush Kumar yadav	1951604	1	2	3	2	8	8	1	3	1
Prashant Gautam	1951605	1	2	2	2	7	8	0.875	3	1
Raina Kumari	1951606	1	2	3	2	8	8	1	3	1
Shashank Yadav	1951607	1		2	2	5	6	0.8333333	3	1
Vinod Kumar Yadav	1951608	1	2	2	2	7	8	0.875	3	1
								AVG	AVG	ATTAINED
		7	11	19	16	53		0.899	3.00	1

CO2										
		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Atul Pandey	1951601	1	3	1	2	7	7	1	3	1
Dharmendra Yadav	1951602	1	2	1	2	6	7	0.85714286	3	1
Omkar	1951603		2	1	2	5	6	0.83333333	3	1
Piyush Kumar yada	1951604	1	2	1	2	6	7	0.85714286	3	1
Prashant Gautam	1951605	1	2		2	5	6	0.83333333	3	1
Raina Kumari	1951606	1		1	2	4	4	1	3	1
Shashank Yadav	1951607	1	3	1	2	7	7	1	3	1
Vinod Kumar Yadav	1951608	1	2	1	2	6	7	0.85714286	3	1
								AVG	AVG	ATTAINED
								0.905	3.00	1

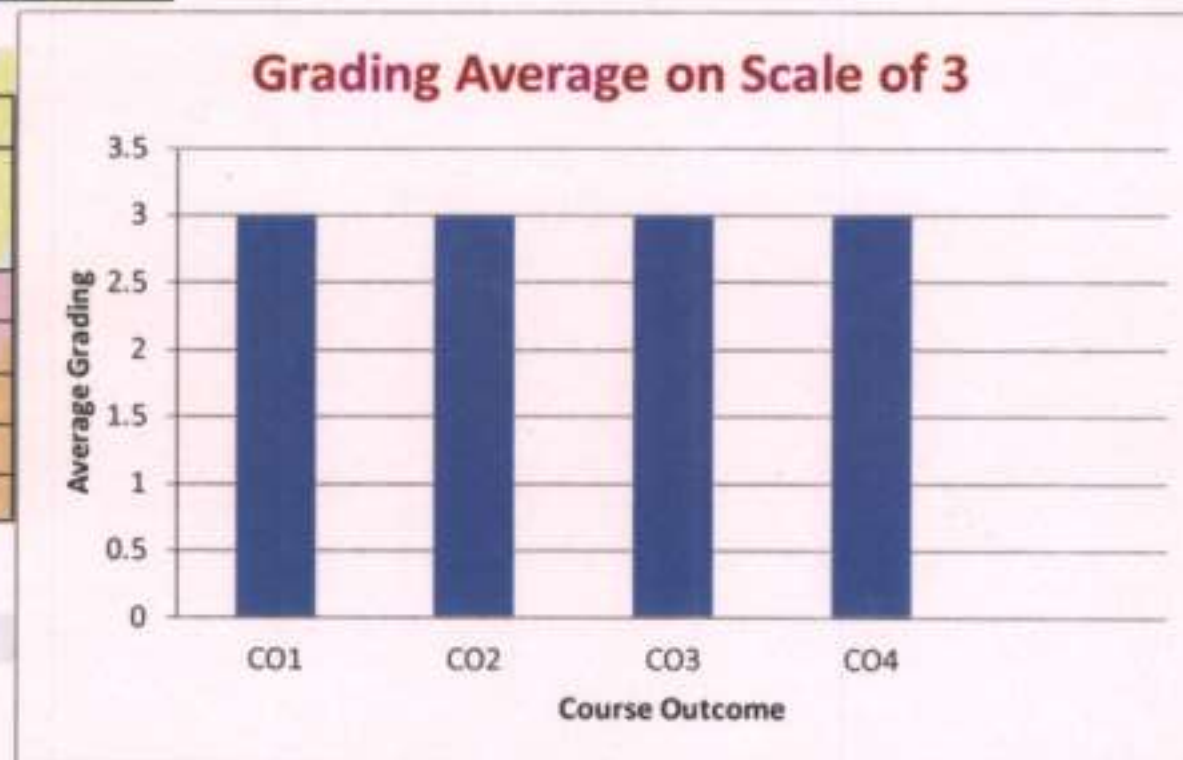
CO3

Questions	Max. Marks	T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q1	Q4						
Atul Pandey	1951601	1	2	3	6	7	0.8571429	3	1
Dharmendra Yadav	1951602		2	3	5	6	0.8333333	3	1
Omkar	1951603	1	3	3	7	7	1	3	1
Piyush Kumar yadav	1951604	1	3	3	7	7	1	3	1
Prashant Gautam	1951605	1	2	3	6	7	0.8571429	3	1
Raina Kumari	1951606		2	3	5	6	0.8333333	3	1
Shashank Yadav	1951607	1		3	4	4	1	3	1
Vinod Kumar Yadav	1951608	1	2	3	6	7	0.8571429	3	1
							AVG	AVG	ATTAINED
							0.905	3.00	1

CO4									
Questions	Max. Marks	T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target $\geq 60\%$ (Y/N)
		Q3	Q5						
Atul Pandey	1951601	2		3	5	5	1	3	1
Dharmendra Yadav	1951602	2	3	3	8	8	1	3	1
Omkar	1951603		3	3	6	6	1	3	1
Piyush Kumar yadav	1951604	2	2	3	7	8	0.875	3	1
Prashant Gautam	1951605	2	2	3	7	8	0.875	3	1
Raina Kumari	1951606	2	3	3	8	8	1	3	1
Shashank Yadav	1951607	2	3	3	8	8	1	3	1
Vinod Kumar Yadav	1951608	2	3	3	8	8	1	3	1
							AVG	AVG	ATTAINED
							0.969	3.00	1

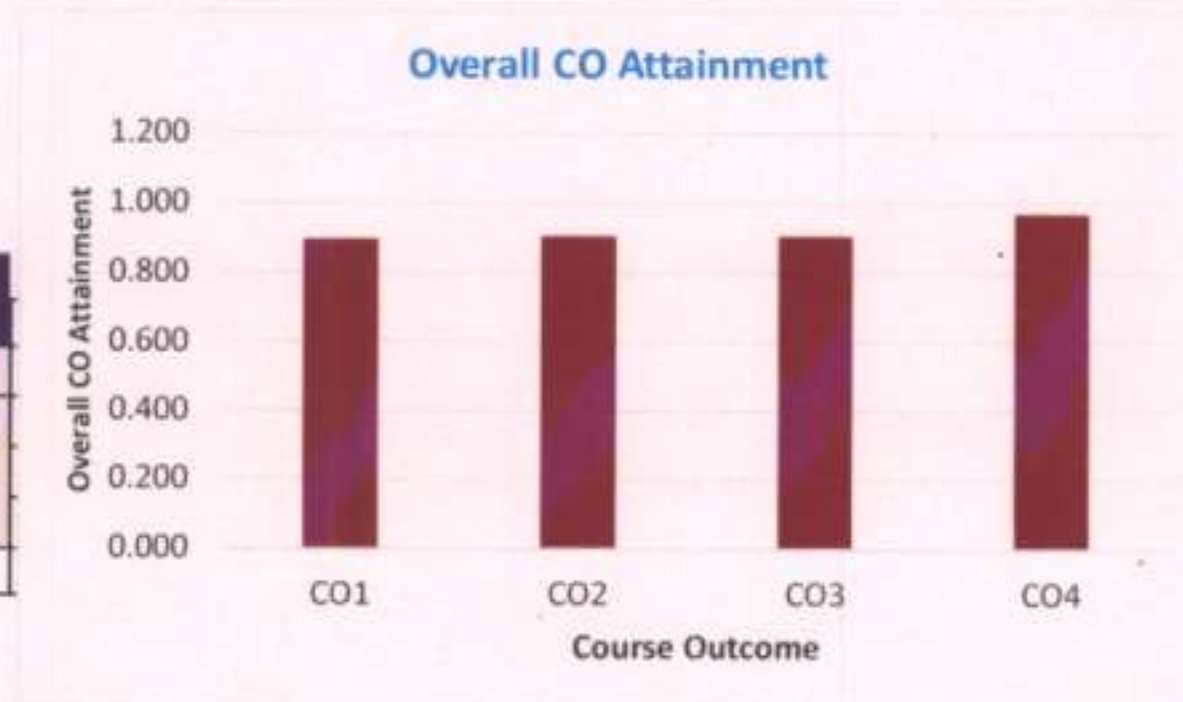
Total No. of Students for Batch 8

Course Outcomes	Grading AVG on Scale of	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.89881
CO2	3	1			0.90476
CO3	3	1			0.90476
CO4	3	1			0.96875



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

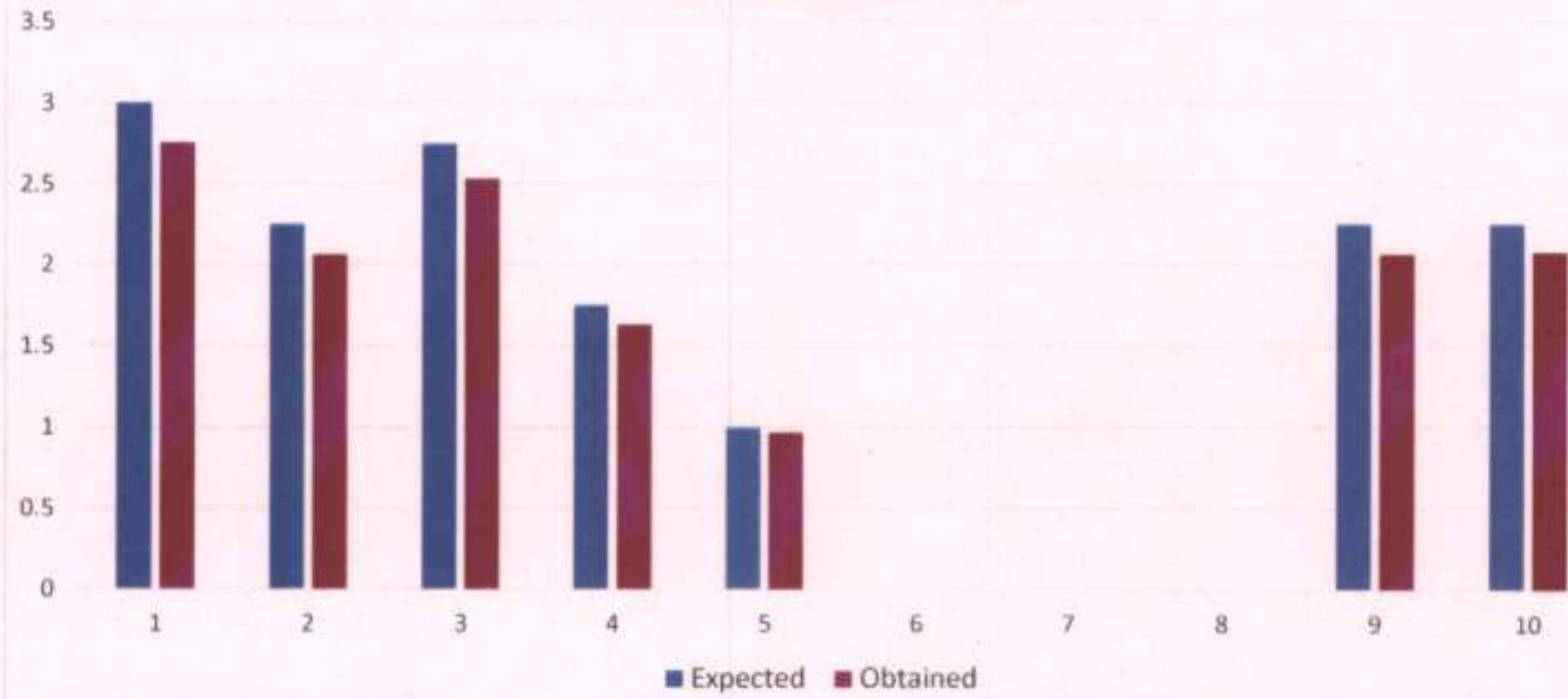


Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.899
CO2	0.905
CO3	0.905
CO4	0.969

CO, PO and PSO correlation												
Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Appreciate the difference between smart grid & conventional grid	3	2	3	1					3	2
	CO2	Apply smart metering concepts to industrial and commercial installations	3	3	2	2					2	1
	CO3	Formulate solutions in the areas of smart substations, distributed generation and wide area measurements	3	2	3	1					2	3
	CO4	Come up with smart grid solutions using modern communication technologies	3	2	3	3	1				2	3
Expected			3	2.25	2.75	1.75	1	0	0	0	2.25	2.25

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Appreciate the difference between smart grid & conventional grid	2.696429	1.79761905	2.69642857	0.89880952					2.69642857	1.79761905
	CO2	Apply smart metering concepts to industrial and commercial installations	2.714286	2.71428571	1.80952381	1.80952381					1.80952381	0.9047619
	CO3	Formulate solutions in the areas of smart substations, distributed generation and wide area measurements	2.714286	1.80952381	2.71428571	0.9047619					1.80952381	2.71428571
	CO4	Come up with smart grid solutions using modern communication technologies	2.90625	1.9375	2.90625	2.90625	0.96875				1.9375	2.90625
Obtained			2.757813	2.06473214	2.53162202	1.62983631	0.96875	0	0	0	2.06324405	2.08072917
%PO			0.919271	0.91765873	0.92058983	0.93133503	0.96875	0	0	0	0.91699735	0.92476852

PO & PSO Attainment



CO, PO and PSO Correlation for M.Tech 1st Semester (Power System)

Value Education (EMP5)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Atul Pandey	1951601		2	3	2	7	7	1	3	1
Dharmendra Yadav	1951602	1	2	2	2	7	8	0.875	3	1
Omkar	1951603	1	1	3	2	7	8	0.875	3	1
Piyush Kumar yadav	1951604	1	2	1	2	6	8	0.75	3	1
Prashant Gautam	1951605	1	2	2	2	7	8	0.875	3	1
Raina Kumari	1951606	1	2	3	2	8	8	1	3	1
Shashank Yadav	1951607	1		3	2	6	6	1	3	1
Vinod Kumar Yadav	1951608	1	2	3	2	8	8	1	3	1
								AVG	AVG	ATTAINED
		7	13	20	16	56		0.922	3.00	1

CO2										
		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
Questions		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Atul Pandey	1951601	1	2	1	2	6	7	0.85714286	3	1
Dharmendra Yadav	1951602	1	2	1	2	6	7	0.85714286	3	1
Omkar	1951603	1	3	1	2	7	7	1	3	1
Piyush Kumar yada	1951604	1	3	1	2	7	7	1	3	1
Prashant Gautam	1951605	1	1	1	2	5	7	0.71428571	3	1
Raina Kumari	1951606	1	2	1	2	6	7	0.85714286	3	1
Shashank Yadav	1951607	1	3	1	2	7	7	1	3	1
Vinod Kumar Yadav	1951608	1	2	1	2	6	7	0.85714286	3	1
								AVG	AVG	ATTAINED
								0.893	3.00	1

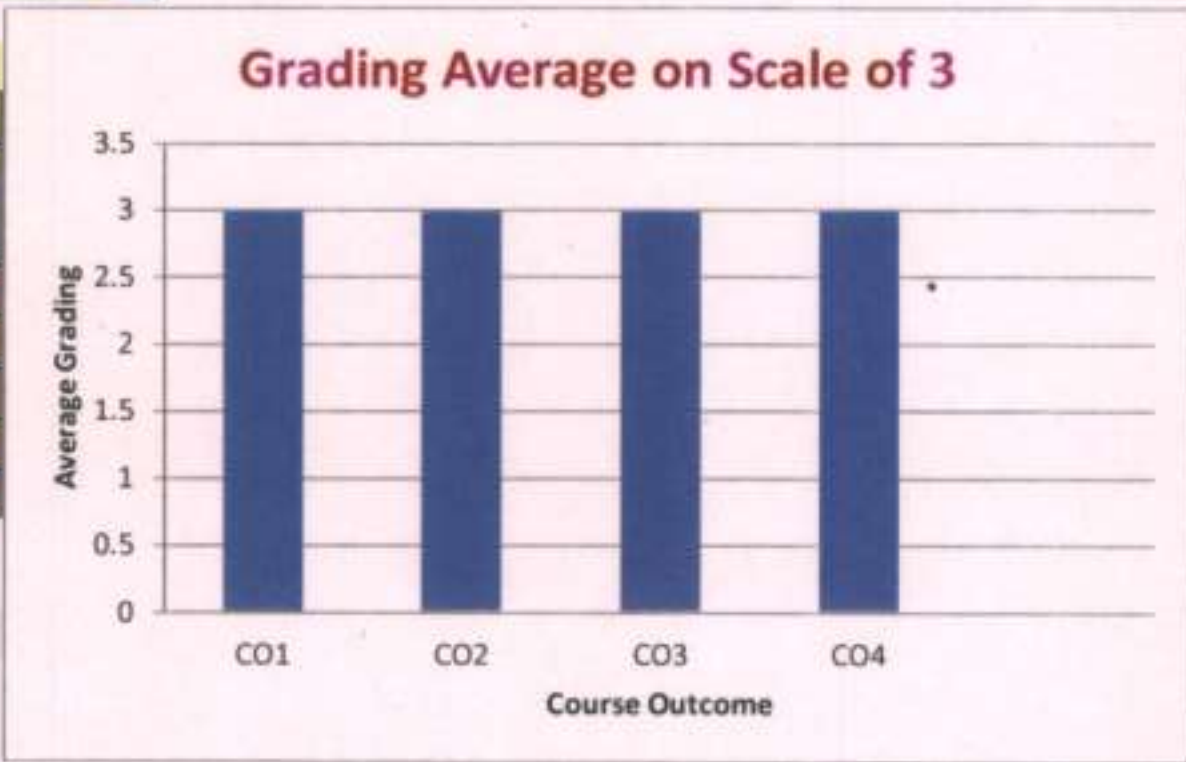
CO3

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q1	Q4						
Questions									
Max. Marks		1	3	3		7			
Atul Pandey	1951601	1	2	3	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1	2	3	6	7	0.8571429	3	1
Omkar	1951603	1	3	3	7	7	1	3	1
Piyush Kumar yadav	1951604	1	3	3	7	7	1	3	1
Prashant Gautam	1951605	1	2	3	6	7	0.8571429	3	1
Raina Kumari	1951606	1	2	3	6	7	0.8571429	3	1
Shashank Yadav	1951607	1	2	3	6	7	0.8571429	3	1
Vinod Kumar Yadav	1951608	1	2	3	6	7	0.8571429	3	1
							AVG	AVG	ATTAINED
							0.893	3.00	1

CO4									
		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q3	Q5						
Max. Marks		2	3	3		8			
Atul Pandey	1951601		2	3	5	6	0.8333333	3	1
Dharmendra Yadav	1951602	2	1	3	6	8	0.75	3	1
Omkar	1951603	2		3	5	5	1	3	1
Piyush Kumar yadav	1951604	2	2	3	7	8	0.875	3	1
Prashant Gautam	1951605	2	2	3	7	8	0.875	3	1
Raina Kumari	1951606	2	1	3	6	8	0.75	3	1
Shashank Yadav	1951607	1	1	3	5	8	0.625	3	1
Vinod Kumar Yadav	1951608	2	2	3	7	8	0.875	3	1
							AVG	AVG	ATTAINED
							0.823	3.00	1

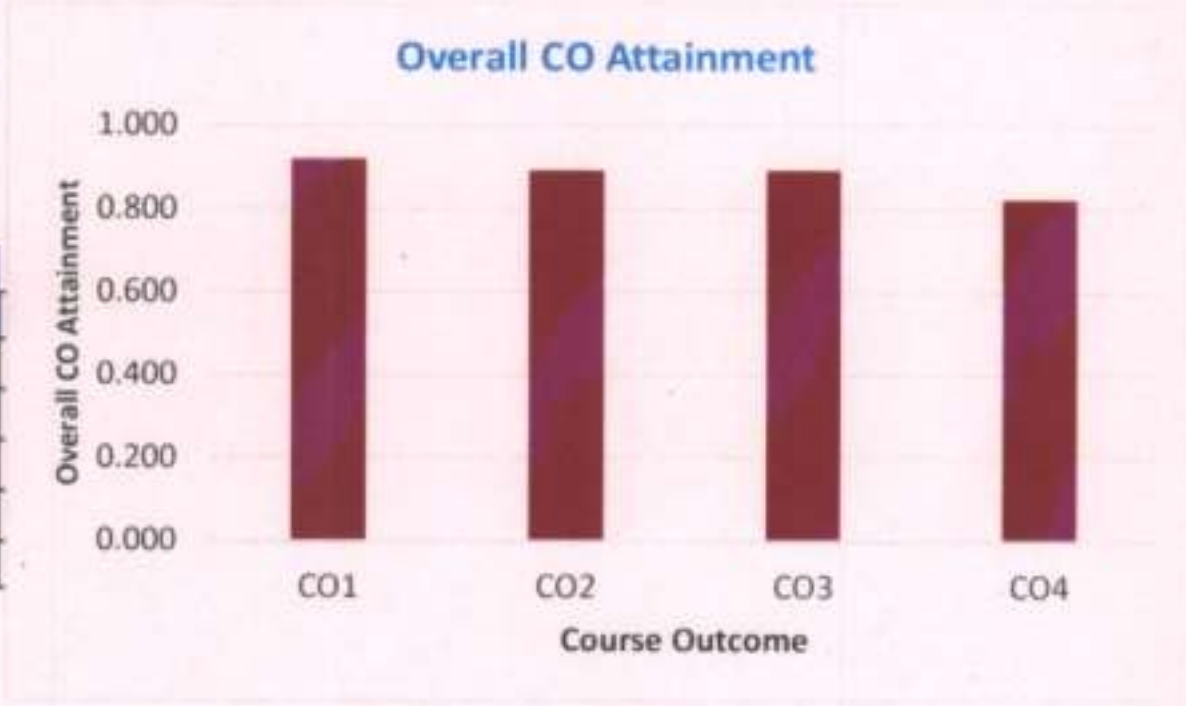
Total No. of Students for Batch **8**

Course Outcomes	Grading AVG on Scale of	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.92188
CO2	3	1			0.89286
CO3	3	1			0.89286
CO4	3	1			0.82292



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

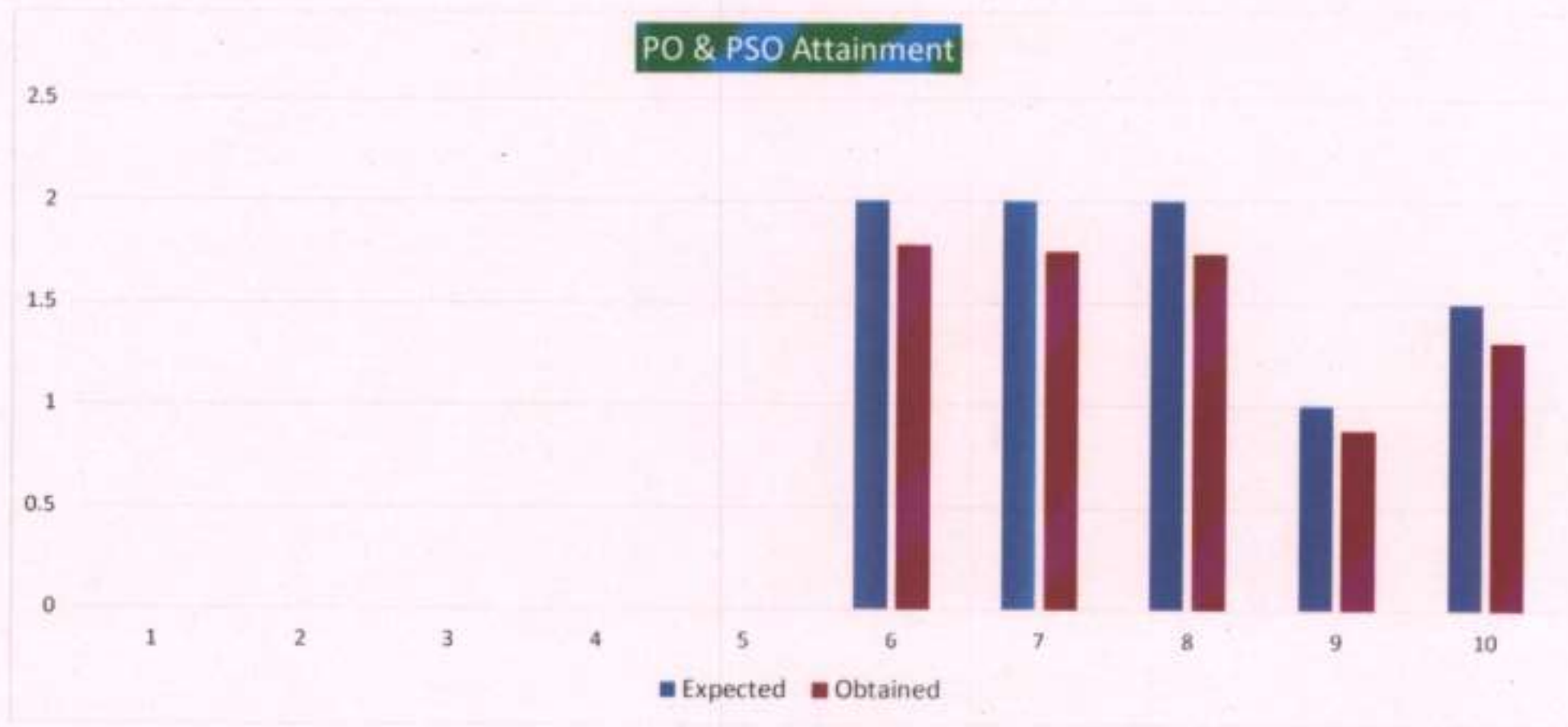


Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.922
CO2	0.893
CO3	0.893
CO4	0.823

CO, PO and PSO correlation												
Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Knowledge of self-development						3	1	2	1	1
	CO2	Learn the importance of Human values						1	3	1	1	1
	CO3	Developing the overall personality						3	2	2	1	2
	CO4	Develop self management, self control, honesty and good health						1	2	3	1	2
		Expected	0	0	0	0	0	2	2	2	1	1.5

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Knowledge of self-development						2.765625	0.921875	1.84375	0.921875	0.921875
	CO2	Learn the importance of Human values						0.892857143	2.678571429	0.892857143	0.892857143	0.892857143
	CO3	Developing the overall personality						2.678571429	1.785714286	1.785714286	0.892857143	1.785714286
	CO4	Develop self management, self control, honesty and good health						0.822916667	1.645833333	2.46875	0.822916667	1.645833333
		Obtained	0	0	0	0	0	1.78999256	1.757998512	1.747767857	0.882626488	1.31156994
		%PO	0	0	0	0	0	0.89499628	0.878999256	0.873883929	0.882626488	0.87437996

PO & PSO Attainment



CO, PO and PSO Correlation for M.Tech 3rd Semester (Power System) 2020-21

Dynamics of Linear Systems (MPSE304)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Atul Pandey	1951601	1	2	2	2	7	8	0.875	3	1
Dharmendra Yadav	1951602	1	2	2	2	7	8	0.875	3	1
Omkar	1951603	1	2	3	2	8	8	1	3	1
Piyush Kumar yadav	1951604	1	2	2	2	7	8	0.875	3	1
Prashant Gautam	1951605	1	2	1	2	6	8	0.75	3	1
Raina Kumari	1951606	1	2	3	2	8	8	1	3	1
Shashank Yadav	1951607	1	2	2	2	7	8	0.875	3	1
Vinod Kumar Yadav	1951608	1	2	2	2	7	8	0.875	3	1
								AVG	AVG	ATTAINED
		8	16	17	16	57		0.891	3.00	1

CO2										
		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
Questions		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Atul Pandey	1951601		2	1	2	5	6	0.833333333	3	1
Dharmendra Yadav	1951602	1	3	1	2	7	7	1	3	1
Omkar	1951603	1	2	1	2	6	7	0.85714286	3	1
Piyush Kumar yada	1951604	1	3	1	2	7	7	1	3	1
Prashant Gautam	1951605	1	3	1	2	7	7	1	3	1
Raina Kumari	1951606	1	2	1	2	6	7	0.85714286	3	1
Shashank Yadav	1951607	1	3		2	6	6	1	3	1
Vinod Kumar Yadav	1951608	1	2	1	2	6	7	0.85714286	3	1
								AVG	AVG	ATTAINED
								0.926	3.00	1

CO3

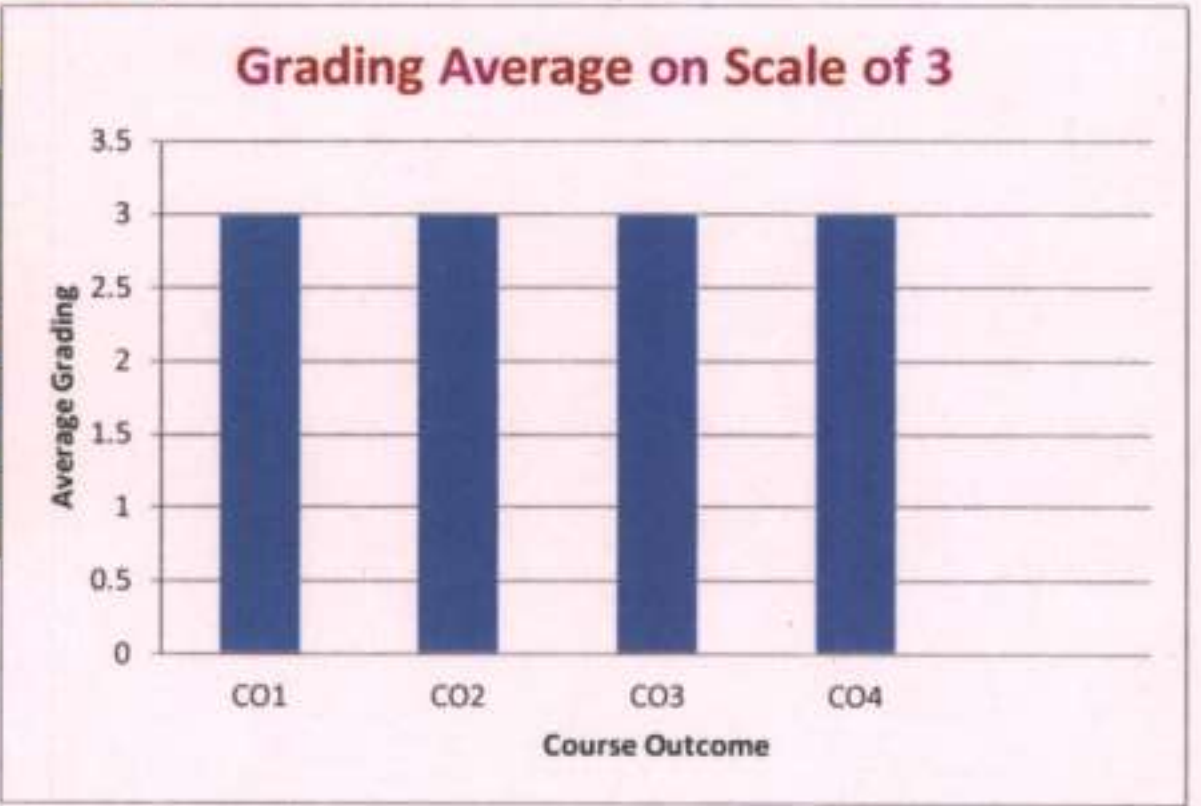
		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q1	Q4						
Questions		1	3						
Max. Marks		1	3	3		7			
Atul Pandey	1951601	1	3	3	7	7	1	3	1
Dharmendra Yadav	1951602	1	2	3	6	7	0.8571429	3	1
Omkar	1951603	1	3	3	7	7	1	3	1
Piyush Kumar yadav	1951604	1	2	3	6	7	0.8571429	3	1
Prashant Gautam	1951605	1	3	3	7	7	1	3	1
Raina Kumari	1951606	1	2	3	6	7	0.8571429	3	1
Shashank Yadav	1951607	1	2	3	6	7	0.8571429	3	1
Vinod Kumar Yadav	1951608	1	3	3	7	7	1	3	1
							AVG	AVG	ATTAINED
							0.929	3.00	1

CO4

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q3	Q5						
Questions									
Max. Marks		2	3	3		8			
Atul Pandey	1951601	2	2	3	7	8	0.875	3	1
Dharmendra Yadav	1951602	2	3	3	8	8	1	3	1
Omkar	1951603	2	2	3	7	8	0.875	3	1
Piyush Kumar yadav	1951604	2	1	3	6	8	0.75	3	1
Prashant Gautam	1951605	2	2	3	7	8	0.875	3	1
Raina Kumari	1951606	2	2	3	7	8	0.875	3	1
Shashank Yadav	1951607	2	2	3	7	8	0.875	3	1
Vinod Kumar Yadav	1951608	2	1	3	6	8	0.75	3	1
							AVG	AVG	ATTAINED
							0.859	3.00	1

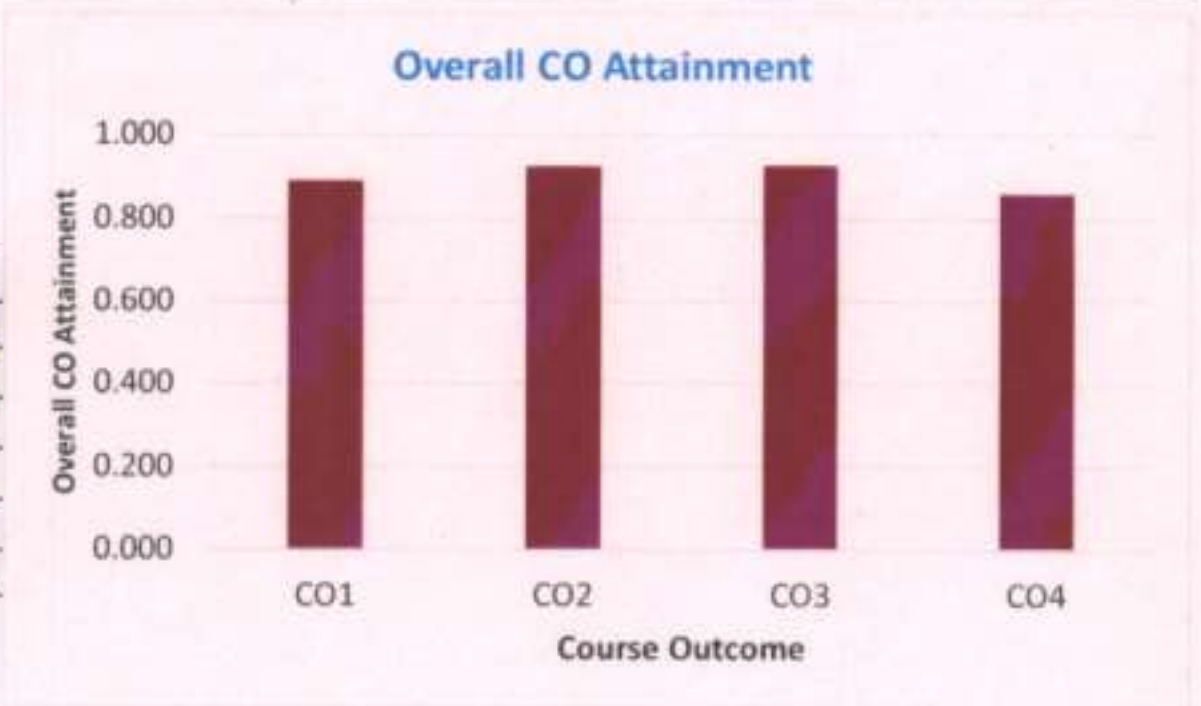
Total No. of Sudents for Batch **8**

Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.89063
CO2	3	1			0.92560
CO3	3	1			0.92857
CO4	3	1			0.85938



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y



Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.891
CO2	0.926
CO3	0.929
CO4	0.859

CO, PO and PSO correlation

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	To learn linear system modeling, analysis and design so as to obtain the ability to apply the same to engineering problems in a global perspective	1	2	2	1	2				1	2
	CO2	Knowledge on carrying out detailed stability analysis of both linear and nonlinear systems	1	1	2	2	2				2	1
	CO3	Design observers and controllers for linear systems and Acquire knowledge of discrete time linear systems modeling, analysis and design	3	2	3	3	3				3	3
	CO4	Develop and utilize modern software tools for analysis and design of linear continuous and discrete time systems	3	3	3	3	3				3	3
Expected			2	2	2.5	2.25	2.5	0	0	0	2.25	2.25

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	To learn linear system modeling, analysis and design so as to obtain the ability to apply the same to engineering problems in a global perspective	0.890625	1.78125	1.78125	0.890625	1.78125				0.890625	1.78125
	CO2	Knowledge on carrying out detailed stability analysis of both linear and nonlinear systems	0.925595	0.925595238	1.85119048	1.85119048	1.85119048				1.85119048	0.925595238
	CO3	Design observers and controllers for linear systems and Acquire knowledge of discrete time linear systems modeling, analysis and design	2.785714	1.857142857	2.78571429	2.78571429	2.78571429				2.78571429	2.785714286
	CO4	Develop and utilize modern software tools for analysis and design of linear continuous and discrete time systems	2.578125	2.578125	2.578125	2.578125	2.578125				2.578125	2.578125
Obtained			1.795015	1.785528274	2.24906994	2.02641369	2.24906994	0	0	0	2.02641369	2.017671131
%PO			0.897507	0.892764137	0.89962798	0.90062831	0.89962798	0	0	0	0.90062831	0.896742725



CO, PO and PSO Correlation for M.Tech 3rd Semester (Power System) 2020-21

Waste to Energy (MPSO316)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Atul Pandey	1951601	1		3	2	6	6	1	3	1
Dharmendra Yadav	1951602	1	1	2	2	6	8	0.75	3	1
Omkar	1951603	1	2	3	2	8	8	1	3	1
Piyush Kumar yadav	1951604	1	2	2	2	7	8	0.875	3	1
Prashant Gautam	1951605	1	2	3	2	8	8	1	3	1
Raina Kumari	1951606	1	2	2	2	7	8	0.875	3	1
Shashank Yadav	1951607	1	2	2	2	7	8	0.875	3	1
Vinod Kumar Yadav	1951608	1	2	2	2	7	8	0.875	3	1
								AVG	AVG	ATTAINED
		8	13	19	16	56		0.906	3.00	1

CO2										
		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Atul Pandey	1951601	1	3	1	2	7	7	1	3	1
Dharmendra Yadav	1951602	1	3	1	2	7	7	1	3	1
Omkar	1951603	1	2	1	2	6	7	0.85714286	3	1
Piyush Kumar yadav	1951604	1	3	1	2	7	7	1	3	1
Prashant Gautam	1951605	1	2	1	2	6	7	0.85714286	3	1
Raina Kumari	1951606	1	2	1	2	6	7	0.85714286	3	1
Shashank Yadav	1951607	1	2	1	2	6	7	0.85714286	3	1
Vinod Kumar Yadav	1951608	1	3	1	2	7	7	1	3	1
								AVG	AVG	ATTAINED
								0.929	3.00	1

CO3

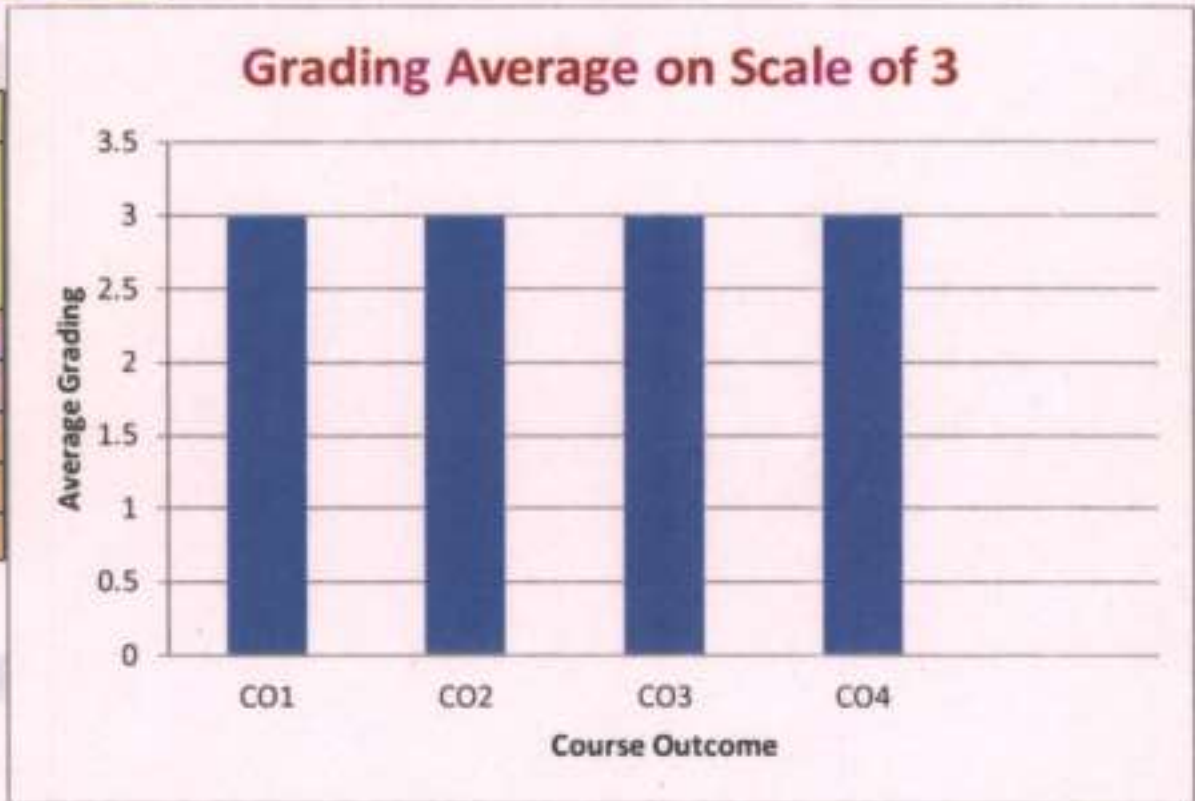
		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q1	Q4						
Questions									
Max. Marks		1	3	3		7			
Atul Pandey	1951601	1	2	3	6	7	0.8571429	3	1
Dharmendra Yadav	1951602	1	2	3	6	7	0.8571429	3	1
Omkar	1951603	1	3	3	7	7	1	3	1
Piyush Kumar yadav	1951604	1	3	3	7	7	1	3	1
Prashant Gautam	1951605	1	2	3	6	7	0.8571429	3	1
Raina Kumari	1951606	1	3	3	7	7	1	3	1
Shashank Yadav	1951607		2	3	5	6	0.8333333	3	1
Vinod Kumar Yadav	1951608	1	1	3	5	7	0.7142857	3	1
							AVG	AVG	ATTAINED
							0.890	3.00	1

CO4

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q3	Q5						
Questions									
Max. Marks		2	3	3		8			
Atul Pandey	1951601	2	1	3	6	8	0.75	3	1
Dharmendra Yadav	1951602	2	2	3	7	8	0.875	3	1
Omkar	1951603	2	1	3	6	8	0.75	3	1
Piyush Kumar yadav	1951604	2	2	3	7	8	0.875	3	1
Prashant Gautam	1951605	2	3	3	8	8	1	3	1
Raina Kumari	1951606	2	1	3	6	8	0.75	3	1
Shashank Yadav	1951607	2	2	3	7	8	0.875	3	1
Vinod Kumar Yadav	1951608	2	3	3	8	8	1	3	1
							AVG	AVG	ATTAINED
							0.859	3.00	1

Total No. of Sudents for Batch 8

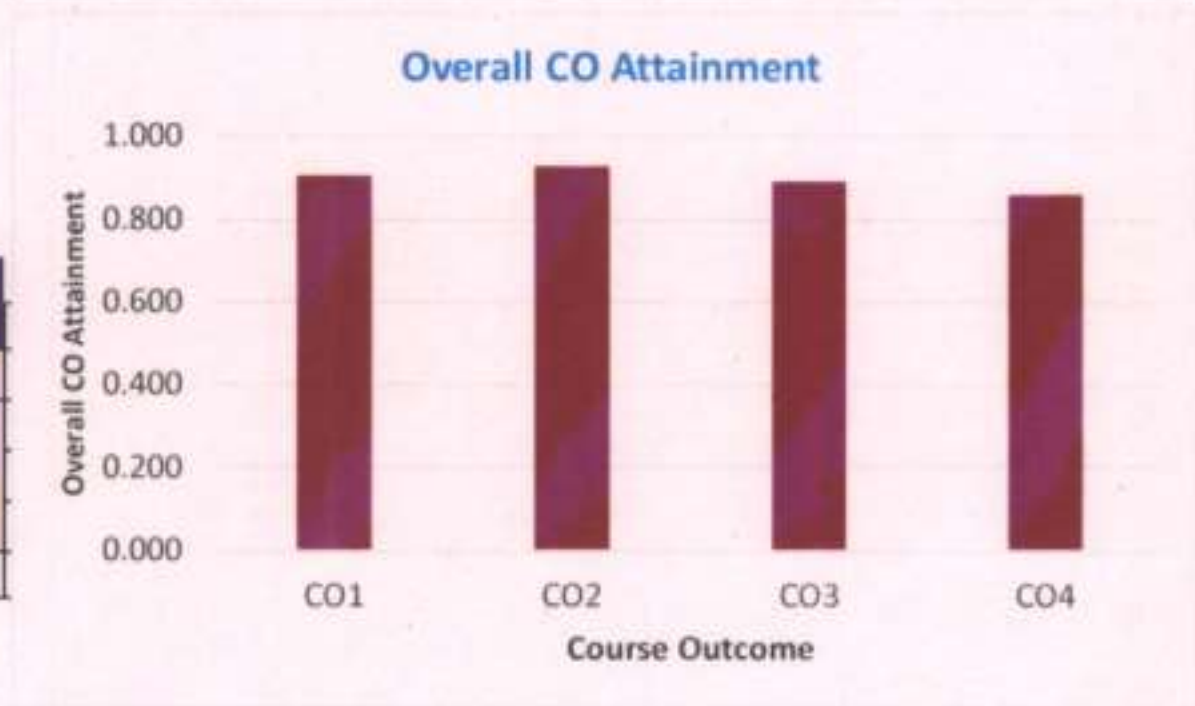
Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.90625
CO2	3	1			0.92857
CO3	3	1			0.88988
CO4	3	1			0.85938



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.906
CO2	0.929
CO3	0.890
CO4	0.859



[Handwritten signature]

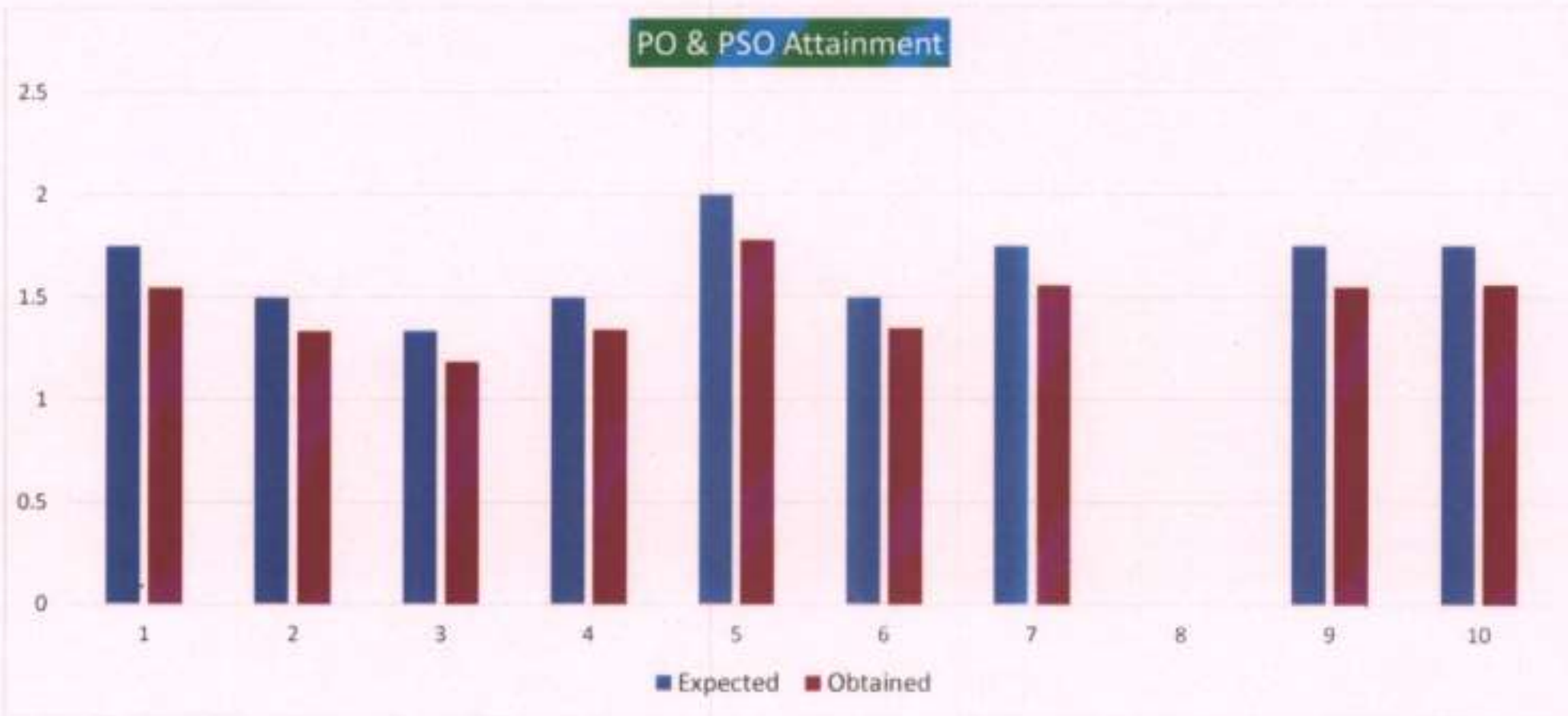
CO, PO and PSO correlation

Course	CO	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
EMP7	CO1	Understand the principles associated with effective energy management and to apply these principles in the day to day life.	1	1	2	1	1	1	1		1	1
	CO2	Develop insight into the collection, transfer and transport of municipal solid waste.	1	1		2	2	2	2		1	2
	CO3	Explain the design and operation of a municipal solid wasteland fill.	2	2	1	1	2	2	1		2	1
	CO4	Device key processes involved in recovering energy from wastes, systematically evaluate the main operational challenges in operating thermal and biochemical energy from waste facilities.	3	2	1	2	3	1	3		3	3
Expected			1.75	1.5	1.333333333	1.5	2	1.5	1.75	0	1.75	1.75

Course	CO	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
EMP7	CO1	Understand the principles associated with effective energy management and to apply these principles in the day to day life.	0.90625	0.90625	1.8125	0.90625	0.90625	0.90625	0.90625		0.90625	0.90625
	CO2	Develop insight into the collection, transfer and transport of municipal solid waste.	0.928571	0.928571429		1.857142857	1.857142857	1.857142857	1.857142857		0.928571429	1.857142857
	CO3	Explain the design and operation of a municipal solid wasteland fill.	1.779762	1.779761905	0.889880952	0.889880952	1.779761905	1.779761905	0.889880952		1.779761905	0.889880952
	CO4	Device key processes involved in recovering energy from wastes, systematically evaluate the main operational challenges in operating thermal and biochemical energy from waste facilities.	2.578125	1.71875	0.859375	1.71875	2.578125	0.859375	2.578125		2.578125	2.578125
Obtained			1.548177	1.333333333	1.187251984	1.343005952	1.78031994	1.35063244	1.557849702	0	1.548177083	1.557849702

%PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
	0.884673	0.888888889	0.890438988	0.895337302	0.89015997	0.900421627	0.89019983	0	0.884672619	0.89019983

PO & PSO Attainment



CO, PO and PSO Correlation for M.Tech 1st Semester (Power System) 2020-21

High Power Converters (MPSE109)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	1	2	6	8	0.75	3	1
Anant Kumar Maurya	2051602	1	1	1	2	5	8	0.625	3	1
Anurag Pal	2051603	1		1	2	4	6	0.66666667	3	1
Arun Yadav	2051604	1	2	1	2	6	8	0.75	3	1
Chandra Kant Yadav	2051605	1			2	3	3	1	3	1
Gaurav Mishra	2051606	1	2	2	2	7	8	0.875	3	1
Mohd. Arkam	2051607	1	1		2	4	5	0.8	3	1
Neha Pal	2051608	1	1	2	2	6	8	0.75	3	1
Padmakar Tripathi	2051609	1	2		2	5	5	1	3	1
Shristi Shashi	2051610	1		1	2	4	6	0.66666667	3	1
Umesh Chandra Patel	2051611	1	1	2	2	6	8	0.75	3	1
Vijay Chand	2051612	1	2	1	2	6	8	0.75	3	1
Gurupreet Singh	2051613	1	2	1	2	6	8	0.75	3	1
						0	0	AVG	AVG	ATTAINED
		13	16	13	26	68		0.779	3.00	1

CO2										
Questions		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	1	1	2	5	7	0.71428571	3	1
Anant Kumar Maurya	2051602	1	2	1	2	6	7	0.85714286	3	1
Anurag Pal	2051603	1	2	1	2	6	7	0.85714286	3	1
Arun Yadav	2051604	1	2	1	2	6	7	0.85714286	3	1
Chandra Kant Yadav	2051605	1	2	1	2	6	7	0.85714286	3	1
Gaurav Mishra	2051606	1	3	1	2	7	7	1	3	1
Mohd. Arkam	2051607	1	2	1	2	6	7	0.85714286	3	1
Neha Pal	2051608	1		1	2	4	4	1	3	1
Padmakar Tripathi	2051609	1		1	2	4	4	1	3	1
Shristi Shashi	2051610	1	2	1	2	6	7	0.85714286	3	1
Umesh Chandra Patel	2051611	1	2	1	2	6	7	0.85714286	3	1
Vijay Chand	2051612	1		1	2	4	4	1	3	1
Gurupreet Singh	2051613	1	1	1	2	5	7	0.71428571	3	1
								AVG	AVG	ATTAINED
								0.879	3.00	1

CO3

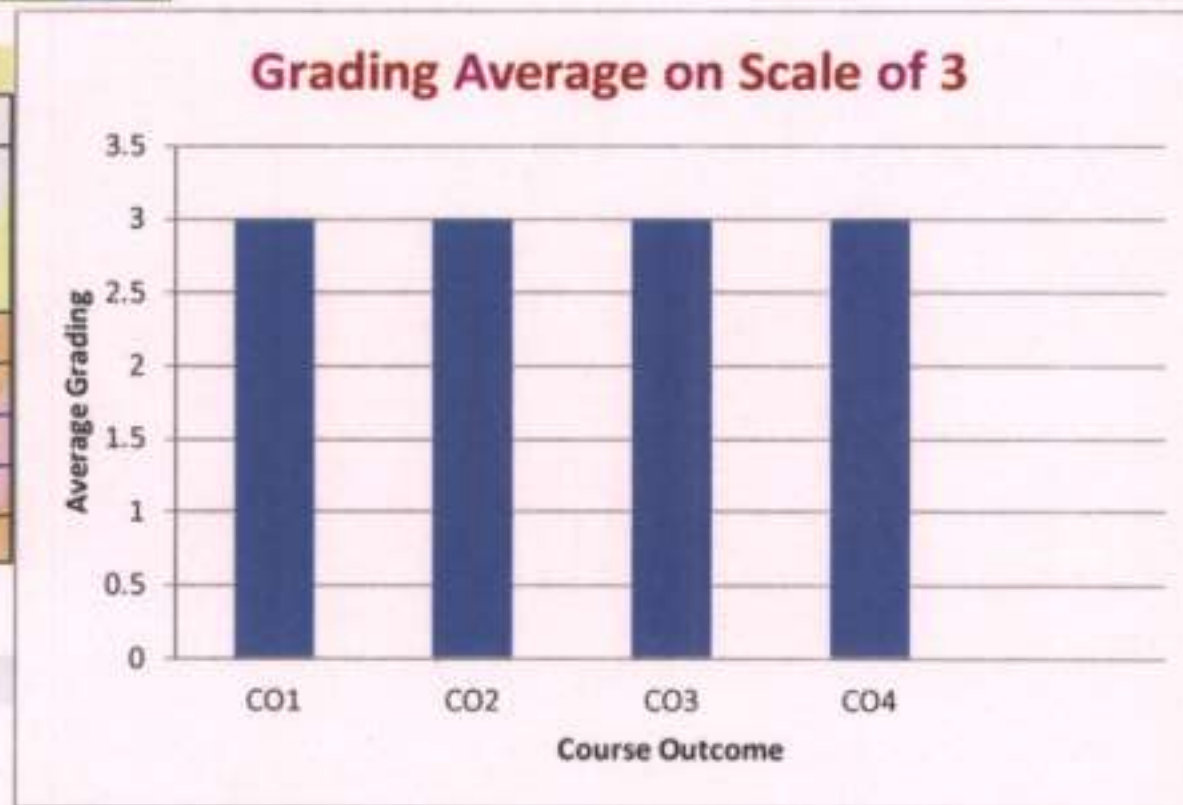
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q1	Q4						
Max. Marks		1	3	3		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	3	6	7	0.85714286	3	1
Anant Kumar Maurya	2051602	1		3	4	4	1	3	1
Anurag Pal	2051603	1	2	3	6	7	0.85714286	3	1
Arun Yadav	2051604	1	2	3	6	7	0.85714286	3	1
Chandra Kant Yadav	2051605	1		3	4	4	1	3	1
Gaurav Mishra	2051606	1	3	3	7	7	1	3	1
Mohd. Arkam	2051607	1	1	3	5	7	0.71428571	3	1
Neha Pal	2051608	1	2	3	6	7	0.85714286	3	1
Padmakar Tripathi	2051609	1		3	4	4	1	3	1
Shristi Shashi	2051610	1		3	4	4	1	3	1
Umesh Chandra Patel	2051611	1	2	3	6	7	0.85714286	3	1
Vijay Chand	2051612	1	1	3	5	7	0.71428571	3	1
Gurupreet Singh	2051613	1	2	3	6	7	0.85714286	3	1
							AVG	AVG	ATTAINED
							0.890	3.00	1

CO4

Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q3	Q5						
Max. Marks		2	3	3		8			
Abdul Mukhtadir Mohd Ashhar	2051601			3	3	3	1	3	1
Anant Kumar Maurya	2051602	1	2	3	6	8	0.75	3	1
Anurag Pal	2051603			3	3	3	1	3	1
Arun Yadav	2051604	2	1	3	6	8	0.75	3	1
Chandra Kant Yadav	2051605		2	3	5	6	0.8333333	3	1
Gaurav Mishra	2051606	2	1	3	6	8	0.75	3	1
Mohd. Arkam	2051607		2	3	5	6	0.8333333	3	1
Neha Pal	2051608			3	3	3	1	3	1
Padmakar Tripathi	2051609		2	3	5	6	0.8333333	3	1
Shristi Shashi	2051610	1		3	4	5	0.8	3	1
Umesh Chandra Patel	2051611	1	3	3	7	8	0.875	3	1
Vijay Chand	2051612	2	1	3	6	8	0.75	3	1
Gurupreet Singh	2051613	1	2	3	6	8	0.75	3	1
							AVG	AVG	ATTAINED
							0.840	3.00	1

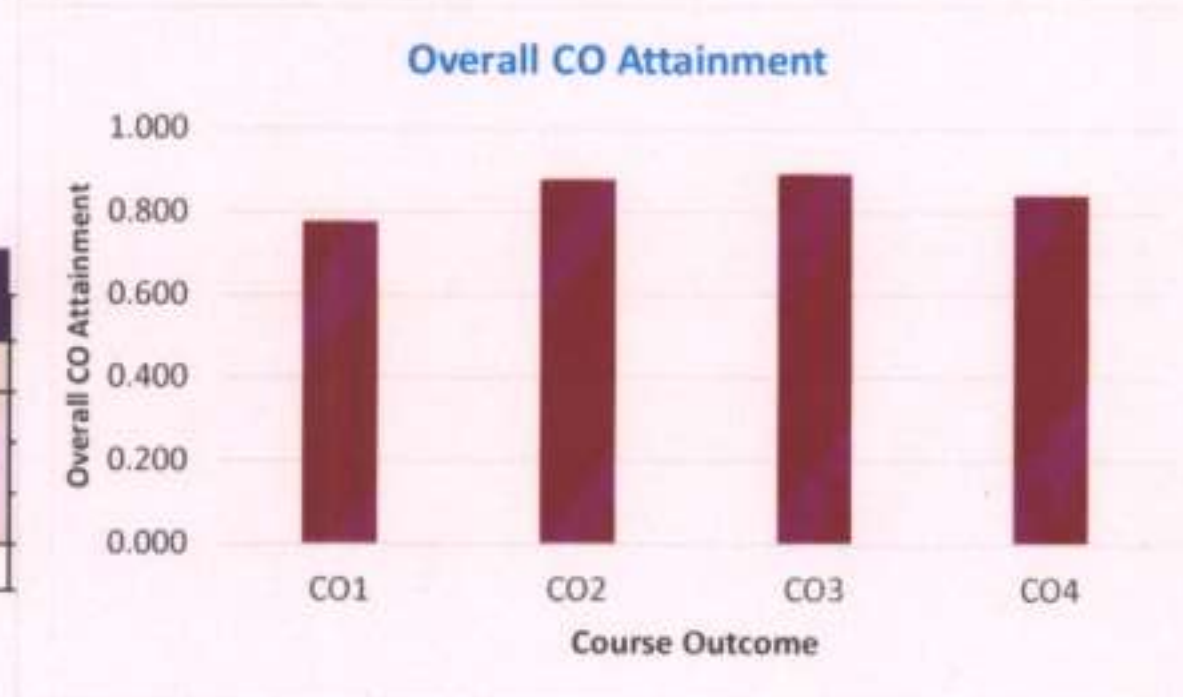
Total No. of Sudents for Batch **13**

Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.77949
CO2	3	1			0.87912
CO3	3	1			0.89011
CO4	3	1			0.84038



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

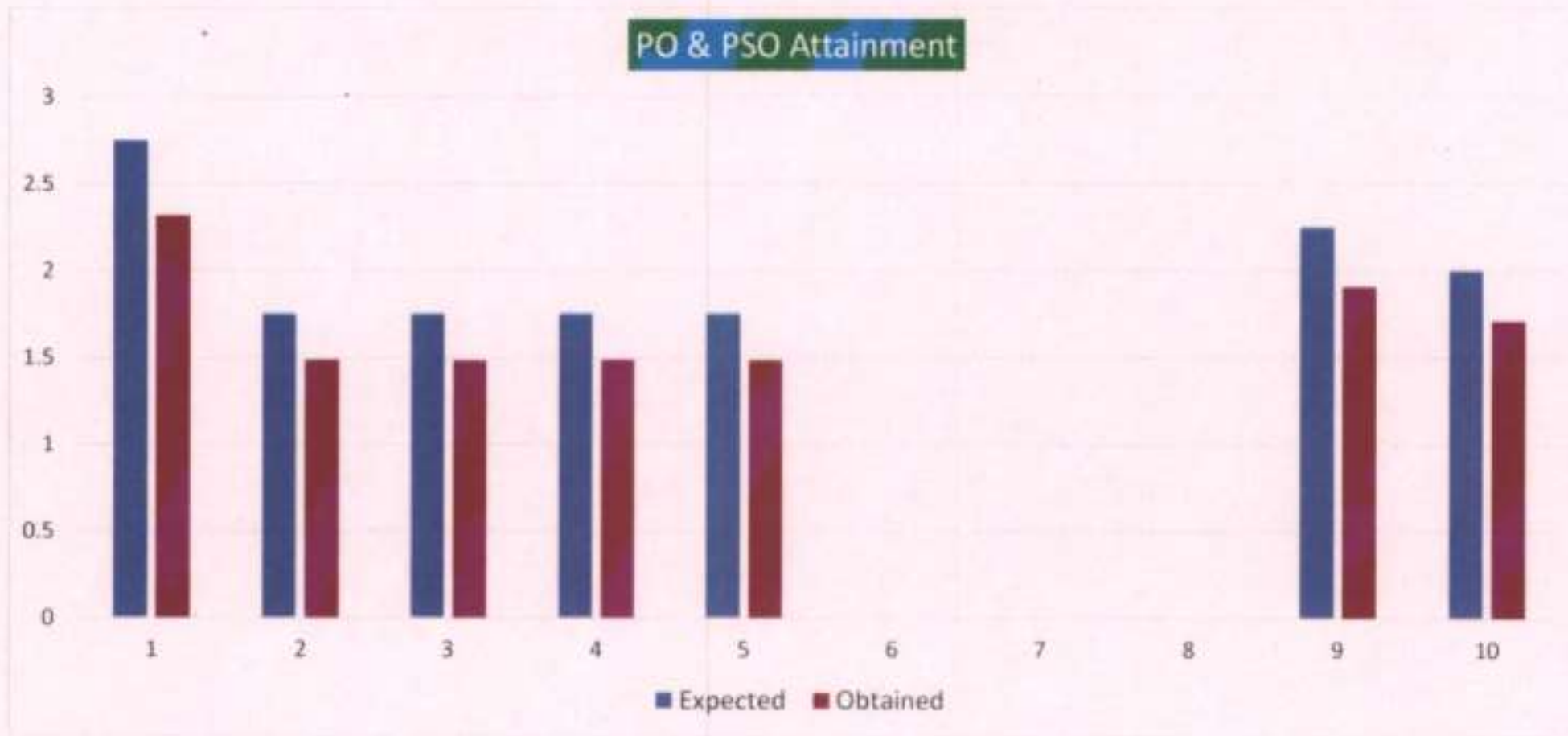


Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.779
CO2	0.879
CO3	0.890
CO4	0.840

CO, PO and PSO correlation												
Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Learn the characteristics of PSDs such as SCRs, GTOs, IGBTs and use them in practical systems	3	1	1	1	1				2	1
	CO2	Knowledge of working of multi-level VSIs, DC-DC switched mode converters, cyclo-converters and PWM techniques and the ability to use them properly	2	1	2	1	2				1	1
	CO3	Acquire knowledge of power conditioners and their applications	3	2	1	2	1				3	3
	CO4	Ability to design power circuit and protection circuit of PSDs and converters	3	3	3	3	3				3	3
		Expected	2.75	1.75	1.75	1.75	1.75	0	0	0	2.25	2

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Learn the characteristics of PSDs such as SCRs, GTOs, IGBTs and use them in practical systems	2.338462	0.779487179	0.779487179	0.779487179	0.779487179				1.558974359	0.779487179
	CO2	Knowledge of working of multi-level VSIs, DC-DC switched mode converters, cyclo-converters and PWM techniques and the ability to use them properly	1.758242	0.879120879	1.758241758	0.879120879	1.758241758				0.879120879	0.879120879
	CO3	Acquire knowledge of power conditioners and their applications	2.67033	1.78021978	0.89010989	1.78021978	0.89010989				2.67032967	2.67032967
	CO4	Ability to design power circuit and protection circuit of PSDs and converters	2.521154	2.521153846	2.521153846	2.521153846	2.521153846				2.521153846	2.521153846
		Obtained	2.322047	1.489995421	1.487248168	1.489995421	1.487248168	0	0	0	1.907394689	1.712522894
		%PO	0.844381	0.851425955	0.849856096	0.851425955	0.849856096	0	0	0	0.847730973	0.856261447

PO & PSO Attainment



[Handwritten signature]

CO, PO and PSO Correlation for M.Tech 1st Semester (Power System) 2020-21

Power System Analysis (MPSC101)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	1	2	6	8	0.75	3	1
Anant Kumar Maurya	2051602	1		2	2	5	6	0.833333333	3	1
Anurag Pal	2051603	1	2	1	2	6	8	0.75	3	1
Arun Yadav	2051604	1	2	2	2	7	8	0.875	3	1
Chandra Kant Yadav	2051605	1	2	2	2	7	8	0.875	3	1
Gaurav Mishra	2051606	1	2	3	2	8	8	1	3	1
Mohd. Arkam	2051607	1	1		2	4	5	0.8	3	1
Neha Pal	2051608	1	2	1	2	6	8	0.75	3	1
Padmakar Tripathi	2051609	1	2	2	2	7	8	0.875	3	1
Shristi Shashi	2051610	1		2	2	5	6	0.833333333	3	1
Umesh Chandra Patel	2051611	1	2		2	5	5	1	3	1
Vijay Chand	2051612	1	2		2	5	5	1	3	1
Gurupreet Singh	2051613	1	2	2	2	7	8	0.875	3	1
								AVG	AVG	ATTAINED
		13	21	18	26	78		0.863	3.00	1

CO2										
Questions		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q2	Q4	Q1						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	1	2	6	7	0.85714286	3	1
Anant Kumar Maurya	2051602	1	2	1	2	6	7	0.85714286	3	1
Anurag Pal	2051603	1	3	1	2	7	7	1	3	1
Arun Yadav	2051604	1	3	1	2	7	7	1	3	1
Chandra Kant Yadav	2051605	1		1	2	4	4	1	3	1
Gaurav Mishra	2051606	1	2	1	2	6	7	0.85714286	3	1
Mohd. Arkam	2051607	1	1	1	2	5	7	0.71428571	3	1
Neha Pal	2051608	1		1	2	4	4	1	3	1
Padmakar Tripathi	2051609	1	3	1	2	7	7	1	3	1
Shristi Shashi	2051610	1	3	1	2	7	7	1	3	1
Umesh Chandra Patel	2051611	1	2	1	2	6	7	0.85714286	3	1
Vijay Chand	2051612	1	1	1	2	5	7	0.71428571	3	1
Gurupreet Singh	2051613	1		1	2	4	4	1	3	1
								AVG	AVG	ATTAINED
								0.912	3.00	1

CO3

		T2	Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q4						
Max. Marks		3	2		5			
Abdul Mukhtadir Mohd Ashhar	2051601	2	2	4	5	0.8	3	1
Anant Kumar Maurya	2051602	2	2	4	5	0.8	3	1
Anurag Pal	2051603	2	2	4	5	0.8	3	1
Arun Yadav	2051604	1	2	3	5	0.6	3	1
Chandra Kant Yadav	2051605		2	2	2	1	3	1
Gaurav Mishra	2051606	3	2	5	5	1	3	1
Mohd. Arkam	2051607		2	2	2	1	3	1
Neha Pal	2051608	1	2	3	5	0.6	3	1
Padmakar Tripathi	2051609	1	2	3	5	0.6	3	1
Shristi Shashi	2051610	2	2	4	5	0.8	3	1
Umesh Chandra Patel	2051611	2	2	4	5	0.8	3	1
Vijay Chand	2051612	2	2	4	5	0.8	3	1
Gurupreet Singh	2051613		2	2	2	1	3	1
						AVG	AVG	ATTAINED
						0.815	3.00	1

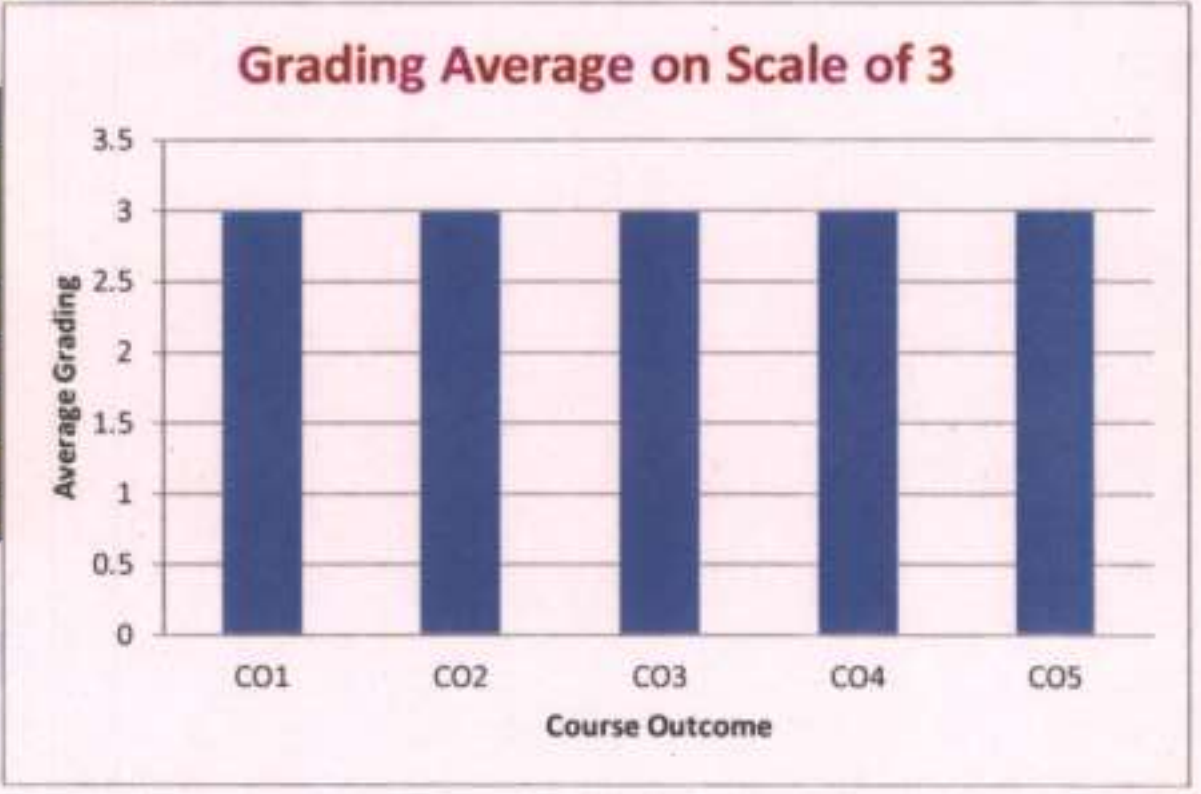
CO4									
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q2	Q3						
Max. Marks		1	2	2		5			
Abdul Mukhtadir Mohd Ashhar	2051601	1		2	3	3	1	3	1
Anant Kumar Maurya	2051602	1	2	2	5	5	1	3	1
Anurag Pal	2051603	1	2	2	5	5	1	3	1
Arun Yadav	2051604	1	2	2	5	5	1	3	1
Chandra Kant Yadav	2051605	1	2	2	5	5	1	3	1
Gaurav Mishra	2051606	1	2	2	5	5	1	3	1
Mohd. Arkam	2051607	1	2	2	5	5	1	3	1
Neha Pal	2051608	1	2	2	5	5	1	3	1
Padmakar Tripathi	2051609	1	2	2	5	5	1	3	1
Shristi Shashi	2051610	1		2	3	3	1	3	1
Umesh Chandra Patel	2051611	1	2	2	5	5	1	3	1
Vijay Chand	2051612	1	1	2	4	5	0.8	3	1
Gurupreet Singh	2051613	1	2	2	5	5	1	3	1
							AVG	AVG	ATTAINED
							0.985	3.00	1

CO5

			Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
Questions		Q5						
Max. Marks		3	2		5			
Abdul Mukhtadir Mohd Ashhar	2051601	2	2	4	5	0.8	3	1
Anant Kumar Maurya	2051602	1	2	3	5	0.6	3	1
Anurag Pal	2051603		2	2	2	1	3	1
Arun Yadav	2051604	2	2	4	5	0.8	3	1
Chandra Kant Yadav	2051605	1	2	3	5	0.6	3	1
Gaurav Mishra	2051606	2	2	4	5	0.8	3	1
Mohd. Arkam	2051607	1	2	3	5	0.6	3	1
Neha Pal	2051608	1	2	3	5	0.6	3	1
Padmakar Tripathi	2051609	2	2	4	5	0.8	3	1
Shristi Shashi	2051610	2	2	4	5	0.8	3	1
Umesh Chandra Patel	2051611	1	2	3	5	0.6	3	1
Vijay Chand	2051612	2	2	4	5	0.8	3	1
Gurupreet Singh	2051613		2	2	2	1	3	1
						AVG	AVG	ATTAINED
						0.754	3.00	1

Total No. of Students for Batch 13

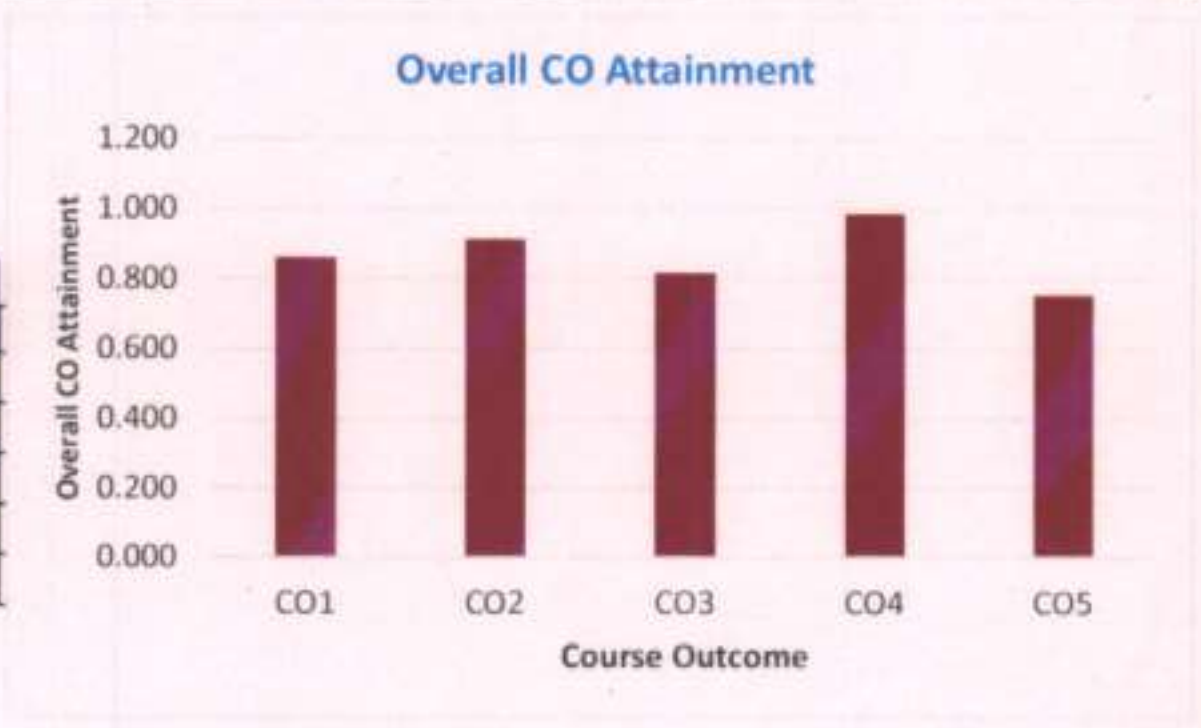
Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.86282
CO2	3	1			0.91209
CO3	3	1			0.81538
CO4	3	1			0.98462
CO5	3	1			0.75385



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y
CO5	100.00%	Y

CO	Overall(Direct method) Overall CO Attainment
CO1	0.863
CO2	0.912
CO3	0.815
CO4	0.985
CO5	0.754



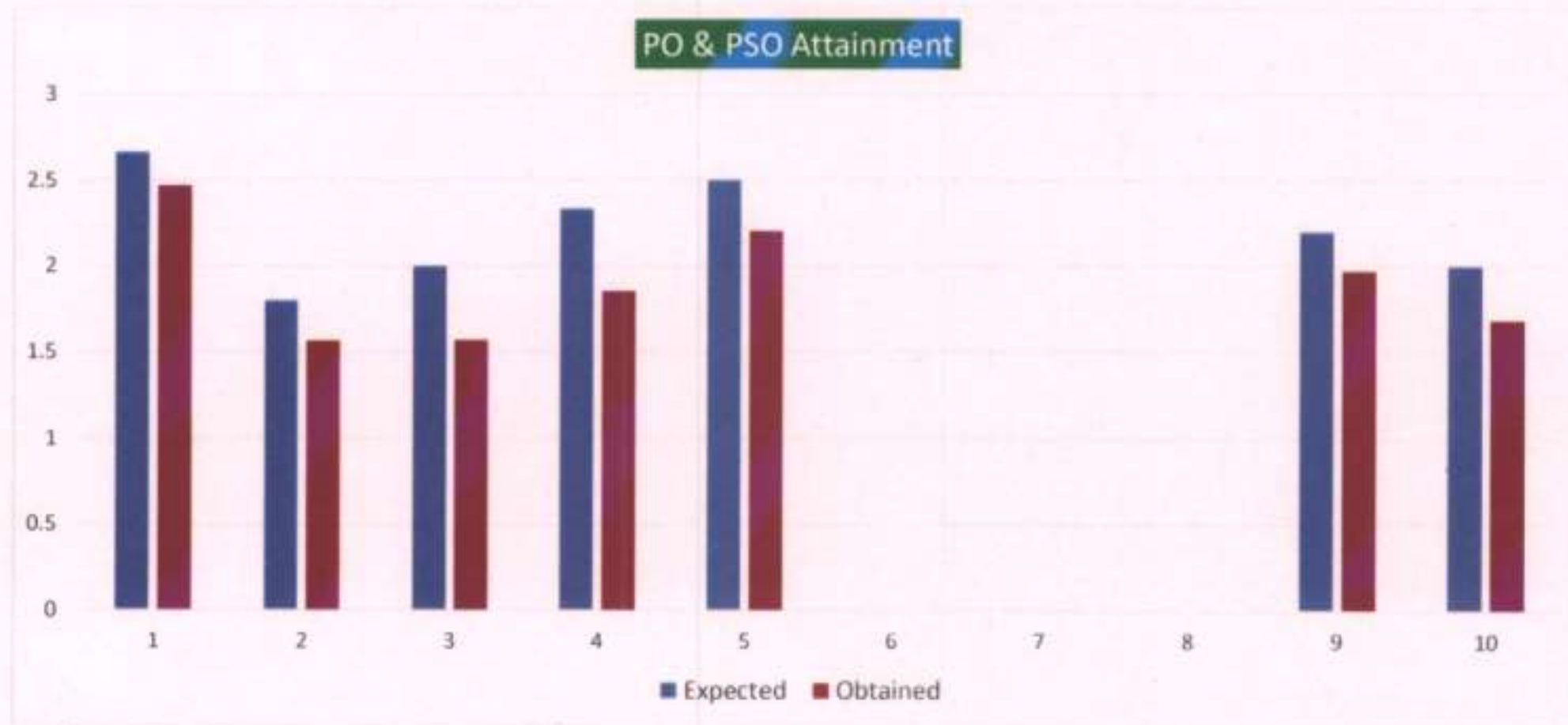
[Handwritten signature]

CO, PO and PSO correlation

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Able to calculate voltage phasors at all buses , given the data using various methods of load flow	2	2		1	3				3	2
	CO2	Able to calculate fault currents in each phase	3	2			2				3	2
	CO3	Rank various contingencies according to their severity		1	2	3	3				1	2
	CO4	Estimate the bus voltage phasors given various quantities viz. power flow, voltages, taps , CB status etc	3	2			2				3	1
	CO5	Estimate closeness to voltage collapse and calculate PV curves using continuation power flow		2	2	3					1	3
Expected			2.666667	1.8	2	2.33333333	2.5	0	0	0	2.2	2

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Able to calculate voltage phasors at all buses , given the data using various methods of load flow	1.725641	1.72564103		0.86282051	2.588461538				2.58846154	1.72564103
	CO2	Able to calculate fault currents in each phase	2.736264	1.82417582			1.824175824				2.73626374	1.82417582
	CO3	Rank various contingencies according to their severity		0.81538462	1.63076923	2.44615385	2.446153846				0.81538462	1.63076923
	CO4	Estimate the bus voltage phasors given various quantities viz. power flow, voltages, taps , CB status etc	2.953846	1.96923077			1.969230769				2.95384615	0.98461538
	CO5	Estimate closeness to voltage collapse and calculate PV curves using continuation power flow		1.50769231	1.50769231	2.26153846					0.75384615	2.26153846
Obtained			2.471917	1.56842491	1.56923077	1.85683761	2.207005495	0	0	0	1.96956044	1.68534799

%PO	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
	0.926969	0.87134717	0.78461538	0.79578755	0.882802198	0	0	0	0.89525475	0.84267399



CO, PO and PSO Correlation for M.Tech 1st Semester (Power System) 2020-21

Power System Dynamics-I (MPSC102)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	1	2	6	8	0.75	3	1
Anant Kumar Maurya	2051602		2	2	2	6	7	0.85714286	3	1
Anurag Pal	2051603	1	2	2	2	7	8	0.875	3	1
Arun Yadav	2051604	1	2	2	2	7	8	0.875	3	1
Chandra Kant Yadav	2051605	1	2	3	2	8	8	1	3	1
Gaurav Mishra	2051606	1	2	2	2	7	8	0.875	3	1
Mohd. Arkam	2051607	1	2	3	2	8	8	1	3	1
Neha Pal	2051608	1	2	3	2	8	8	1	3	1
Padmakar Tripathi	2051609	1	2	2	2	7	8	0.875	3	1
Shristi Shashi	2051610	1	2	3	2	8	8	1	3	1
Umesh Chandra Patel	2051611	1	1	2	2	6	8	0.75	3	1
Vijay Chand	2051612	1	2	2	2	7	8	0.875	3	1
Gurupreet Singh	2051613	1	1	2	2	6	8	0.75	3	1
								AVG	AVG	ATTAINED
		12	24	29	26	91		0.883	3.00	1

CO2										
Questions		T1		T2	Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	3	1	2	7	7	1	3	1
Anant Kumar Maurya	2051602	1	2	1	2	6	7	0.85714286	3	1
Anurag Pal	2051603	1	3	1	2	7	7	1	3	1
Arun Yadav	2051604	1	1	1	2	5	7	0.71428571	3	1
Chandra Kant Yadav	2051605	1		1	2	4	4	1	3	1
Gaurav Mishra	2051606	1	2	1	2	6	7	0.85714286	3	1
Mohd. Arkam	2051607	1	2	1	2	6	7	0.85714286	3	1
Neha Pal	2051608	1	1	1	2	5	7	0.71428571	3	1
Padmakar Tripathi	2051609		2	1	2	5	6	0.83333333	3	1
Shristi Shashi	2051610	1	2		2	5	6	0.83333333	3	1
Umesh Chandra Patel	2051611	1	3	1	2	7	7	1	3	1
Vijay Chand	2051612	1	1	1	2	5	7	0.71428571	3	1
Gurupreet Singh	2051613	1	2	1	2	6	7	0.85714286	3	1
								AVG	AVG	ATTAINED
								0.864	3.00	1

CO3

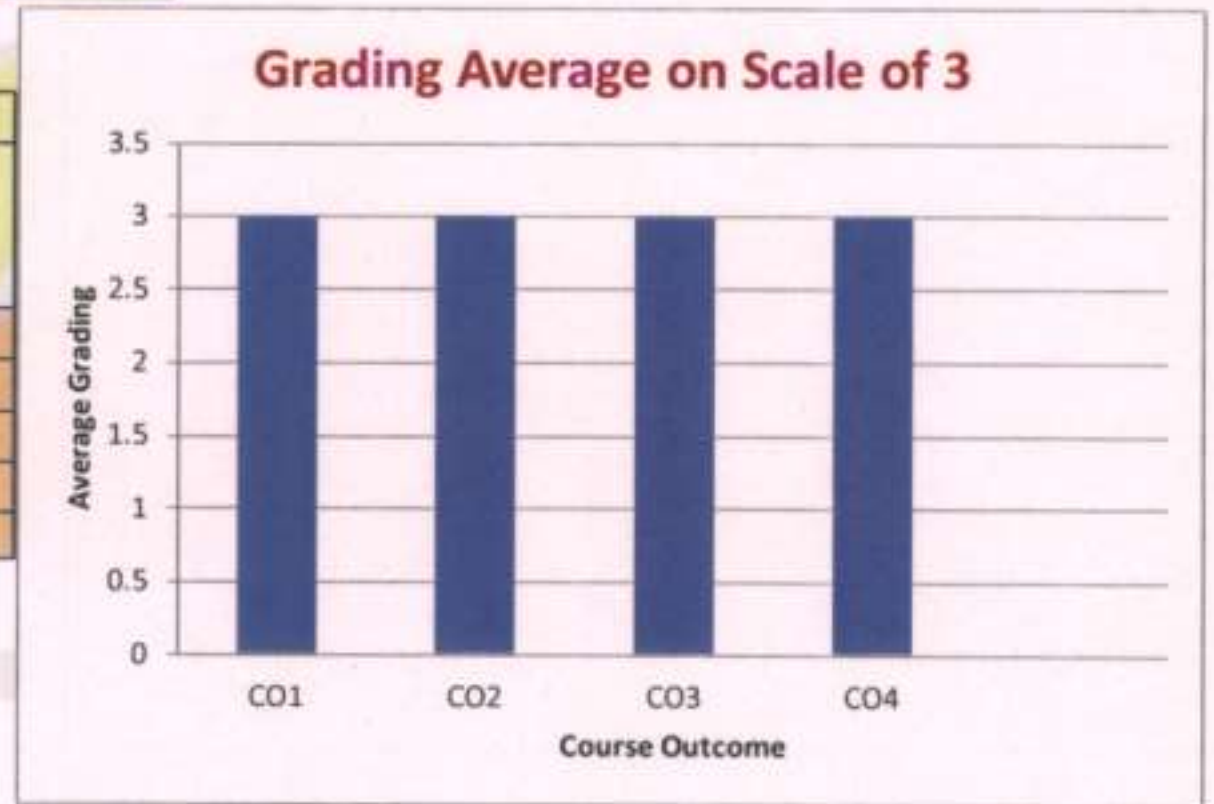
		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q1	Q4						
Questions		1	3	3		7			
Max. Marks		1	3	3		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	3	3	7	7	1	3	1
Anant Kumar Maurya	2051602	1	2	3	6	7	0.85714286	3	1
Anurag Pal	2051603	1	3	3	7	7	1	3	1
Arun Yadav	2051604	1	2	3	6	7	0.85714286	3	1
Chandra Kant Yadav	2051605	1	1	3	5	7	0.71428571	3	1
Gaurav Mishra	2051606	1	3	3	7	7	1	3	1
Mohd. Arkam	2051607		2	3	5	6	0.83333333	3	1
Neha Pal	2051608	1	1	3	5	7	0.71428571	3	1
Padmakar Tripathi	2051609	1	1	3	5	7	0.71428571	3	1
Shristi Shashi	2051610	1	2	3	6	7	0.85714286	3	1
Umesh Chandra Patel	2051611	1	2	3	6	7	0.85714286	3	1
Vijay Chand	2051612	1	1	3	5	7	0.71428571	3	1
Gurupreet Singh	2051613	1	3	3	7	7	1	3	1
							AVG	AVG	ATTAINED
							0.855	3.00	1

CO4

Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q3	Q5						
Max. Marks		2	3	3		8			
Abdul Mukhtadir Mohd Ashhar	2051601	2	2	3	7	8	0.875	3	1
Anant Kumar Maurya	2051602	2	2	3	7	8	0.875	3	1
Anurag Pal	2051603	2	1	3	6	8	0.75	3	1
Arun Yadav	2051604	2	3	3	8	8	1	3	1
Chandra Kant Yadav	2051605	2	3	3	8	8	1	3	1
Gaurav Mishra	2051606	2	2	3	7	8	0.875	3	1
Mohd. Arkam	2051607	2	2	3	7	8	0.875	3	1
Neha Pal	2051608	2	2	3	7	8	0.875	3	1
Padmakar Tripathi	2051609	2	3	3	8	8	1	3	1
Shristi Shashi	2051610	2	2	3	7	8	0.875	3	1
Umesh Chandra Patel	2051611	2	1	3	6	8	0.75	3	1
Vijay Chand	2051612	2	3	3	8	8	1	3	1
Gurupreet Singh	2051613	2	1	3	6	8	0.75	3	1
							AVG	AVG	ATTAINED
							0.885	3.00	1

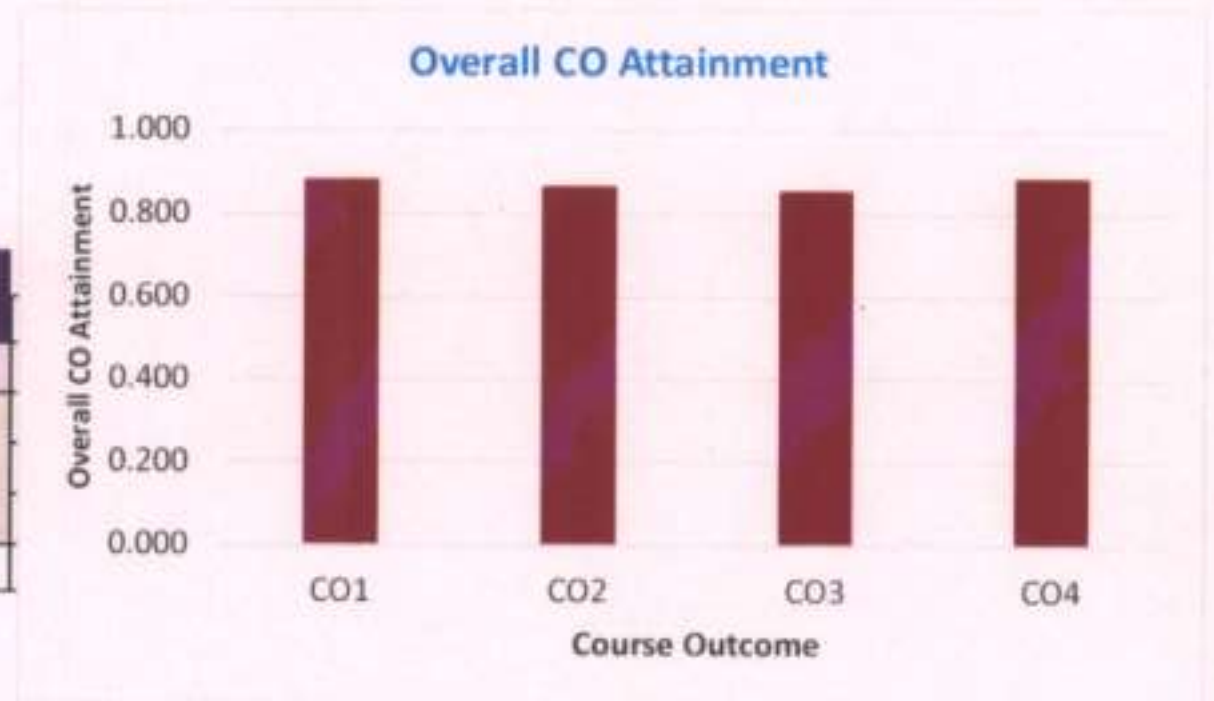
Total No. of Sudents for Batch 13

Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.88324
CO2	3	1			0.86447
CO3	3	1			0.85531
CO4	3	1			0.88462



No. of Students Scoring >=60%

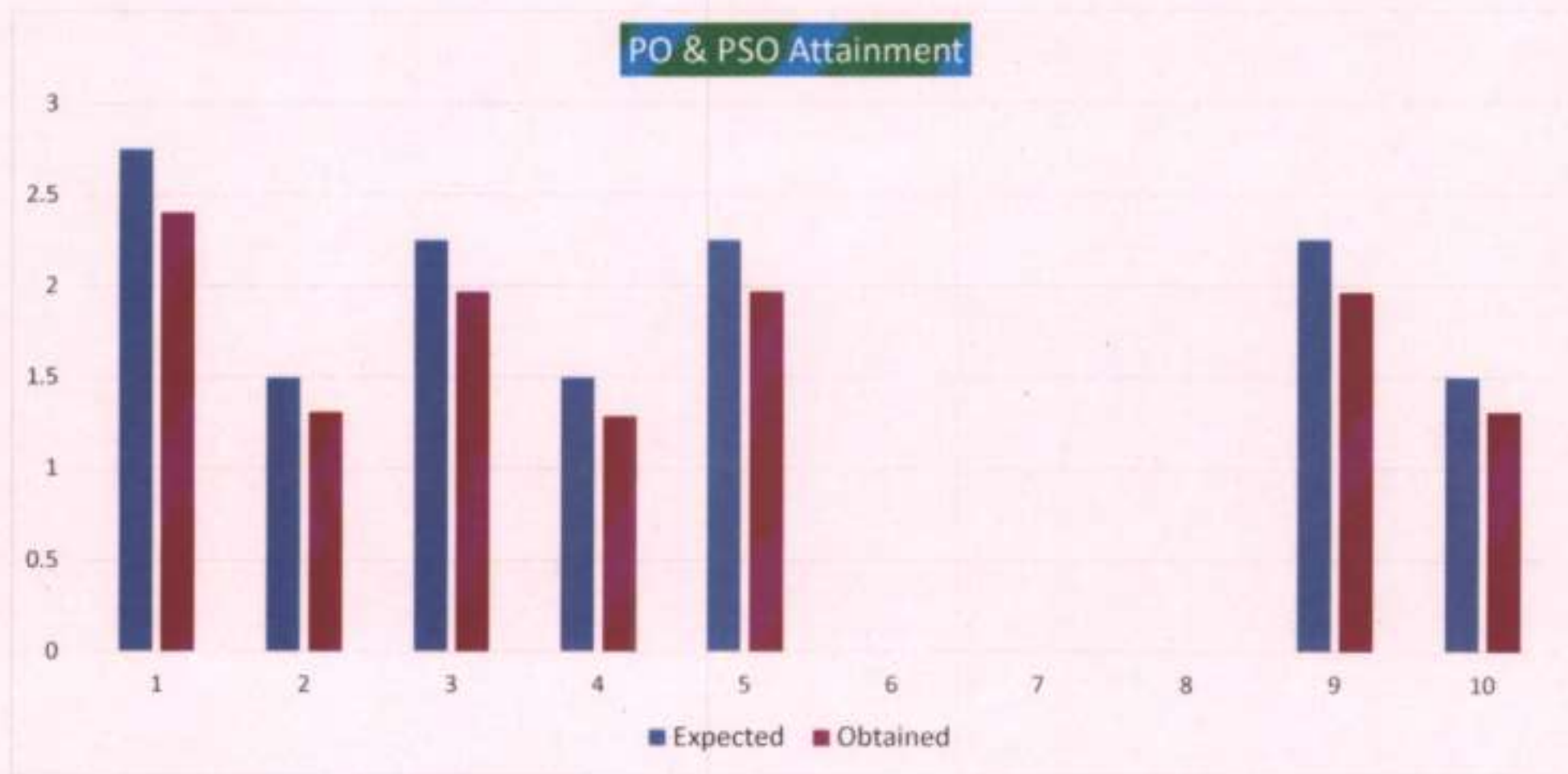
Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y



Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.883
CO2	0.864
CO3	0.855
CO4	0.885

CO, PO and PSO correlation												
Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand the modeling of synchronous machine in details	3	2	3		2				2	1
	CO2	Carry out simulation studies of power system dynamics using MATLAB-SIMULINK, MI POWER	2	1	3	1	3				1	3
	CO3	Carry out stability analysis with and without power system stabilizer (PSS)	3	2	1	2	1				3	1
	CO4	Understand the load modeling in power system	3	1	2		3				3	1
Expected			2.75	1.5	2.25	1.5	2.25	0	0	0	2.25	1.5

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand the modeling of synchronous machine in details	2.649725	1.76648352	2.64972527		1.766484				1.76648352	0.88324176
	CO2	Carry out simulation studies of power system dynamics using MATLAB-SIMULINK, MI POWER	1.728938	0.86446886	2.59340659	0.86446886	2.593407				0.86446886	2.59340659
	CO3	Carry out stability analysis with and without power system stabilizer (PSS)	2.565934	1.71062271	0.85531136	1.71062271	0.855311				2.56593407	0.85531136
	CO4	Understand the load modeling in power system	2.653846	0.88461538	1.76923077		2.653846				2.65384615	0.88461538
Obtained			2.399611	1.30654762	1.9669185	1.28754579	1.967262	0	0	0	1.96268315	1.30414377
%PO			0.872586	0.87103175	0.874186	0.85836386	0.874339	0	0	0	0.87230362	0.86942918



CO, PO and PSO Correlation for M.Tech 1st Semester (Power System) 2020-21

Research Methodology & IPR (MPSRM150)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	2	2	7	8	0.875	3	1
Anant Kumar Maurya	2051602	1	2	2	2	7	8	0.875	3	1
Anurag Pal	2051603	1	2	1	2	6	8	0.75	3	1
Arun Yadav	2051604	1	2	3	2	8	8	1	3	1
Chandra Kant Yadav	2051605	1	2	2	2	7	8	0.875	3	1
Gaurav Mishra	2051606	1	2	2	2	7	8	0.875	3	1
Mohd. Arkam	2051607	1	2	2	2	7	8	0.875	3	1
Neha Pal	2051608	1	2	2	2	7	8	0.875	3	1
Padmakar Tripathi	2051609	1	2	3	2	8	8	1	3	1
Shristi Shashi	2051610	1	2	1	2	6	8	0.75	3	1
Umesh Chandra Patel	2051611	1	1	2	2	6	8	0.75	3	1
Vijay Chand	2051612	1	2	3	2	8	8	1	3	1
Gurupreet Singh	2051613		2	2	2	6	7	0.85714286	3	1
						0	0	AVG	AVG	ATTAINED
		12	25	27	26	90		0.874	3.00	1

CO2										
Questions		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	3	1	2	7	7	1	3	1
Anant Kumar Maurya	2051602	1		1	2	4	4	1	3	1
Anurag Pal	2051603	1	3	1	2	7	7	1	3	1
Arun Yadav	2051604	1	2	1	2	6	7	0.85714286	3	1
Chandra Kant Yadav	2051605		2	1	2	5	6	0.83333333	3	1
Gaurav Mishra	2051606	1	3	1	2	7	7	1	3	1
Mohd. Arkam	2051607	1	1	1	2	5	7	0.71428571	3	1
Neha Pal	2051608	1	2	1	2	6	7	0.85714286	3	1
Padmakar Tripathi	2051609	1	2	1	2	6	7	0.85714286	3	1
Shristi Shashi	2051610	1	3	1	2	7	7	1	3	1
Umesh Chandra Patel	2051611	1	2	1	2	6	7	0.85714286	3	1
Vijay Chand	2051612	1	1		2	4	6	0.66666667	3	1
Gurupreet Singh	2051613	1	2	1	2	6	7	0.85714286	3	1
								AVG	AVG	ATTAINED
								0.885	3.00	1

CO3

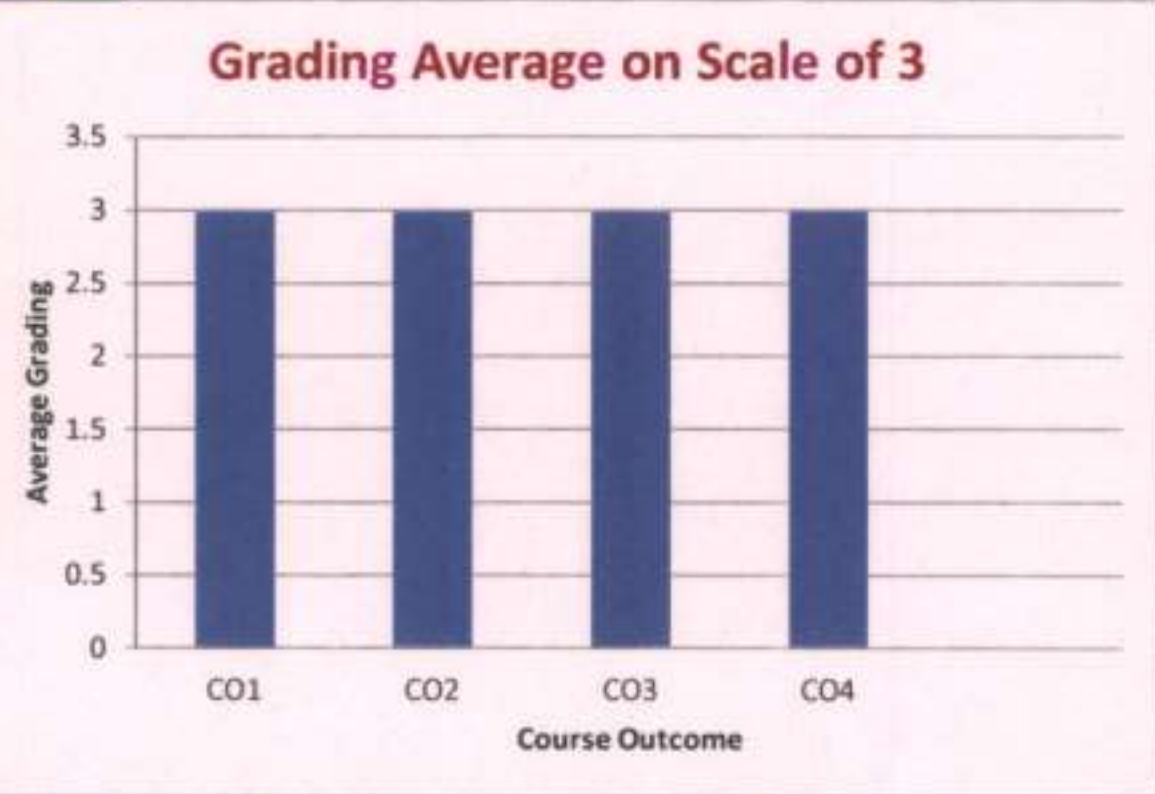
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q1	Q4						
Max. Marks		1	3	3		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	3	3	7	7	1	3	1
Anant Kumar Maurya	2051602	1	3	3	7	7	1	3	1
Anurag Pal	2051603	1	2	3	6	7	0.85714286	3	1
Arun Yadav	2051604	1	1	3	5	7	0.71428571	3	1
Chandra Kant Yadav	2051605	1	3	3	7	7	1	3	1
Gaurav Mishra	2051606	1	2	3	6	7	0.85714286	3	1
Mohd. Arkam	2051607	1	2	3	6	7	0.85714286	3	1
Neha Pal	2051608	1	2	3	6	7	0.85714286	3	1
Padmakar Tripathi	2051609	1	3	3	7	7	1	3	1
Shristi Shashi	2051610		2	3	5	6	0.83333333	3	1
Umesh Chandra Patel	2051611	1	2	3	6	7	0.85714286	3	1
Vijay Chand	2051612	1	2	3	6	7	0.85714286	3	1
Gurupreet Singh	2051613	1	3	3	7	7	1	3	1
							AVG	AVG	ATTAINED
							0.899	3.00	1

CO4

Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q3	Q5						
Max. Marks		2	3	3		8			
Abdul Mukhtadir Mohd Ashhar	2051601	2	1	3	6	8	0.75	3	1
Anant Kumar Maurya	2051602	2	2	3	7	8	0.875	3	1
Anurag Pal	2051603	2	3	3	8	8	1	3	1
Arun Yadav	2051604	2	3	3	8	8	1	3	1
Chandra Kant Yadav	2051605	2	2	3	7	8	0.875	3	1
Gaurav Mishra	2051606	2	2	3	7	8	0.875	3	1
Mohd. Arkam	2051607	2	2	3	7	8	0.875	3	1
Neha Pal	2051608	2	3	3	8	8	1	3	1
Padmakar Tripathi	2051609	2	1	3	6	8	0.75	3	1
Shristi Shashi	2051610	2	2	3	7	8	0.875	3	1
Umesh Chandra Patel	2051611	2	3	3	8	8	1	3	1
Vijay Chand	2051612	2	2	3	7	8	0.875	3	1
Gurupreet Singh	2051613	2	2	3	7	8	0.875	3	1
							AVG	AVG	ATTAINED
							0.894	3.00	1

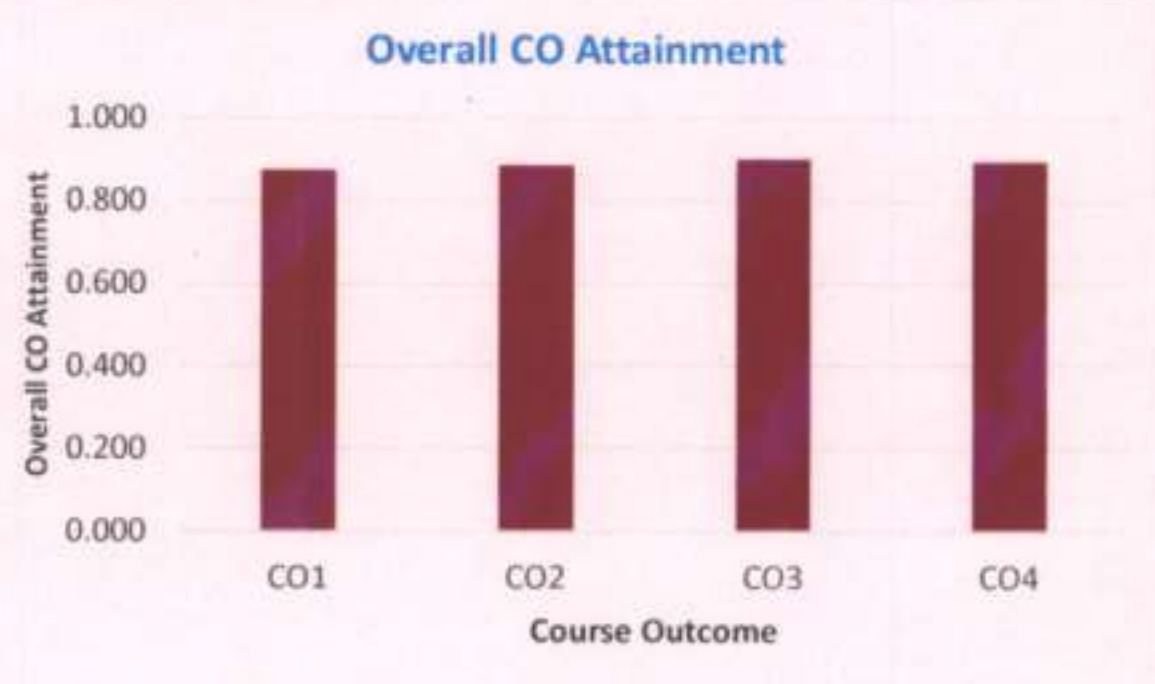
Total No. of Students for Batch **13**

Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.87363
CO2	3	1			0.88462
CO3	3	1			0.89927
CO4	3	1			0.89423



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

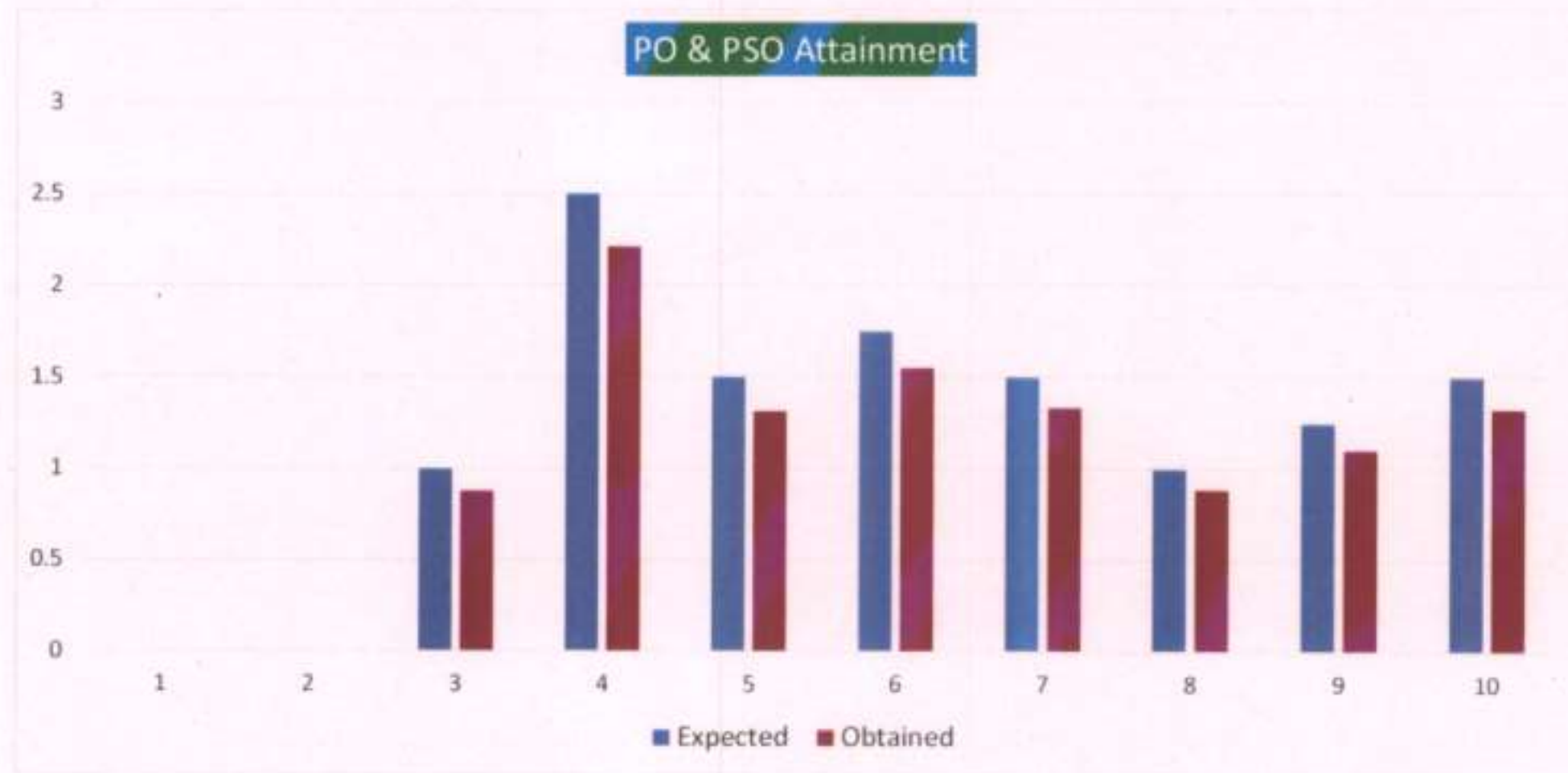


Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.874
CO2	0.885
CO3	0.899
CO4	0.894

CO, PO and PSO correlation

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand research problem formulation, Analyze research related information and Follow research ethics			1	3	2	2	1	1	2	2
	CO2	Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.			1	3	1	1	1	1	1	2
	CO3	Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.				2		2	2	1	1	1
	CO4	Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.				2		2	2	1	1	1
Expected			0	0	1	2.5	1.5	1.75	1.5	1	1.25	1.5

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand research problem formulation, Analyze research related information and Follow research ethics			0.87362637	2.62087912	1.747253	1.747253	0.873626	0.873626	1.74725275	1.74725275
	CO2	Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.			0.88461538	2.65384615	0.884615	0.884615	0.884615	0.884615	0.88461538	1.76923077
	CO3	Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.				1.7985348		1.798535	1.798535	0.899267	0.8992674	0.8992674
	CO4	Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.				1.78846154		1.788462	1.788462	0.894231	0.89423077	0.89423077
Obtained			0	0	0.87912088	2.2154304	1.315934	1.554716	1.33631	0.887935	1.10634158	1.32749542
%PO			0	0	0.87912088	0.88617216	0.877289	0.888409	0.890873	0.887935	0.88507326	0.88499695



CO, PO and PSO Correlation for M.Tech 1st Semester (Power System) 2020-21

Smart Grids (MPSE104)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1		2	2	5	6	0.83333333	3	1
Anant Kumar Maurya	2051602	1	2		2	5	5	1	3	1
Anurag Pal	2051603	1	2	1	2	6	8	0.75	3	1
Arun Yadav	2051604	1	2	1	2	6	8	0.75	3	1
Chandra Kant Yadav	2051605		1		2	3	4	0.75	3	1
Gaurav Mishra	2051606	1	2	2	2	7	8	0.875	3	1
Mohd. Arkam	2051607	1	2		2	5	5	1	3	1
Neha Pal	2051608	1	2	1	2	6	8	0.75	3	1
Padmakar Tripathi	2051609	1	1	1	2	5	8	0.625	3	1
Shristi Shashi	2051610	1	1		2	4	5	0.8	3	1
Umesh Chandra Patel	2051611	1	1	2	2	6	8	0.75	3	1
Vijay Chand	2051612	1		2	2	5	6	0.83333333	3	1
Gurupreet Singh	2051613		1	2	2	5	7	0.71428571	3	1
						0	0	AVG	AVG	ATTAINED
		11	17	14	26	68		0.802	3.00	1

CO2										
Questions		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2		2	5	6	0.833333333	3	1
Anant Kumar Maurya	2051602	1	2	1	2	6	7	0.85714286	3	1
Anurag Pal	2051603	1		1	2	4	4	1	3	1
Arun Yadav	2051604	1	2	1	2	6	7	0.85714286	3	1
Chandra Kant Yadav	2051605	1	2	1	2	6	7	0.85714286	3	1
Gaurav Mishra	2051606	1	3	1	2	7	7	1	3	1
Mohd. Arkam	2051607	1	1	1	2	5	7	0.71428571	3	1
Neha Pal	2051608	1		1	2	4	4	1	3	1
Padmakar Tripathi	2051609	1		1	2	4	4	1	3	1
Shristi Shashi	2051610	1	2	1	2	6	7	0.85714286	3	1
Umesh Chandra Patel	2051611	1	2	1	2	6	7	0.85714286	3	1
Vijay Chand	2051612	1	1	1	2	5	7	0.71428571	3	1
Gurupreet Singh	2051613	1	2	1	2	6	7	0.85714286	3	1
								AVG	AVG	ATTAINED
								0.877	3.00	1

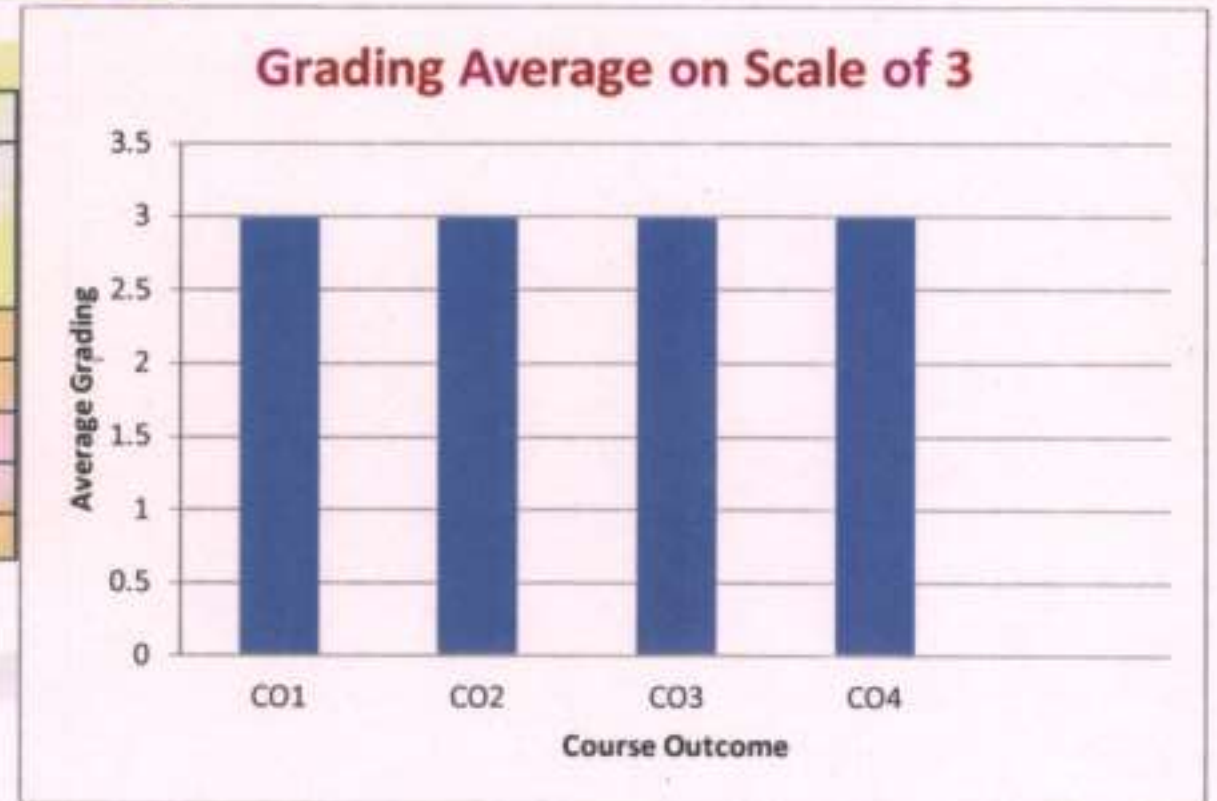
CO3

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target ≥60% (Y/N)
		Q1	Q4						
Questions		1	3						
Max. Marks		1	3	3		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	1	3	5	7	0.71428571	3	1
Anant Kumar Maurya	2051602	1	2	3	6	7	0.85714286	3	1
Anurag Pal	2051603	1		3	4	4	1	3	1
Arun Yadav	2051604	1	2	3	6	7	0.85714286	3	1
Chandra Kant Yadav	2051605	1	2	3	6	7	0.85714286	3	1
Gaurav Mishra	2051606	1	3	3	7	7	1	3	1
Mohd. Arkam	2051607	1	1	3	5	7	0.71428571	3	1
Neha Pal	2051608	1		3	4	4	1	3	1
Padmakar Tripathi	2051609	1	1	3	5	7	0.71428571	3	1
Shristi Shashi	2051610	1		3	4	4	1	3	1
Umesh Chandra Patel	2051611	1	2	3	6	7	0.85714286	3	1
Vijay Chand	2051612	1	1	3	5	7	0.71428571	3	1
Gurupreet Singh	2051613	1	2	3	6	7	0.85714286	3	1
							AVG	AVG	ATTAINED
							0.857	3.00	1

CO4									
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target $\geq 60\%$ (Y/N)
		Q3	Q5						
Max. Marks		2	3	3		8			
Abdul Mukhtadir Mohd Ashhar	2051601	2		3	5	5	1	3	1
Anant Kumar Maurya	2051602		1	3	4	6	0.6666667	3	1
Anurag Pal	2051603	2		3	5	5	1	3	1
Arun Yadav	2051604	2	1	3	6	8	0.75	3	1
Chandra Kant Yadav	2051605			3	3	3	1	3	1
Gaurav Mishra	2051606	2	1	3	6	8	0.75	3	1
Mohd. Arkam	2051607	2		3	5	5	1	3	1
Neha Pal	2051608		2	3	5	6	0.8333333	3	1
Padmakar Tripathi	2051609		1	3	4	6	0.6666667	3	1
Shristi Shashi	2051610	1		3	4	5	0.8	3	1
Umesh Chandra Patel	2051611	2	2	3	7	8	0.875	3	1
Vijay Chand	2051612	2	1	3	6	8	0.75	3	1
Gurupreet Singh	2051613	2	1	3	6	8	0.75	3	1
							AVG	AVG	ATTAINED
							0.834	3.00	1

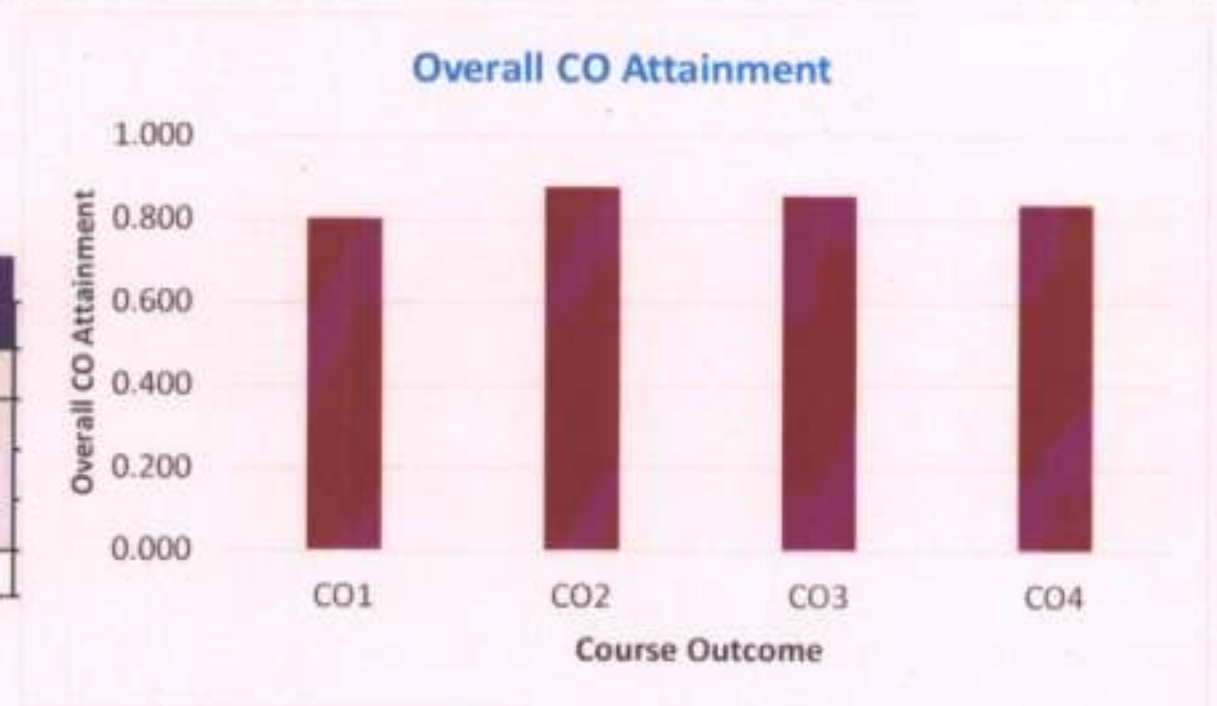
Total No. of Sudents for Batch **13**

Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.80238
CO2	3	1			0.87729
CO3	3	1			0.85714
CO4	3	1			0.83397



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y



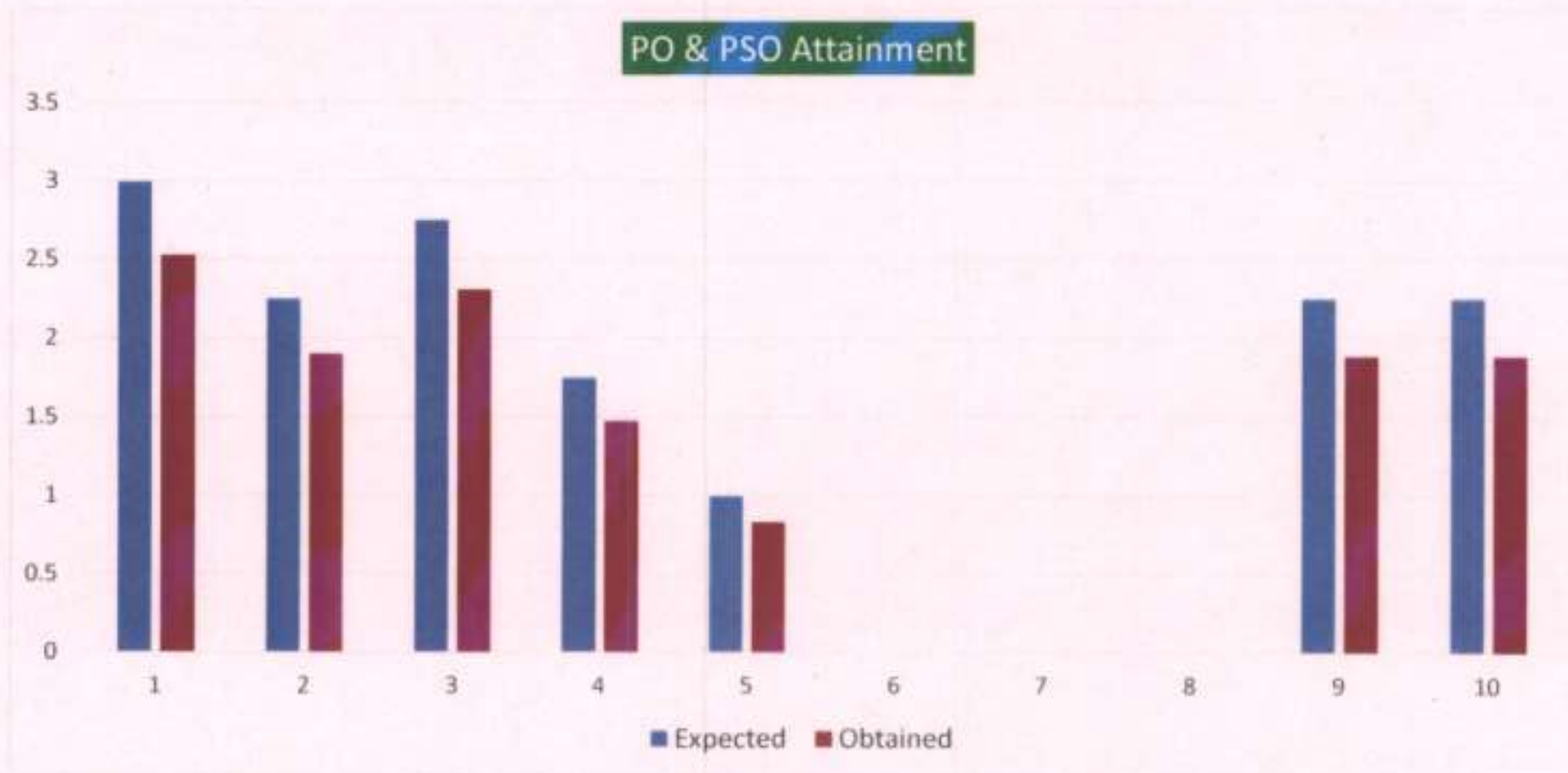
Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.802
CO2	0.877
CO3	0.857
CO4	0.834

CO, PO and PSO correlation

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Appreciate the difference between smart grid & conventional grid	3	2	3	1					3	2
	CO2	Apply smart metering concepts to industrial and commercial installations	3	3	2	2					2	1
	CO3	Formulate solutions in the areas of smart substations, distributed generation and wide area measurements	3	2	3	1					2	3
	CO4	Come up with smart grid solutions using modern communication technologies	3	2	3	3	1				2	3
Expected			3	2.25	2.75	1.75	1	0	0	0	2.25	2.25

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Appreciate the difference between smart grid & conventional grid	2.407143	1.6047619	2.40714286	0.80238095					2.40714286	1.6047619
	CO2	Apply smart metering concepts to industrial and commercial installations	2.631868	2.63186813	1.75457875	1.75457875					1.75457875	0.87728938
	CO3	Formulate solutions in the areas of smart substations, distributed generation and wide area measurements	2.571429	1.71428571	2.57142857	0.85714286					1.71428571	2.57142857
	CO4	Come up with smart grid solutions using modern communication technologies	2.501923	1.66794872	2.50192308	2.50192308	0.833974				1.66794872	2.50192308
Obtained			2.528091	1.90471612	2.30876832	1.47900641	0.833974	0	0	0	1.88598901	1.88885073
%PO			0.842697	0.8465405	0.83955211	0.84514652	0.833974	0	0	0	0.83821734	0.83948921

PO & PSO Attainment



CO, PO and PSO Correlation for M.Tech 1st Semester (Power System) 2020-21

Value Education (MPSA104)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	1	2	6	8	0.75	3	1
Anant Kumar Maurya	2051602	1	2		2	5	5	1	3	1
Anurag Pal	2051603	1	1	2	2	6	8	0.75	3	1
Arun Yadav	2051604	1	2	2	2	7	8	0.875	3	1
Chandra Kant Yadav	2051605	1	2	2	2	7	8	0.875	3	1
Gaurav Mishra	2051606	1	2	3	2	8	8	1	3	1
Mohd. Arkam	2051607	1		1	2	4	6	0.66666667	3	1
Neha Pal	2051608	1	2	1	2	6	8	0.75	3	1
Padmakar Tripathi	2051609	1		1	2	4	6	0.66666667	3	1
Shristi Shashi	2051610	1	1	1	2	5	8	0.625	3	1
Umesh Chandra Patel	2051611	1	2	2	2	7	8	0.875	3	1
Vijay Chand	2051612	1	1	3	2	7	8	0.875	3	1
Gurupreet Singh	2051613	1	2	1	2	6	8	0.75	3	1
						0	0	AVG	AVG	ATTAINED
		13	19	20	26	78		0.804	3.00	1

CO2										
Questions		T1		T2	Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	1	2	6	7	0.85714286	3	1
Anant Kumar Maurya	2051602	1	1	1	2	5	7	0.71428571	3	1
Anurag Pal	2051603	1	2	1	2	6	7	0.85714286	3	1
Arun Yadav	2051604	1	3	1	2	7	7	1	3	1
Chandra Kant Yadav	2051605	1	2	1	2	6	7	0.85714286	3	1
Gaurav Mishra	2051606	1	2	1	2	6	7	0.85714286	3	1
Mohd. Arkam	2051607	1	2	1	2	6	7	0.85714286	3	1
Neha Pal	2051608	1	1	1	2	5	7	0.71428571	3	1
Padmakar Tripathi	2051609	1	2	1	2	6	7	0.85714286	3	1
Shristi Shashi	2051610	1	2	1	2	6	7	0.85714286	3	1
Umesh Chandra Patel	2051611	1	3	1	2	7	7	1	3	1
Vijay Chand	2051612	1	2	1	2	6	7	0.85714286	3	1
Gurupreet Singh	2051613	1	1	1	2	5	7	0.71428571	3	1
								AVG	AVG	ATTAINED
								0.846	3.00	1

CO3

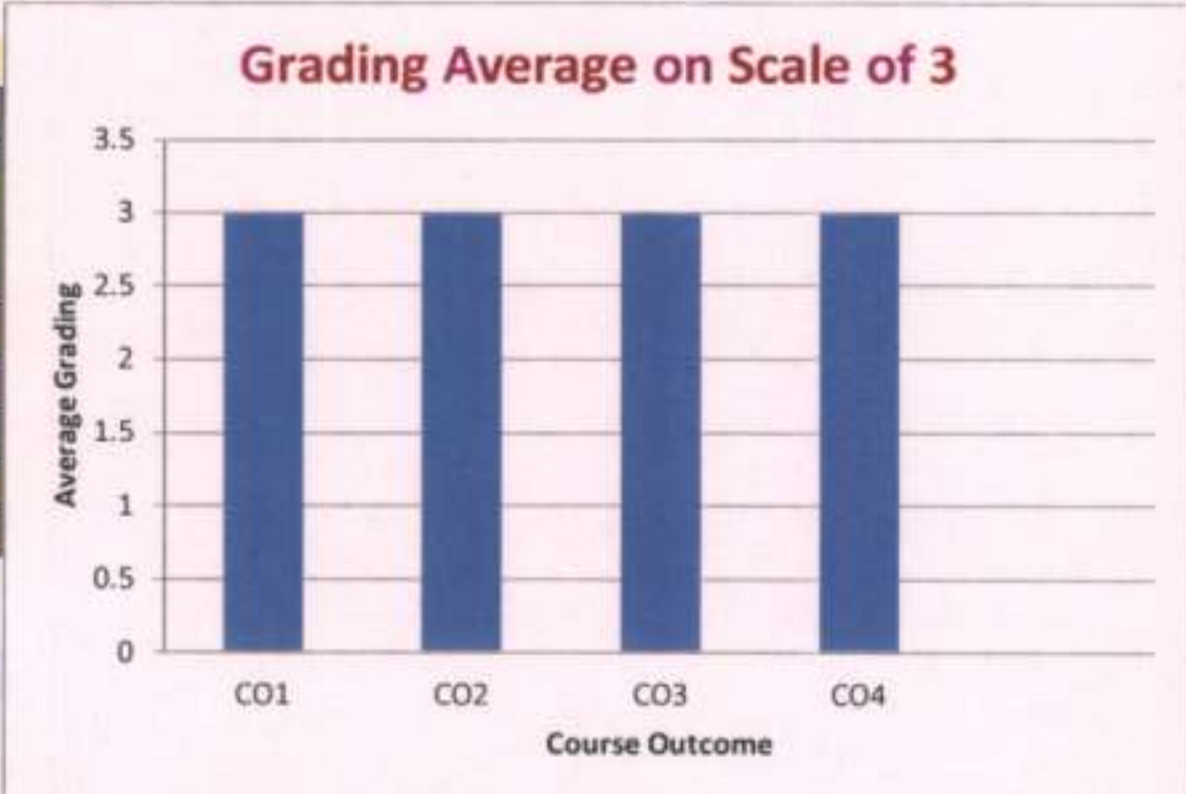
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q1	Q4						
Max. Marks		1	3	3		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	3	6	7	0.85714286	3	1
Anant Kumar Maurya	2051602	1	1	3	5	7	0.71428571	3	1
Anurag Pal	2051603	1		3	4	4	1	3	1
Arun Yadav	2051604	1	3	3	7	7	1	3	1
Chandra Kant Yadav	2051605	1	2	3	6	7	0.85714286	3	1
Gaurav Mishra	2051606	1	1	3	5	7	0.71428571	3	1
Mohd. Arkam	2051607	1		3	4	4	1	3	1
Neha Pal	2051608	1	2	3	6	7	0.85714286	3	1
Padmakar Tripathi	2051609	1	2	3	6	7	0.85714286	3	1
Shristi Shashi	2051610	1	2	3	6	7	0.85714286	3	1
Umesh Chandra Patel	2051611	1	3	3	7	7	1	3	1
Vijay Chand	2051612	1	2	3	6	7	0.85714286	3	1
Gurupreet Singh	2051613	1	2	3	6	7	0.85714286	3	1
							AVG	AVG	ATTAINED
							0.879	3.00	1

CO4

		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q3	Q5						
Questions									
Max. Marks		2	3	3		8			
Abdul Mukhtadir Mohd Ashhar	2051601		1	3	4	6	0.6666667	3	1
Anant Kumar Maurya	2051602	2	1	3	6	8	0.75	3	1
Anurag Pal	2051603	2	1	3	6	8	0.75	3	1
Arun Yadav	2051604	2	1	3	6	8	0.75	3	1
Chandra Kant Yadav	2051605	1	1	3	5	8	0.625	3	1
Gaurav Mishra	2051606	2	3	3	8	8	1	3	1
Mohd. Arkam	2051607	2	2	3	7	8	0.875	3	1
Neha Pal	2051608	1		3	4	5	0.8	3	1
Padmakar Tripathi	2051609	2	1	3	6	8	0.75	3	1
Shristi Shashi	2051610	1	2	3	6	8	0.75	3	1
Umesh Chandra Patel	2051611	2	2	3	7	8	0.875	3	1
Vijay Chand	2051612	2		3	5	5	1	3	1
Gurupreet Singh	2051613	2	2	3	7	8	0.875	3	1
							AVG	AVG	ATTAINED
							0.805	3.00	1

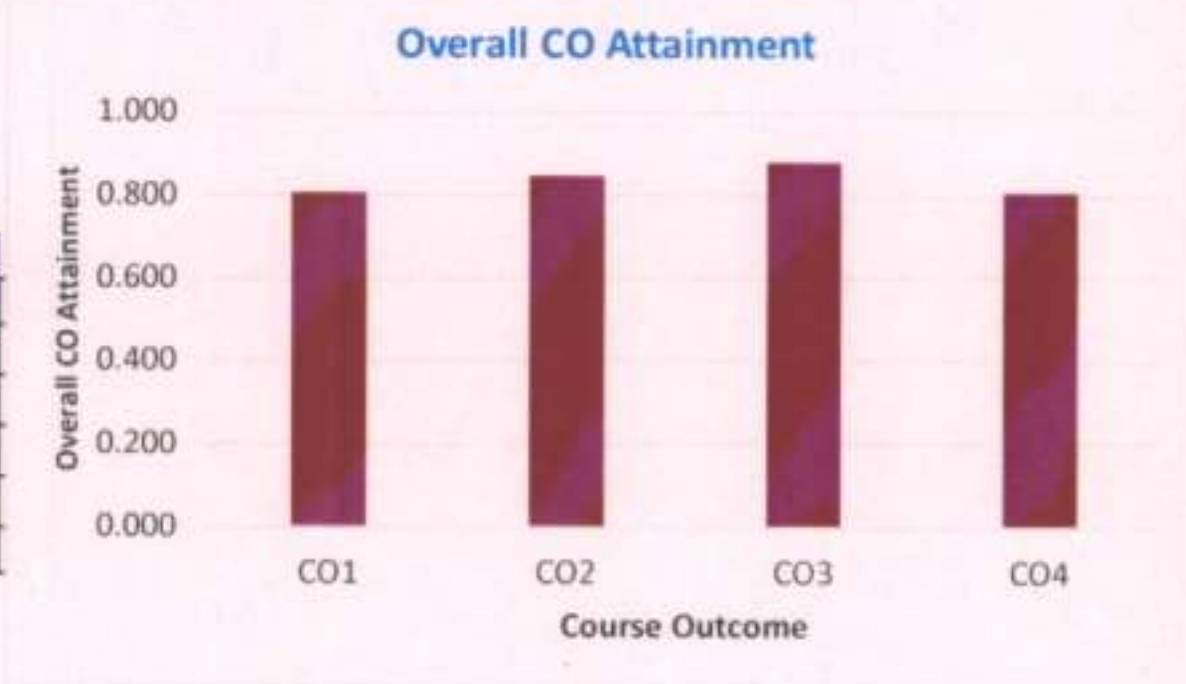
Total No. of Sudents for Batch **13**

Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional
		Distribution			Overall CO Attainment %
		3	2	1	
CO1	3	1			0.80449
CO2	3	1			0.84615
CO3	3	1			0.87912
CO4	3	1			0.80513



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y



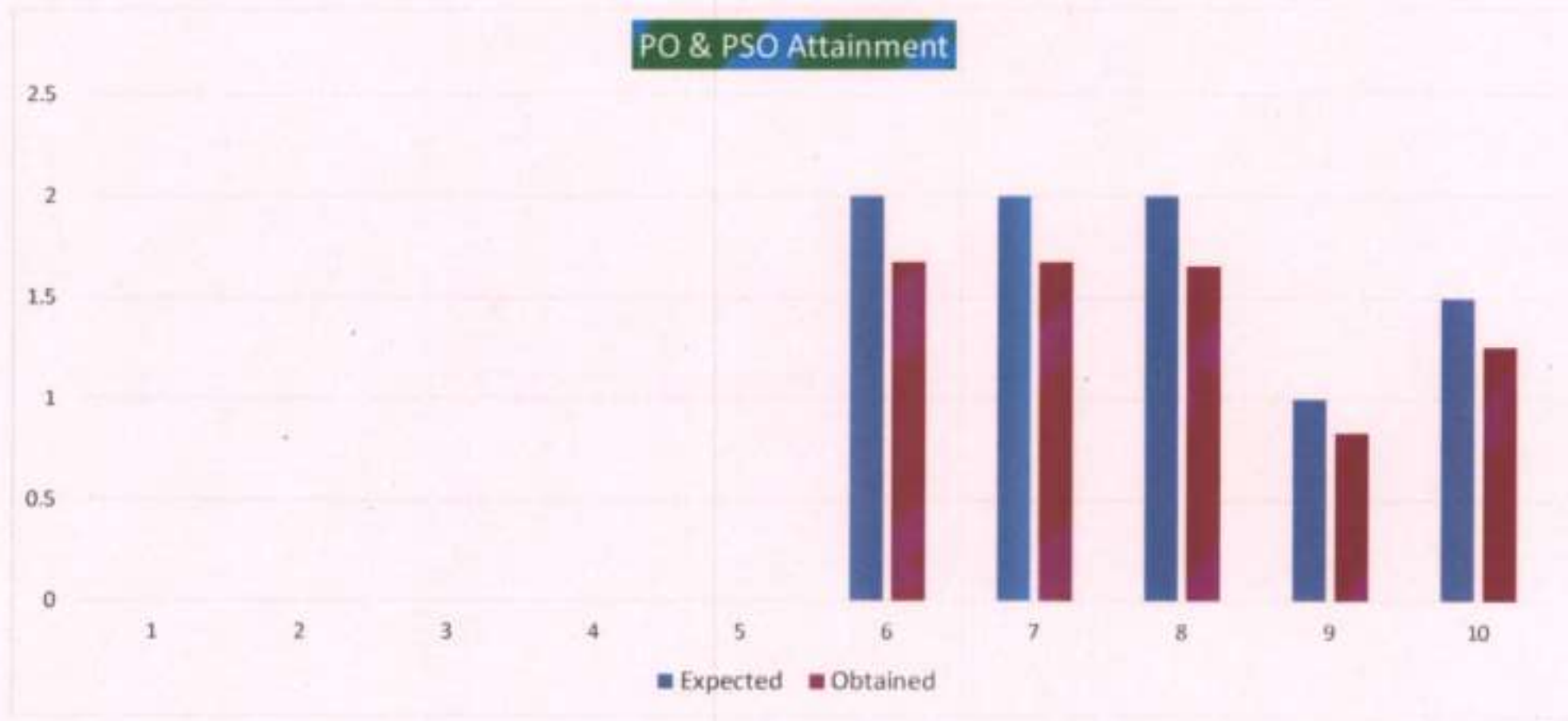
Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.804
CO2	0.846
CO3	0.879
CO4	0.805

CO, PO and PSO correlation

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Knowledge of self-development						3	1	2	1	1
	CO2	Learn the importance of Human values						1	3	1	1	1
	CO3	Developing the overall personality						3	2	2	1	2
	CO4	Develop self management, self control, honesty and good health						1	2	3	1	2
Expected			0	0	0	0	0	2	2	2	1	1.5

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Knowledge of self-development						2.413461538	0.804487179	1.608974359	0.804487179	0.804487179
	CO2	Learn the importance of Human values						0.846153846	2.538461538	0.846153846	0.846153846	0.846153846
	CO3	Developing the overall personality						2.637362637	1.758241758	1.758241758	0.879120879	1.758241758
	CO4	Develop self management, self control, honesty and good health						0.805128205	1.61025641	2.415384615	0.805128205	1.61025641
Obtained			0	0	0	0	0	1.675526557	1.677861722	1.657188645	0.833722527	1.254784799
%PO			0	0	0	0	0	0.837763278	0.838930861	0.828594322	0.833722527	0.836523199

PO & PSO Attainment



CO, PO and PSO Correlation for M.Tech 3rd Semester (Power System) 2021-22
Energy Auditing and Management (MPSE308)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1		3	2	6	6	1	3	1
Anant Kumar Maurya	2051602	1	2		2	5	5	1	3	1
Anurag Pal	2051603	1	2	2	2	7	8	0.875	3	1
Arun Yadav	2051604		2	2	2	6	7	0.85714286	3	1
Chandra Kant Yadav	2051605	1	2		2	5	5	1	3	1
Gaurav Mishra	2051606	1	2	2	2	7	8	0.875	3	1
Mohd. Arkam	2051607	1	2	2	2	7	8	0.875	3	1
Neha Pal	2051608	1	2		2	5	5	1	3	1
Padmakar Tripathi	2051609	1	2		2	5	5	1	3	1
Shristi Shashi	2051610	1	2	2	2	7	8	0.875	3	1
Umesh Chandra Patel	2051611	1	1	3	2	7	8	0.875	3	1
Vijay Chand	2051612	1	2	2	2	7	8	0.875	3	1
Gurupreet Singh	2051613	1	2		2	5	5	1	3	1
						0	0	AVG	AVG	ATTAINED
		12	23	18	26	79		0.931	3.00	1

CO2										
Questions		T1		T2	Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target $\geq 60\%$ (Y/N)
		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	3	1	2	7	7	1	3	1
Anant Kumar Maurya	2051602	1	3		2	6	6	1	3	1
Anurag Pal	2051603	1			2	3	3	1	3	1
Arun Yadav	2051604	1	3	1	2	7	7	1	3	1
Chandra Kant Yadav	2051605	1	2	1	2	6	7	0.85714286	3	1
Gaurav Mishra	2051606		3	1	2	6	6	1	3	1
Mohd. Arkam	2051607	1		1	2	4	4	1	3	1
Neha Pal	2051608	1	2	1	2	6	7	0.85714286	3	1
Padmakar Tripathi	2051609	1	3	1	2	7	7	1	3	1
Shristi Shashi	2051610	1		1	2	4	4	1	3	1
Umesh Chandra Patel	2051611	1	3	1	2	7	7	1	3	1
Vijay Chand	2051612	1		1	2	4	4	1	3	1
Gurupreet Singh	2051613	1	3	1	2	7	7	1	3	1
								AVG	AVG	ATTAINED
								0.978	3.00	1

CO3

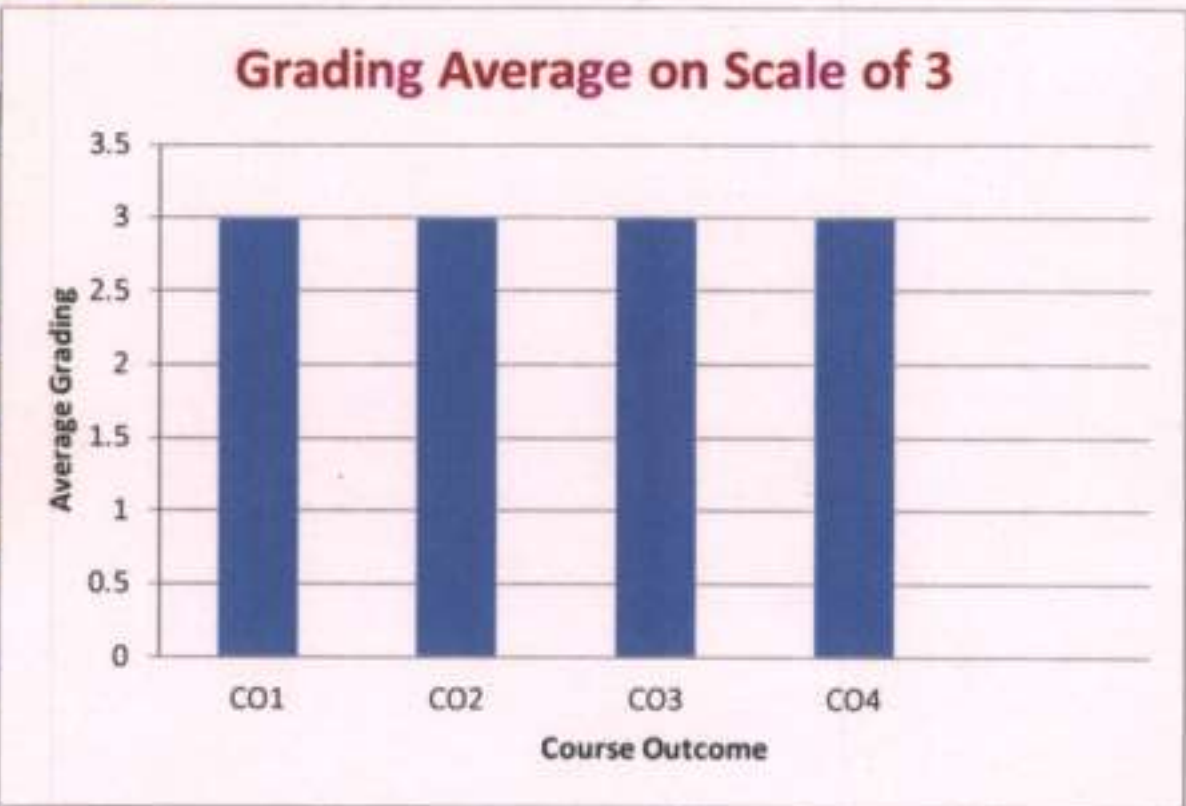
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target $\geq 60\%$ (Y/N)
		Q1	Q4						
Max. Marks		1	3	3		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	3	6	7	0.85714286	3	1
Anant Kumar Maurya	2051602		2	3	5	6	0.83333333	3	1
Anurag Pal	2051603	1	2	3	6	7	0.85714286	3	1
Arun Yadav	2051604	1	3	3	7	7	1	3	1
Chandra Kant Yadav	2051605	1	3	3	7	7	1	3	1
Gaurav Mishra	2051606	1	3	3	7	7	1	3	1
Mohd. Arkam	2051607	1	2	3	6	7	0.85714286	3	1
Neha Pal	2051608	1		3	4	4	1	3	1
Padmakar Tripathi	2051609	1		3	4	4	1	3	1
Shristi Shashi	2051610	1		3	4	4	1	3	1
Umesh Chandra Patel	2051611	1	3	3	7	7	1	3	1
Vijay Chand	2051612	1		3	4	4	1	3	1
Gurupreet Singh	2051613	1	2	3	6	7	0.85714286	3	1
							AVG	AVG	ATTAINED
							0.943	3.00	1

CO4

Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q3	Q5						
Max. Marks		2	3	3		8			
Abdul Mukhtadir Mohd Ashhar	2051601	2		3	5	5	1	3	1
Anant Kumar Maurya	2051602	2	2	3	7	8	0.875	3	1
Anurag Pal	2051603	2	2	3	7	8	0.875	3	1
Arun Yadav	2051604	2	1	3	6	8	0.75	3	1
Chandra Kant Yadav	2051605	2	1	3	6	8	0.75	3	1
Gaurav Mishra	2051606	2	2	3	7	8	0.875	3	1
Mohd. Arkam	2051607	2		3	5	5	1	3	1
Neha Pal	2051608		3	3	6	6	1	3	1
Padmakar Tripathi	2051609		3	3	6	6	1	3	1
Shristi Shashi	2051610		3	3	6	6	1	3	1
Umesh Chandra Patel	2051611	2		3	5	5	1	3	1
Vijay Chand	2051612	2	3	3	8	8	1	3	1
Gurupreet Singh	2051613	2		3	5	5	1	3	1
							AVG	AVG	ATTAINED
							0.933	3.00	1

Total No. of Students for Batch **13**

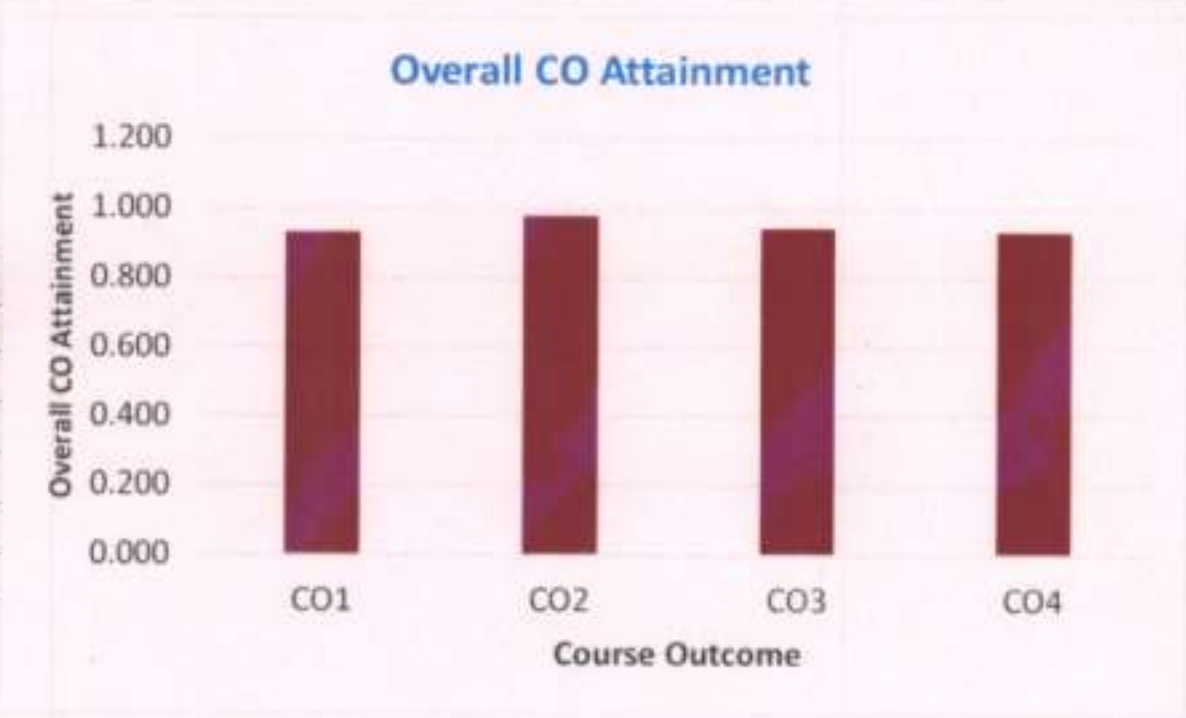
Course Outcomes	Grading AVG on Scale of 3	Attainment			Sessional Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.93132
CO2	3	1			0.97802
CO3	3	1			0.94322
CO4	3	1			0.93269



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.931
CO2	0.978
CO3	0.943
CO4	0.933



(Handwritten signature)

CO, PO and PSO correlation												
Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Acquire the background required for engineers to meet the role of energy managers and to acquire the skills and techniques required to implement energy management	1	2	2	1	2				1	2
	CO2	Identify and quantify the energy intensive business activities in an organization	1	1	2	2	2				2	1
	CO3	Able to perform Basic Energy Audit in an Organization	3	2	3	3	3				3	3
	CO4	Identify different loads and energy conservation measures	3	3	3	3	3				3	3
Expected			2	2	2.5	2.25	2.5	0	0	0	2.25	2.25

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Acquire the background required for engineers to meet the role of energy managers and to acquire the skills and techniques required to implement energy management	0.931319	1.862637363	1.862637363	0.931318681	1.862637363				0.931318681	1.862637363
	CO2	Identify and quantify the energy intensive business activities in an organization	0.978022	0.978021978	1.956043956	1.956043956	1.956043956				1.956043956	0.978021978
	CO3	Able to perform Basic Energy Audit in an Organization	2.82967	1.886446886	2.82967033	2.82967033	2.82967033				2.82967033	2.82967033
	CO4	Identify different loads and energy conservation measures	2.798077	2.798076923	2.798076923	2.798076923	2.798076923				2.798076923	2.798076923
Obtained			1.884272	1.881295788	2.361607143	2.128777473	2.361607143	0	0	0	2.128777473	2.117101648

%PO	0.942136	0.940647894	0.944642857	0.946123321	0.944642857	0	0	0	0.946123321	0.940934066
-----	----------	-------------	-------------	-------------	-------------	---	---	---	-------------	-------------

PO & PSO Attainment



CO, PO and PSO Correlation for M.Tech 3rd Semester (Power System) 2021-22

Waste to Energy (MPSO316)

CO1										
CO1		T1			Assign ment A1	Total Marks of attempted questions	Total Marks	Pecentage	Score 3,2,1	Target >60% (Y/N)
Questions		Q1	Q3	Q5						
Max. Marks		1	2	3	2		8			
Abdul Mukhtadir Mohd Ashhar	2051601	1	2	2	2	7	8	0.875	3	1
Anant Kumar Maurya	2051602	1	2		2	5	5	1	3	1
Anurag Pal	2051603	1	2	1	2	6	8	0.75	3	1
Arun Yadav	2051604	1		3	2	6	6	1	3	1
Chandra Kant Yadav	2051605	1	2	2	2	7	8	0.875	3	1
Gaurav Mishra	2051606	1		3	2	6	6	1	3	1
Mohd. Arkam	2051607	1	1	3	2	7	8	0.875	3	1
Neha Pal	2051608	1	2		2	5	5	1	3	1
Padmakar Tripathi	2051609	1	2		2	5	5	1	3	1
Shristi Shashi	2051610	1	2	1	2	6	8	0.75	3	1
Umesh Chandra Patel	2051611	1	2	2	2	7	8	0.875	3	1
Vijay Chand	2051612	1	2	1	2	6	8	0.75	3	1
Gurupreet Singh	2051613	1	2	1	2	6	8	0.75	3	1
						0	0	AVG	AVG	ATTAINED
		13	21	19	26	79		0.885	3.00	1

CO2										
Questions		T1		T2	Assignm ent A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q2	Q4	Q2						
Max. Marks		1	3	1	2		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	3	1	2	7	7	1	3	1
Anant Kumar Maurya	2051602	1	3	1	2	7	7	1	3	1
Anurag Pal	2051603	1	3	1	2	7	7	1	3	1
Arun Yadav	2051604	1	3	1	2	7	7	1	3	1
Chandra Kant Yadav	2051605	1	3	1	2	7	7	1	3	1
Gaurav Mishra	2051606	1	3	1	2	7	7	1	3	1
Mohd. Arkam	2051607	1	3	1	2	7	7	1	3	1
Neha Pal	2051608	1	2	1	2	6	7	0.85714286	3	1
Padmakar Tripathi	2051609	1	2	1	2	6	7	0.85714286	3	1
Shristi Shashi	2051610	1		1	2	4	4	1	3	1
Umesh Chandra Patel	2051611	1	3	1	2	7	7	1	3	1
Vijay Chand	2051612	1	3	1	2	7	7	1	3	1
Gurupreet Singh	2051613	1	3	1	2	7	7	1	3	1
								AVG	AVG	ATTAINED
								0.978	3.00	1

CO3

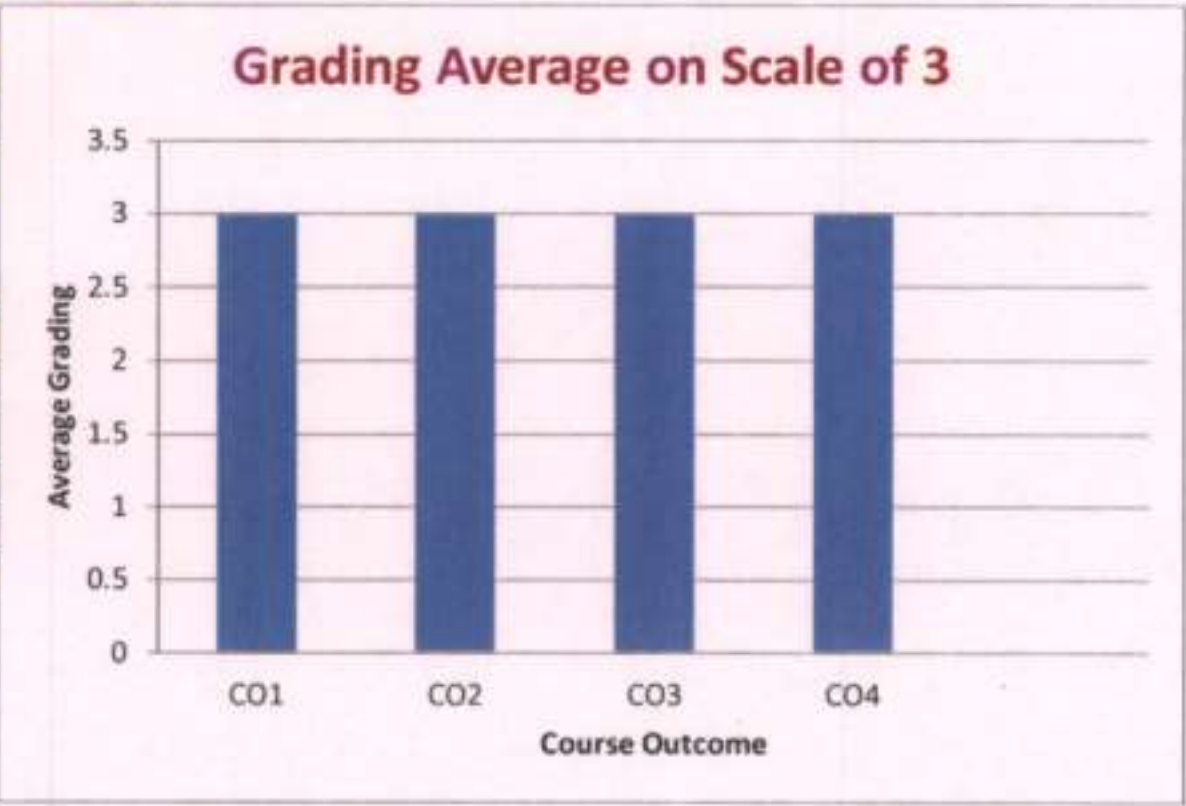
Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target $\geq 60\%$ (Y/N)
		Q1	Q4						
Max. Marks		1	3	3		7			
Abdul Mukhtadir Mohd Ashhar	2051601	1	3	3	7	7	1	3	1
Anant Kumar Maurya	2051602	1	3	3	7	7	1	3	1
Anurag Pal	2051603	1	3	3	7	7	1	3	1
Arun Yadav	2051604	1	3	3	7	7	1	3	1
Chandra Kant Yadav	2051605	1	3	3	7	7	1	3	1
Gaurav Mishra	2051606	1	3	3	7	7	1	3	1
Mohd. Arkam	2051607	1	3	3	7	7	1	3	1
Neha Pal	2051608	1	3	3	7	7	1	3	1
Padmakar Tripathi	2051609	1	3	3	7	7	1	3	1
Shristi Shashi	2051610	1		3	4	4	1	3	1
Umesh Chandra Patel	2051611	1	3	3	7	7	1	3	1
Vijay Chand	2051612	1	3	3	7	7	1	3	1
Gurupreet Singh	2051613	1	3	3	7	7	1	3	1
							AVG	AVG	ATTAINED
							1.000	3.00	1

CO4

Questions		T2		Assignment A1	Total Marks of attempted questions	Total Marks	Percentage	Score 3,2,1	Target >=60% (Y/N)
		Q3	Q5						
Max. Marks		2	3	3		8			
Abdul Mukhtadir Mohd Ashhar	2051601	2	1	3	6	8	0.75	3	1
Anant Kumar Maurya	2051602	2	1	3	6	8	0.75	3	1
Anurag Pal	2051603	2		3	5	5	1	3	1
Arun Yadav	2051604		3	3	6	6	1	3	1
Chandra Kant Yadav	2051605	2		3	5	5	1	3	1
Gaurav Mishra	2051606	2	2	3	7	8	0.875	3	1
Mohd. Arkam	2051607		2	3	5	6	0.8333333	3	1
Neha Pal	2051608			3	3	3	1	3	1
Padmakar Tripathi	2051609	2		3	5	5	1	3	1
Shristi Shashi	2051610	2	2	3	7	8	0.875	3	1
Umesh Chandra Patel	2051611	2		3	5	5	1	3	1
Vijay Chand	2051612	2	1	3	6	8	0.75	3	1
Gurupreet Singh	2051613	2		3	5	5	1	3	1
							AVG	AVG	ATTAINED
							0.910	3.00	1

Total No. of Sudents for Batch **13**

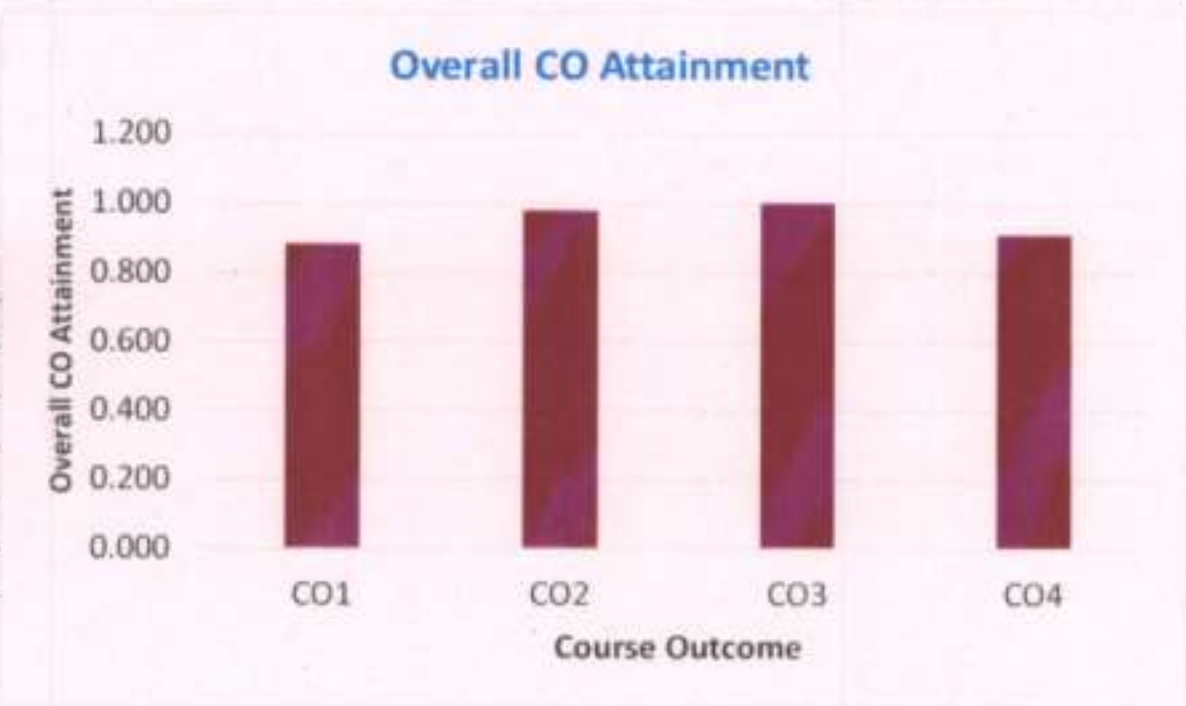
Course Outcomes	Grading AVG on Scale of 3	Attainment			Overall CO Attainment %
		Distribution			
		3	2	1	
CO1	3	1			0.88462
CO2	3	1			0.97802
CO3	3	1			1.00000
CO4	3	1			0.91026



No. of Students Scoring >=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	100.00%	Y
CO2	100.00%	Y
CO3	100.00%	Y
CO4	100.00%	Y

Overall(Direct method)	
CO	Overall CO Attainment
CO1	0.885
CO2	0.978
CO3	1.000
CO4	0.910

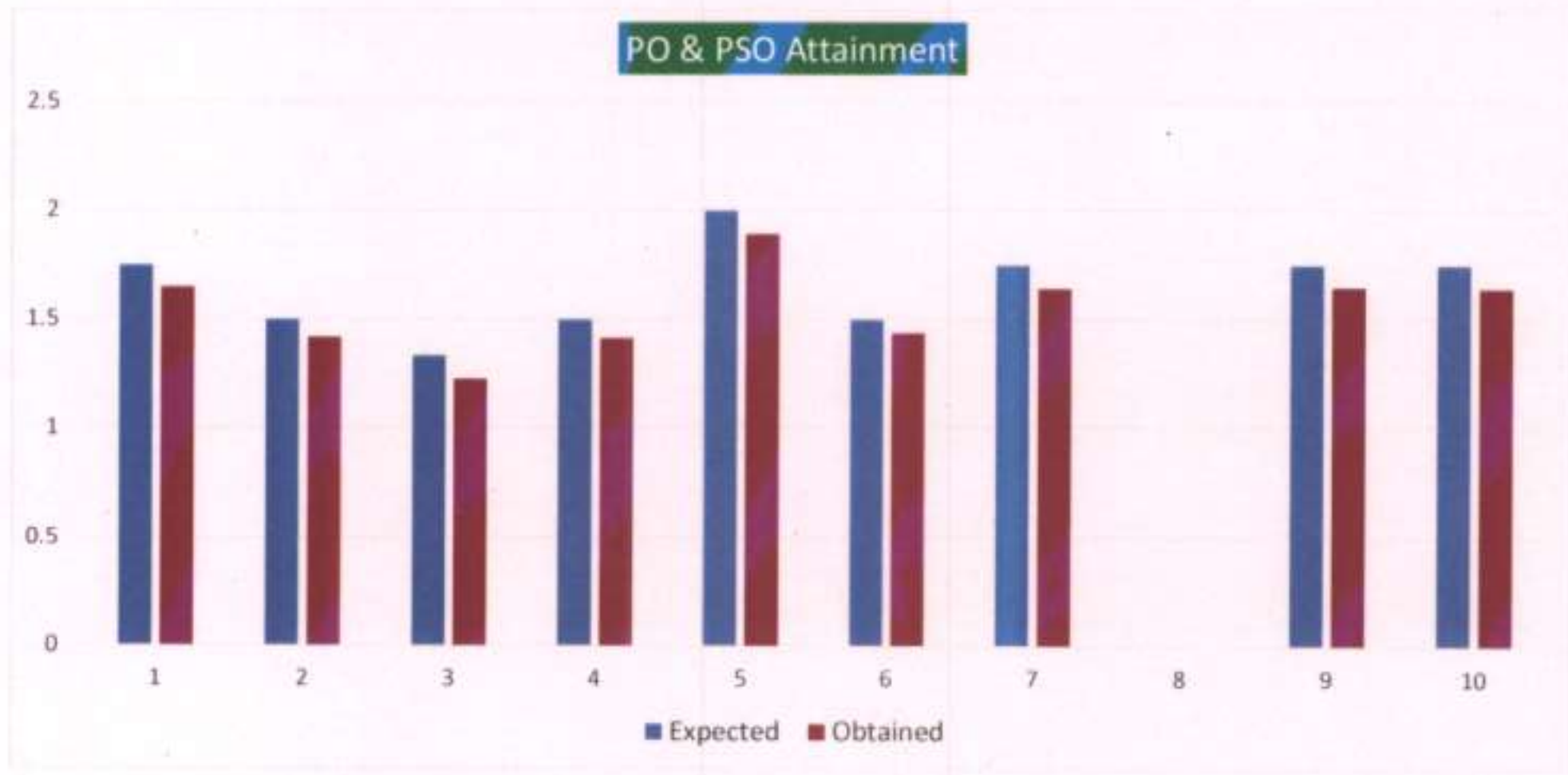


[Handwritten signature]

CO, PO and PSO correlation

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand the principles associated with effective energy management and to apply these principles in the day to day life.	1	1	2	1	1	1	1		1	1
	CO2	Develop insight into the collection, transfer and transport of municipal solid waste.	1	1		2	2	2	2		1	2
	CO3	Explain the design and operation of a municipal solid wasteland fill.	2	2	1	1	2	2	1		2	1
	CO4	Devise key processes involved in recovering energy from wastes, systematically evaluate the main operational challenges in operating thermal and biochemical energy from waste facilities.	3	2	1	2	3	1	3		3	3
Expected			1.75	1.5	1.33333333	1.5	2	1.5	1.75	0	1.75	1.75

Course	CO	Statement	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02
EMP7	CO1	Understand the principles associated with effective energy management and to apply these principles in the day to day life.	0.884615	0.88461538	1.76923077	0.88461538	0.884615	0.884615	0.884615		0.88461538	0.88461538
	CO2	Develop insight into the collection, transfer and transport of municiple solid waste.	0.978022	0.97802198		1.95604396	1.956044	1.956044	1.956044		0.97802198	1.95604396
	CO3	Explain the design and operation of a municiple solid wasteland fill.	2	2	1	1	2	2	1		2	1
	CO4	Devise key processes involved in recovering energy from wastes, systematically evaluate the main operational challenges in operating thermal and biochemical energy from waste facilities.	2.730769	1.82051282	0.91025641	1.82051282	2.730769	0.910256	2.730769		2.73076923	2.73076923
		Obtained	1.648352	1.42078755	1.22649573	1.41529304	1.892857	1.437729	1.642857	0	1.64835165	1.64285714
		%PO	0.941915	0.9471917	0.91987179	0.94352869	0.946429	0.958486	0.938776	0	0.94191523	0.93877551



[Handwritten signature]