

PURNEA COLLEGE OF ENGINEERING PURNEA
SELF ASSESSMENT REPORT(TIER - II) FOR Electrical Engineering

Part A : Institutional Information

1 Name and Address of the Institution

PURNEA COLLEGE OF ENGINEERING PURNEA,
Purnea College of Engineering,AT-Polytechnic Chowk,Near Ram Nagar Subhas Nagar,Purnia, Bihar 854303

2 Type of the Institution:

☐ Deemed to be University	☐ Autonomous
☐ University	☒ Non-Autonomous (Affiliated)
☐ Institute of National Importance	☐ Any Other(Please Specify)

3 Year of establishment of the Institution:

2017

4 Ownership Status:

☐ Central Government	☐ Any Other(Please Specify)
☒ State Government	
☐ Government Aided	
☐ Self financing	

5 Name and Address of Affiliating University

BIHAR ENGINEERING UNIVERSITY

6 Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of Institutions	Year of Establishment	Programs of Study	Location

7 Details of all the programs being offered by the institution:

Program Name	Program Applied level	Year of Start	AICTE approval details	Sanctioned Intake	Increase/decrease in intake	Current Intake	Accreditation status	From	To	Program for consideration
Electrical Engineering	UG	2017	2017	60	No	60	Applying first time	--	--	

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Electrical Engineering

Table No. A8.2

S No	Name of the Department	Name of the Program	Name of Allied Departments/Cluster	Name of Allied Program
No record exist(s)				

9 Total Number of Faculty Members in Various Departments:

ID	Department Name	Number of faculty members in the Department (UG and PG)										
		2025-26 (CAY)				2024-25 (CAYm1)				2023-24 (CAY		
		No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members	No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members	No. of Professors	No. of Associate Professors	No. Ass Pro
1												

10 Total Number of Engineering Students in Various Departments:

ID	Department Name	Number of students in the Department (UG and PG)		
		2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)
1				

11 Vision of the Institution:

To consistently strive for excellence in engineering education by producing skilled, trained and knowledge-driven engineers who fit into the current and industries, organizations, and society thereby contributing to the growth of the country.

12 Mission of the Institution:

Mission of Institute

- To improve teaching-learning process while making the existing curriculum more contemporary and in keeping with the requirements of the industry.
- To create an environment for fostering research and development.
- To develop students' soft skills, ethical values, leadership qualities, reasoning and analytical abilities and motivate them to address engineering needs of neighboring

13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution	
Name	Enter Full Name
Designation	Designation
Mobile No.	10- digit Mobile No.
Email ID	E-Mail

☐ NBA Coordinator, If Designated

PART B: Criteria Summary

Criteria No.	Criteria	Total Marks	Institute Marks
1	OUTCOME-BASED CURRICULUM	120	117.00
2	OUTCOME-BASED TEACHING LEARNING	120	115.00
3	OUTCOME-BASED ASSESSMENT	120	120.00
4	STUDENTS' PERFORMANCE	120	77.54
5	FACULTY INFORMATION	100	64.77
6	FACULTY CONTRIBUTIONS	120	52.35
7	FACILITIES AND TECHNICAL SUPPORT	100	97.00
8	CONTINUOUS IMPROVEMENT	80	74.00
9	STUDENT SUPPORT AND GOVERNANCE	120	115.00
	Total	1000	833

Part B : Criteria Summary

1 OUTCOME-BASED CURRICULUM (120)

Tc

1.1 Vision, Mission and Program Educational Objectives (PEOs) (35)

1.1.1 State the Vision and Mission of the Institute and the Department (5)

Vision of the institute	To consistently strive for excellence in engineering education by producing skilled, trained and knowledge-driven engineers who fit into the current and future requirements of industries, organizations, and society thereby contributing to the growth of the country.								
Mission of the institute	<u>Mission of Institute</u> - To improve teaching-learning process while making the existing curriculum more contemporary and in keeping with the requirements of the industry. - To create an environment for fostering research and development. - To develop students' soft skills, ethical values, leadership qualities, reasoning and analytical abilities and motivate them to address engineering needs of neighboring areas.								
Vision of the Department	To produce competent electrical engineers with ethical values addressing the challenges in the field of education, industry, and research for the sustainable growth of nation.								
Mission of the Department	<table border="1"> <thead> <tr> <th>Mission No.</th><th>Mission Statements</th></tr> </thead> <tbody> <tr> <td>M1</td><td>To create an environment for quality technical education and produce engineers who will contribute meaningfully to the growth and development of the country.</td></tr> <tr> <td>M2</td><td>To engage the students in research & development in cutting edge and sustainable technologies.</td></tr> <tr> <td>M3</td><td>To develop professional skills, ethical values and leadership qualities to address the needs of neighbouring areas in terms of engineering and technical support.</td></tr> </tbody> </table>	Mission No.	Mission Statements	M1	To create an environment for quality technical education and produce engineers who will contribute meaningfully to the growth and development of the country.	M2	To engage the students in research & development in cutting edge and sustainable technologies.	M3	To develop professional skills, ethical values and leadership qualities to address the needs of neighbouring areas in terms of engineering and technical support.
Mission No.	Mission Statements								
M1	To create an environment for quality technical education and produce engineers who will contribute meaningfully to the growth and development of the country.								
M2	To engage the students in research & development in cutting edge and sustainable technologies.								
M3	To develop professional skills, ethical values and leadership qualities to address the needs of neighbouring areas in terms of engineering and technical support.								

1.1.2 State PEOs of the Program (5)

PEO No.	Program Educational Objectives Statements
PEO1	Establish their careers in the field of Electrical Engineering and related areas, providing innovative and effective solutions.
PEO2	Establish themselves as entrepreneur, work in research and development organization and pursue higher education.
PEO3	Manage projects catering to current societal and industrial needs in an ethical manner as a member/leader of multidisciplinary teams.

1.1.3 Process of Defining Vision, Mission and PEOs (15)

To formulate the Vision and Mission, a collaborative procedure was implemented that incorporated feedback and evaluations from the departments key stakeholders, considering both long-term prospects and societal needs. The methodology followed is outlined below.

Step 1: The Institutes own Vision and Mission served as the foundational reference point for developing those of the department.

Step 2: Internally, departmental faculty members contributed their perspectives through organized meetings and collaborative brainstorming sessions.

Step 3: Input was further gathered from the departments external stakeholders, alumni and parents.

Step 4: The consolidated feedback was carefully examined and assessed to ensure alignment and harmony with the overarching Institutes Vision and Mission.

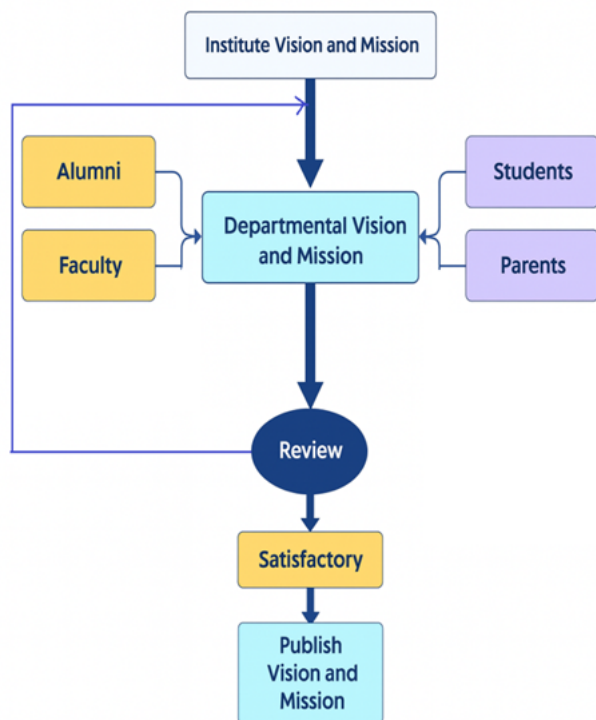


Figure 1.1a

Flow chart of process for defining Vision and Mission

Process for defining PEOs

Process adopted for defining PEOs of the Program is given below.

Step 1: Brainstorming sessions to define the PEOs were conducted.

Step 2: Benchmarking of defined PEOs was done.

Step 3: Feedbacks from the Stakeholders were taken.

Step 4: Feedbacks from the experts were taken and modifications based upon feedbacks were done.

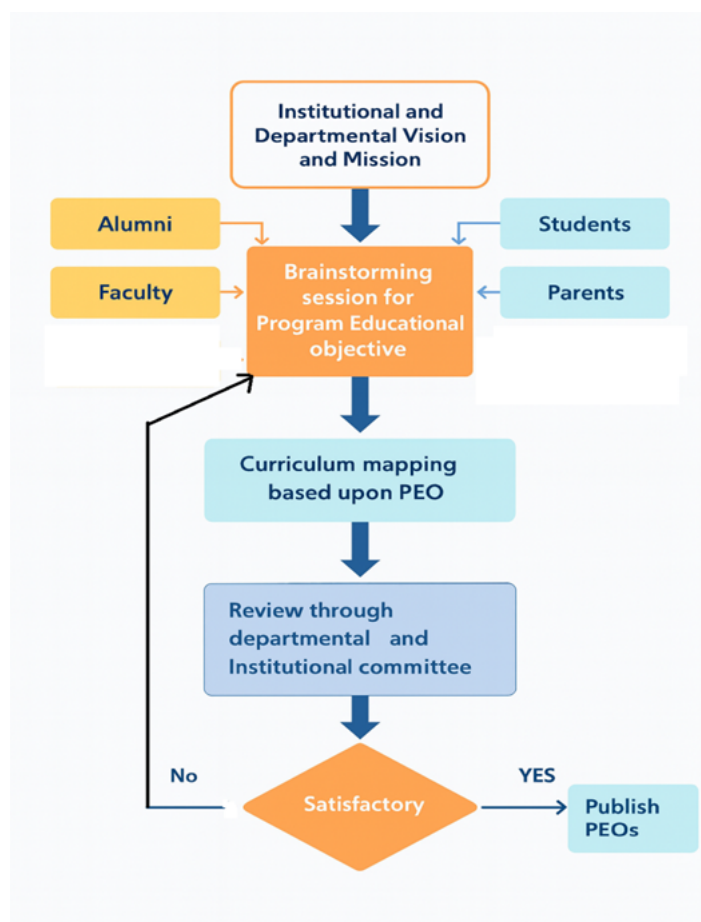


Figure 1.1b

Flow chart of process for defining Program Educational Objective

1.1.4 Dissemination of Vision, Mission and PEOs (5)

- After the Vision, Mission, and PEO statements are approved, they are displayed and disseminated to both internal and external stakeholders through various media. Internal stakeholders can access these statements through display boards placed at key locations such as the Department Notice Board, department laboratories, the HoD's chamber, and respective classrooms.
- The inclusion of the Vision and Mission statements in the course files and course plans ensures that both faculty members and students are well informed of them. In addition, the department magazine serves as another effective medium for disseminating these statements to students and faculty.
- The College website forms an indispensable platform to disseminate the statements of both the institute and the department to the internal and external stakeholders.

Methods of Dissemination:

- 1. Classroom Introduction:** Faculty members introduce vision, mission and PEO at the beginning of each semester, explaining their significance in shaping students academic and professional growth.
- 2. Syllabus and Course Materials:** The Vision, Mission, and PEO statements are integrated into the course syllabi, laboratory manuals, and study materials to ensure continuous reinforcement and awareness.
- 3. Departmental and Institutional Websites:** A dedicated section on the institutional website ensures easy access to these outcomes for students at any time.

<https://www.pcepurmia.org/department/electrical-engineering/vision-and-mission/> (<https://www.pcepurmia.org/department/electrical-engineering/vision-and-mission/>)

- 4. Notice Boards:** Printed versions of vision, mission and PEO are displayed on department notice boards for reference.

- 5. Assessment and Feedback Mechanisms:** Periodic assessments, surveys, and feedback sessions help evaluate students awareness and understanding of these outcomes.

1.1.5 Mapping of PEOs with Mission (10)

PEO Statements	M1	M2	M3
Establish their careers in the field of Electrical Engineering and related areas, providing innovative and effective solutions.	3	3	2
Establish themselves as entrepreneur, work in research and development organization and pursue higher education.	2	3	3
Manage projects catering to current societal and industrial needs in an ethical manner as a member/leader of multidisciplinary teams.	3	2	3

Table No.1.1.5.1: Mapping of PEOs with mission.

PEO Statements	M ₁	M ₂	M ₃
PEO1: Identify, analyze, and solve real-life problems by applying the knowledge in Electrical Engineering.	Excel in Electrical Engineering by contributing innovative solutions to national development and growth. (3)	Innovate and provide effective solutions through research and development in sustainable technologies. (3)	Innovative and find effective solutions while upholding professional ethics and leadership qualities. (2)
PEO2: Design and develop electrical systems with the help of automation tools to excel in the field of Electrical engineering.	Empowering graduates to become entrepreneurs, contribute to research and development organizations, and pursue higher education, thereby fostering the countrys growth and development through their expertise. (2)	Preparing graduates to become entrepreneurs, contribute to research and development in cutting-edge and sustainable technologies, and pursue higher education, thereby advancing innovation and sustainability in the field. (3)	Equipping graduates to become entrepreneurs, contribute to research and development, and pursue higher education, while embodying professional skills, ethical values, and leadership qualities to support neighboring areas. (3)
PEO3: Find solutions to the issues faced by society through engineering and technological innovations while upholding professional ethics and social values.	Manage projects addressing societal and industrial needs ethically, fostering quality technical education, and contributing to the countrys growth and development. (3)	Manage projects that address societal and industrial needs ethically, synergizing with research and development efforts in cutting-edge, sustainable technologies. (2)	Cultivating professional skills, ethical values, and leadership qualities in students, enabling them to manage projects ethically and contribute engineering and technical support to neighboring areas. (3)

Low (1), Medium (2) and High (3)

1.2 Curriculum Structure and Features (30)

1.2.1 Program Curriculum Structure (5)

[Edit](#)

ID	Course Code	Course Title	Classroom Instruction (CI) (in hours per semester)		Lab Instruction (LI) (in hours per semester)	Term Work (TW) and Self Learning (SL) (TW+ SL) (in hours per semester)	Total no. of Hours per semester	Total Credits (C)* (Total Hours/30)
			L	T	P	SL		
1	100302	Analog Electronic Circuit	40	0	0	50	90	3.00
2	100306	Electrical Circuit Analysis	36	12	0	72	120	4.00
3	100307	Electrical Machines – I	36	12	0	72	120	4.00
4	100308	Electromagnetic Fields	36	12	0	72	120	4.00
5	100310	Engineering Mechanics	36	12	0	72	120	4.00
6	100302P	Analog Electronics Lab	0	0	30	0	30	1.00
7	100306P	Circuit Analysis Lab	0	0	30	0	30	1.00
8	100307P	Machines-I Lab	0	0	30	0	30	1.00
9	100399P	Internship	0	0	30	90	120	4.00
10	100401	Biology for Engineers	40	0	0	50	90	3.00
11	100403	Digital Electronics	40	0	0	50	90	3.00
12	103401	Electrical & Electronics Measurement	40	0	0	50	90	3.00
13	103402	Electrical Machines – II	36	142	0	72	250	8.33
14	103403	Mathematics – III	40	0	0	50	90	3.00
15	103404	Signals and Systems	40	0	0	50	90	3.00
16	100403P	Signals and Systems	40	0	0	50	90	3.00
17	103401P	Digital Electronics Lab	40	0	0	50	90	3.00
18	103401P	EEM Lab	0	0	30	0	30	1.00
19	103402P	Machines-II Lab	0	0	30	0	30	1.00
20	100502	Control Systems	40	0	0	50	90	3.00
21	100502P	Microprocessor	40	0	0	50	90	3.00
22	100504P	Power Electronics	40	0	0	50	90	3.00
23	100507	Power Systems – I	40	0	0	50	90	3.00
24	103502	Wind & Solar Energy	40	0	0	50	90	3.00
25	100502P	Control Systems Lab	0	0	30	0	30	1.00
26	100504P	Microprocessor Lab	0	0	30	0	30	1.00
27	100506P	Power Electronics Lab	0	0	30	0	30	1.00
28	Power Electronics Lab	Power Systems-I Lab	0	0	30	0	30	1.00
29	100510P	Summer Entrepreneurship-II	0	0	60	120	180	6.00
30	100511P	MOOC / SWAYAM / NPTEL – II	0	0	10	50	60	2.00
31	100606	Digital Signal Processing	40	0	0	50	90	3.00

32	100607	VLSI Design	40	0	0	50	90	3.00
33	100608	Professional Skills	40	0	0	50	90	3.00
34	100613	Electrical Drives	40	0	0	50	90	3.00
35	103601	Power Systems – II	40	0	0	50	90	3.00
36	100704	Electromagnetic Waves	40	0	0	50	90	3.00
37	103701	Power System Protection	40	0	0	50	90	3.00
38	103712	Power Plant Engineering	40	0	0	50	90	3.00
39	103715	Electrical Materials	40	0	0	50	90	3.00
40	100702P	Summer Entrepreneurship–III	0	0	60	180	240	8.00
41	100706P	Seminar	0	0	30	30	60	2.00
42	100709P	Project – I	0	0	60	120	180	6.00
43	100803	HVDC Transmission	40	0	0	50	90	3.00
44	100804	Power Quality & FACTS	40	0	0	50	90	3.00
45	100815	Digital Image Processing	40	0	0	50	90	3.00
46	103804	Computer Networks	40	0	0	50	90	3.00
47	100801P	Project – II	0	0	60	120	180	6.00
48	100103	Chemistry	36	12	0	72	120	4.00
49	100104	Programming for Problem Solving	40	0	0	50	90	3.00
50	100105	WMP	14	0	0	16	30	1.00
51	100106	English	28	0	0	32	60	2.00
52	103102	Mathematics-1	36	12	0	72	120	4.00
53	100103P	Chemistry Lab	0	0	42	3	45	1.50
54	100104P	Programming for Problem Solving Lab	0	0	56	4	60	2.00
55	100105P	WMP Lab	0	0	56	4	60	2.00
56	100106P	English Lab	0	0	28	2	30	1.00
57	100201	BEE	36	12	0	72	120	4.00
58	100202	EGD	14	0	0	16	30	1.00
59	103201	Physics	36	12	0	72	120	4.00
60	103202	Mathematics-2	36	12	0	72	120	4.00
61	100201P	BEE Lab	0	0	28	2	30	1.00
62	100202P	EGD Lab	0	0	56	4	60	2.00
63	103201P	Physics Lab	0	0	42	3	45	1.50
		Total	1496	250	888	2866	5500	183.33

1.2.2 Components of Program Curriculum (5)

Course Components	Curriculum Content (% of total number of credits of the program)	Total number of contact hours	Total number of credits
Basic Sciences	12.32	312.00	26.00
Basic Engineering	10.9	372.00	23.00
Humanities and Social Scie	1.9	72.00	4.00
Program Core	43.6	1254.00	92.00
Program Electives	12.8	294.00	27.00
Open Electives	1.9	60.00	4.00
Project(s)	5.69	60.00	12.00
Internships/Seminars	8.53	90.00	18.00
Any other (Please specify)	2.37	90.00	5.00
Total number of Credits			211.00

1.2.3 State the Process Used to Identify Extent of Compliance of the University Curriculum for Attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure II. Also Mention the Identified Curricular Gaps, if any (10)

1. Curriculum Review Mechanism

- The Department of Electrical Engineering follows a systematic process to assess compliance of the University-prescribed curriculum with the stated Program Outcomes (POs) and Program Specific Outcomes (PSOs) as given in Annexure II.
- An internal BoS-equivalent committee periodically reviews:
 - o University syllabus
 - o Course Outcomes (COs) framed by the department
 - o CO–PO–PSO mapping
- Inputs from industry and alumni are considered wherever applicable to ensure relevance to professional practice.

2. PO–PSO Compliance through Attainment Analysis

- The extent of compliance is evaluated through course-wise and semester-wise attainment analysis using:
 - o **Direct assessment tools:** internal assessments, laboratory evaluations, and end-semester examinations
 - o **Indirect assessment tools:** course-end surveys, student exit feedback, alumni feedback, and employer feedback
- Attained values are compared with predefined targets to assess the effectiveness of curriculum delivery in achieving POs and PSOs.

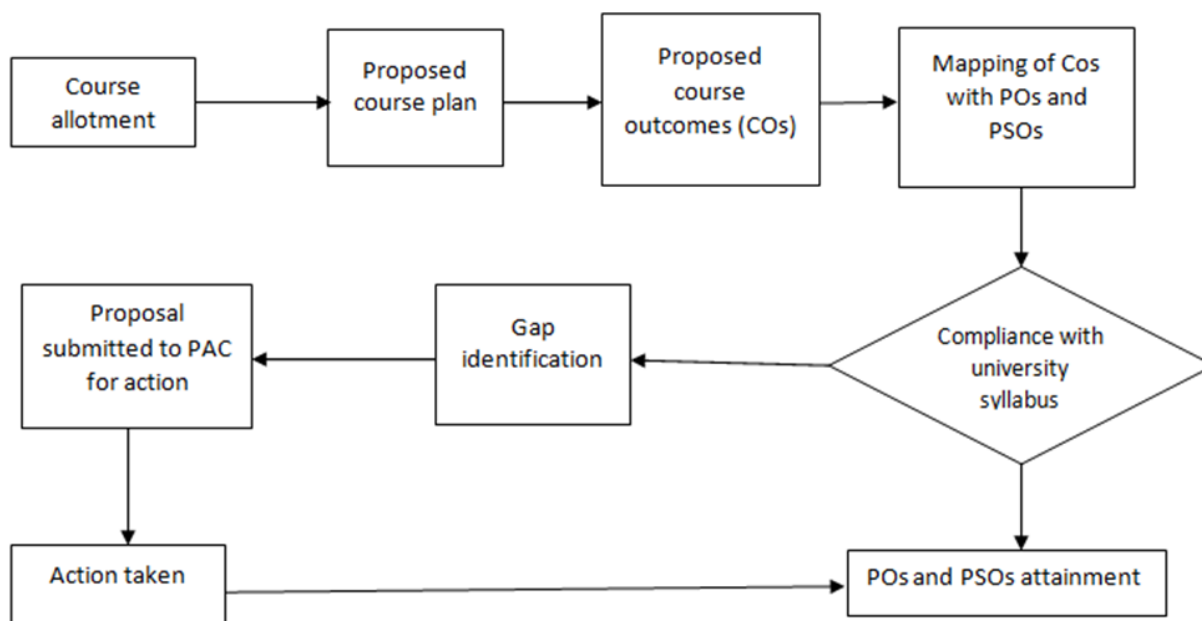
3. Identification of Curricular Gaps

- Based on attainment analysis and stakeholder feedback, minor and generalised gaps are identified, such as:
 - o Limited exposure to emerging technologies in Electrical Engineering
 - o Need for enhanced use of modern simulation and analysis tools
 - o Requirement of additional industry-oriented and application-based learning

These gaps do not warrant changes to the University curriculum but require academic enrichment.

4. Gap-Filling and Continuous Improvement Measures

- Identified gaps are addressed through supplementary initiatives, including:
 - o Value-added courses and training on relevant tools and technologies
 - o Expert lectures, workshops, and industry interaction
 - o Industrial visits, internships, and project-based learning aligned with PSOs
 - o Additional laboratory experiments beyond the University syllabus
 - o Participation in online certification courses mapped to relevant POs
- The impact of these measures is periodically reviewed to ensure continuous improvement and effective attainment of POs and PSOs.



Gaps identified	2023-2024	2024-2025	2025-2026
Industry based skills	Yes	Yes	No
Practical based learning	Yes	No	No
Project based learning	Yes	No	No
Entrepreneurship	Yes	Yes	No
Higher studies	Yes	Yes	No
Advanced tools and techniques	Yes	No	No
New software knowledge	Yes	No	No
Communication & English learning	Yes	Yes	No

1.2.4 State the Delivery Details of the Content beyond the Syllabus for the Attainment of Program Outcomes and Program Specific Outcomes (10)

1.3 PO, PSO and their Mapping with Courses (20)

1.3.1 POs and PSOs (5)

PSO1	Identify, analyze, and solve real-life problems by applying the knowledge in Electrical Engineering.
PSO2	Design and develop electrical systems with the help of automation tools to excel in the field of Electrical engineering.
PSO3	Find solutions to the issues faced by society through engineering and technological innovations while upholding professional ethics and social values.

1.3.2 Mapping between the Courses and POs/PSOs (10)

[illegible]

PO8	Analog Electronic Circuits, Electrical Circuit Analysis, Electrical Machines–I, Engineering Mechanics, Analog Electronic Circuits Laboratory, Electrical Circuit Analysis Laboratory, Electrical Machines Laboratory–I, Internship, Biology for Engineers, Digital Electronics, Electrical and Electronics Measurement, Electrical Machines–II, Signals and Systems, Digital Electronics Laboratory, Electrical and Electronics Measurement Laboratory, Electrical Machines Laboratory–II, Control Systems, Power Electronics, Power Systems–I, Wind and Solar Energy Systems, Control Systems Laboratory, Microprocessor Laboratory, Power Systems–I Laboratory, Summer Entrepreneurship–II, MOOCs/SWAYAM/NPTEL–II, Digital Signal Processing, Electrical Drives, Power Systems–II, MOOCs/SWAYAM/NPTEL, Electronics Design Laboratory, Power Systems–II Laboratory, Power System Protection, Electrical Materials, Summer Entrepreneurship–III, Seminar, Project–I, HVDC Transmission Systems, Power Quality and FACTS, Digital Image Processing, and Project–II.
PO9	Analog Electronic Circuits, Electrical Circuit Analysis, Electrical Machines–I, Engineering Mechanics, Analog Electronic Circuits Laboratory, Electrical Circuit Analysis Laboratory, Electrical Machines Laboratory–I, Internship, Biology for Engineers, Digital Electronics, Electrical and Electronics Measurement, Electrical Machines–II, Signals and Systems, Digital Electronics Laboratory, Electrical and Electronics Measurement Laboratory, Electrical Machines Laboratory–II, Control Systems, Power Electronics, Power Systems–I, Wind and Solar Energy Systems, Control Systems Laboratory, Power Systems–I Laboratory, Summer Entrepreneurship–II, MOOCs/SWAYAM/NPTEL–II, Digital Signal Processing, Introduction to VLSI Design, Electrical Drives, Power Systems–II, MOOCs/SWAYAM/NPTEL, Electronics Design Laboratory, Power Systems–II Laboratory, Power System Protection, Electrical Materials, Summer Entrepreneurship–III, Seminar, Project–I, HVDC Transmission Systems, Power Quality and FACTS, Digital Image Processing, and Project–II.
PO10	Electrical Circuit Analysis, Electrical Machines–I, Engineering Mechanics, Analog Electronic Circuits Laboratory, Electrical Circuit Analysis Laboratory, Electrical Machines Laboratory–I, Internship, Biology for Engineers, Digital Electronics, Electrical and Electronics Measurement, Electrical Machines–II, Signals and Systems, Digital Electronics Laboratory, Electrical and Electronics Measurement Laboratory, Electrical Machines Laboratory–II, Control Systems, Power Electronics, Power Systems–I, Wind and Solar Energy Systems, Control Systems Laboratory, Power Systems–I Laboratory, Summer Entrepreneurship–II, MOOCs/SWAYAM/NPTEL–II, Digital Signal Processing, Electrical Drives, Power Systems–II, High Voltage Engineering, MOOCs/SWAYAM/NPTEL, Electronics Design Laboratory, Power Systems–II Laboratory, Electromagnetic Waves, Power System Protection, Electrical Materials, Summer Entrepreneurship–III, Seminar, Project–I, HVDC Transmission Systems, Power Quality and FACTS, Digital Image Processing, Computer Networks, and Project–II.
PO11	Analog Electronic Circuits, Electrical Circuit Analysis, Electrical Machines–I, Engineering Mechanics, Analog Electronic Circuits Laboratory, Electrical Circuit Analysis Laboratory, Electrical Machines Laboratory–I, Biology for Engineers, Digital Electronics, Electrical and Electronics Measurement, Electrical Machines–II, Mathematics–III, Signals and Systems, Digital Electronics Laboratory, Electrical and Electronics Measurement Laboratory, Electrical Machines Laboratory–II, Control Systems, Microprocessor, Power Electronics, Power Systems–I, Wind and Solar Energy Systems, Control Systems Laboratory, Microprocessor Laboratory, Power Electronics Laboratory, Power Systems–I Laboratory, Summer Entrepreneurship–II, MOOCs/SWAYAM/NPTEL–II, Digital Signal Processing, Introduction to VLSI Design, Professional Skill Development, Electrical Drives, Power Systems–II, High Voltage Engineering, MOOCs/SWAYAM/NPTEL, VLSI Design Laboratory, Electronics Design Laboratory, Power Systems–II Laboratory, Electromagnetic Waves, Power System Protection, Power Plant Engineering, Electrical Materials, Summer Entrepreneurship–III, Seminar, HVDC Transmission Systems, Power Quality and FACTS, Digital Image Processing, Computer Networks, and Project–II.
PO12	Analog Electronic Circuits, Electrical Circuit Analysis, Electrical Machines–I, Engineering Mechanics, Analog Electronic Circuits Laboratory, Electrical Circuit Analysis Laboratory, Electrical Machines Laboratory–I, Biology for Engineers, Digital Electronics, Electrical and Electronics Measurement, Electrical Machines–II, Mathematics–III, Signals and Systems, Digital Electronics Laboratory, Electrical and Electronics Measurement Laboratory, Electrical Machines Laboratory–II, Control Systems, Microprocessor, Power Electronics, Power Systems–I, Wind and Solar Energy Systems, Control Systems Laboratory, Microprocessor Laboratory, Power Electronics Laboratory, Power Systems–I Laboratory, Summer Entrepreneurship–II, MOOCs/SWAYAM/NPTEL–II, Digital Signal Processing, Introduction to VLSI Design, Professional Skill Development, Electrical Drives, Power Systems–II, High Voltage Engineering, MOOCs/SWAYAM/NPTEL, VLSI Design Laboratory, Electronics Design Laboratory, Power Systems–II Laboratory, Electromagnetic Waves, Power System Protection, Power Plant Engineering, Electrical Materials, Summer Entrepreneurship–III, Seminar, HVDC Transmission Systems, Power Quality and FACTS, Digital Image Processing, Computer Networks, and Project–II.

1.4 Course Outcomes and Course Articulation Matrix (30)

1.4.1 Course Outcome (Semester Wise) (10)

No. of Core Courses : 6	C2 : 2	C3 : 2	C4 : 2
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Note : Number of Outcomes for a Course is expected to be around 6.

Course Code :	100307	Semester :	3
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Course Outcome	Statements
100307.1	Analyze magnetic circuit fundamentals; Apply laws to magnetic field visualization.
100307.2	Evaluate magnetic materials; Analyze energy, force, and torque in magnetic circuits.
100307.3	Evaluate single and three-phase transformers, testing, connections, and cooling techniques.
100307.4	Analyze DC machine components, magnetic field, commutation, and torque derivation.
100307.5	Evaluate armature circuit equations, field excitations, characteristics, and control methods.

Course Code :	103401	Semester :	4
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Course Outcome	Statements
103401.1	Evaluate measurement accuracy, standards, and instruments for electrical system analysis.
103401.2	Analyze and measure resistance in various electrical and insulating materials.
103401.3	Evaluate inductance and capacitance using various measurement methods and devices.
103401.4	Analyze galvanometers and potentiometers for precise electrical measurements and calibration.
103401.5	Assess construction and testing of current and potential transformers, electronic instruments.

Course Code :	100502	Semester :	5
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Course Outcome	Statements
100507.1	Analyze feedback control systems and design mathematical models for industrial applications.
100507.2	Evaluate system time-response and stability using standard test signals and techniques.
100507.3	Analyze time-frequency response relationships, stability criteria, and closed-loop performance.
100507.4	Evaluate control system stability, accuracy, and design using various methods.
100507.5	Analyze state variables, stability, and pole-placement for control system design.

Course Code :	103601	Semester :	6
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Course Outcome	Statements
100502.1	Develop and validate mathematical models and design computational programs for comprehensive power system studies.
100502.2	Analyze and select appropriate load flow methodologies for power networks based on system size, accuracy, and convergence requirements.
100502.3	Analyze and evaluate contingency conditions to assess power system security and reliability.
100502.4	Evaluate and design monitoring and control strategies for effective operation of modern power systems.
100502.5	Analyze and assess power system stability under steady-state and dynamic operating conditions.

Course Code :	103701	Semester :	7
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Course Outcome	Statements
103701.1	Apply advanced electrical engineering principles to design and coordinate protection systems.
103701.2	Analyze, design, and evaluate power system protection methods and equipment.
103701.3	Apply advanced techniques for analyzing and designing computer-aided protection systems.
103701.4	Analyze, simulate, and test electrical systems and protective relay applications.
103701.5	Apply advanced strategies to enhance power system protection using wide-area measurements.

Course Code :	100804	Semester :	8
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Course Outcome	Statements
100804.1	To understand basic concepts of AC transmission and to analyze FACTS devices, and their operational characteristics effectively.
100804.2	To apply advanced principles of VSCs and FACTS devices in power systems.
100804.3	To implement FACTS devices for power control, stability, and power quality solutions.
100804.4	To analyze and mitigate power quality issues in distribution systems effectively.
100804.5	To apply advanced techniques for reactive power compensation and harmonics mitigation and to understand basic concepts of DVR and UPQC.

1.4.2 Course Articulation Matrix (15)

1 . course name : C2100307

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
100307.1	Analyze m	2 ▾	2 ▾	- ▾	1 ▾	- ▾	1 ▾	- ▾	- ▾	- ▾	1 ▾	1 ▾
100307.2	Evaluate m	2 ▾	2 ▾	1 ▾	1 ▾	- ▾	1 ▾	1 ▾	- ▾	1 ▾	1 ▾	1 ▾
100307.3	Evaluate sii	3 ▾	2 ▾	1 ▾	- ▾	1 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100307.4	Analyze DC	3 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100307.5	Evaluate ar	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	- ▾	1 ▾	- ▾	1 ▾	1 ▾
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2 . course name : C2103401

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
103401.1	Evaluate m	3 ▾	3 ▾	1 ▾	1 ▾	1 ▾	2 ▾	2 ▾	2 ▾	1 ▾	- ▾	3 ▾
103401.2	Analyze an	3 ▾	3 ▾	1 ▾	1 ▾	2 ▾	2 ▾	1 ▾	2 ▾	1 ▾	1 ▾	3 ▾
103401.3	Evaluate in	2 ▾	3 ▾	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	3 ▾
103401.4	Analyze ga	2 ▾	3 ▾	2 ▾	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	3 ▾
103401.5	Assess con	3 ▾	3 ▾	2 ▾	1 ▾	1 ▾	2 ▾	2 ▾	1 ▾	1 ▾	- ▾	3 ▾
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3 . course name : C3100502

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
100507.1	Analyze fee	3 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	- ▾	1 ▾	1 ▾	- ▾	1 ▾
100507.2	Evaluate sy	3 ▾	1 ▾	1 ▾	1 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100507.3	Analyze tim	2 ▾	1 ▾	1 ▾	2 ▾	1 ▾	2 ▾	2 ▾	1 ▾	1 ▾	- ▾	1 ▾
100507.4	Evaluate cc	2 ▾	2 ▾	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	- ▾	1 ▾	1 ▾	1 ▾
100507.5	Analyze sta	3 ▾	2 ▾	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	- ▾	1 ▾	1 ▾
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4 . course name : C3103601

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
100502.1	Develop an	3 ▾	1 ▾	2 ▾	1 ▾	1 ▾	1 ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
100502.2	Analyze an	3 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100502.3	Analyze an	2 ▾	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100502.4	Evaluate ar	1 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	- ▾	1 ▾	1 ▾
100502.5	Analyze an	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	- ▾	- ▾	- ▾	- ▾	1 ▾
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5 . course name : C4103701

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
103701.1	Apply adva	3 ▾	3 ▾	2 ▾	1 ▾	1 ▾	3 ▾	- ▾	1 ▾	- ▾	- ▾	3 ▾
103701.2	Analyze, de	3 ▾	3 ▾	2 ▾	2 ▾	1 ▾	2 ▾	1 ▾	1 ▾	- ▾	1 ▾	3 ▾
103701.3	Apply adva	3 ▾	3 ▾	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	3 ▾
103701.4	Analyze, sir	3 ▾	3 ▾	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	3 ▾
103701.5	Apply adva	3 ▾	3 ▾	2 ▾	1 ▾	1 ▾	2 ▾	1 ▾	- ▾	1 ▾	- ▾	3 ▾
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

6 . course name : C4100804

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
100804.1	To understa	2 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	- ▾	1 ▾	- ▾	1 ▾	1 ▾
100804.2	To apply ad	3 ▾	3 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100804.3	To impleme	2 ▾	3 ▾	2 ▾	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100804.4	To analyze	2 ▾	3 ▾	3 ▾	2 ▾	1 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	1 ▾
100804.5	To apply ad	3 ▾	2 ▾	3 ▾	2 ▾	2 ▾	2 ▾	1 ▾	- ▾	1 ▾	1 ▾	1 ▾
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1 . Course Name : C2100307

Course	PSO1	PSO2	PSO3
100307.1	3 ▾	- ▾	2 ▾
100307.2	3 ▾	- ▾	2 ▾
100307.3	3 ▾	1 ▾	2 ▾
100307.4	3 ▾	- ▾	2 ▾
100307.5	3 ▾	1 ▾	2 ▾
Average	0.00	0.00	0.00

2 . Course Name : C2103401

Course	PSO1	PSO2	PSO3
103401.1	3 ▾	2 ▾	2 ▾
103401.2	3 ▾	1 ▾	1 ▾
103401.3	3 ▾	2 ▾	2 ▾
103401.4	3 ▾	1 ▾	2 ▾
103401.5	3 ▾	2 ▾	1 ▾
Average	0.00	0.00	0.00

3 . Course Name : C3100502

Course	PSO1	PSO2	PSO3
100507.1	3 ▾	2 ▾	3 ▾
100507.2	2 ▾	3 ▾	2 ▾
100507.3	3 ▾	2 ▾	2 ▾
100507.4	2 ▾	3 ▾	2 ▾
100507.5	3 ▾	2 ▾	3 ▾
Average	0.00	0.00	0.00

4 . Course Name : C3103601

Course	PSO1	PSO2	PSO3
100502.1	3 ▾	2 ▾	1 ▾
100502.2	3 ▾	2 ▾	2 ▾
100502.3	3 ▾	3 ▾	2 ▾
100502.4	3 ▾	2 ▾	3 ▾
100502.5	2 ▾	2 ▾	3 ▾
Average	0.00	0.00	0.00

5 . Course Name : C4103701

Course	PSO1	PSO2	PSO3
103701.1	3 ▾	2 ▾	2 ▾
103701.2	3 ▾	1 ▾	3 ▾
103701.3	3 ▾	2 ▾	3 ▾
103701.4	3 ▾	2 ▾	3 ▾
103701.5	3 ▾	1 ▾	3 ▾
Average	0.00	0.00	0.00

6 . Course Name : C4100804

Course	PSO1	PSO2	PSO3
100804.1	3 ▼	2 ▼	3 ▼
100804.2	2 ▼	- ▼	3 ▼
100804.3	2 ▼	- ▼	3 ▼
100804.4	2 ▼	1 ▼	2 ▼
100804.5	3 ▼	- ▼	2 ▼
Average	0.00	0.00	0.00

1.5 Program Articulation Matrix (5)

Program Articulation Matrix
(10)

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
100307	2.4	2	0.8	0.8	0.6	1.2	0.6	0.6	0.6	1	1
100307P	3.0	3.0	1.7	1.3	1.0	0.8	0.3	0.3	0.0	1.0	1.0
100308	2.0	2.0	1.6	1.4	1.4	1.2	0.8	0.6	0.4	0.6	2.0
100302	3.0	2.0	2.0	2.0	2.0	1.2	0.6	0.6	0.4	0.0	2.0
100302P	3.0	2.0	2.0	2.0	2.0	1.2	0.7	0.7	0.3	0.3	2.0
100306	2.4	2.4	1.8	1.4	1.2	0.7	0.6	0.4	0.6	0.6	0.6
100306P	3.0	1.7	2.3	1.3	1.3	0.7	0.3	0.3	1.0	1.0	1.3
100310	2.8	2.0	1.6	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
100399P	2.8	2.0	1.2	1.2	1.8	1.4	1.2	1.0	0.4	0.2	0.0
103401	2.6	3.0	1.6	1.4	1.6	1.5	1.6	1.4	1.0	0.6	3.0
103401P	1.7	2.3	1.3	1.7	1.3	1.2	1.0	0.7	0.7	1.3	2.3
103402	1.8	2.0	1.0	1.4	1.2	1.0	0.6	0.6	0.4	1.0	1.0
103402P	3.0	2.0	2.0	1.3	1.3	1.0	0.7	0.7	0.7	1.0	1.0
103404	3.0	2.0	2.0	2.0	2.0	1.2	0.8	0.6	0.4	0.2	2.0
100403	1.8	1.4	2.0	1.0	1.2	0.8	0.4	1.0	0.8	2.0	1.4
100403P	2.3	1.3	2.0	3.0	1.7	1.0	1.0	0.7	0.3	0.3	0.7
103403	1.4	1.6	0.8	1.6	0.2	0.0	0.0	0.0	0.0	0.0	1.6
100401	2.2	3.0	1.0	2.0	0.0	0.5	0.0	0.0	0.0	0.0	1.0
103502	2.6	2.6	1.6	2.2	2.2	1.3	1.4	1.0	0.6	1.6	2.0
100507	2.0	1.8	1.8	1.8	1.4	1.1	1.0	0.8	0.6	0.4	1.0
100507P	2.7	2.7	2.3	1.7	1.7	0.8	0.7	0.7	0.3	0.3	3.0
100506	1.8	2.2	2.4	1.6	1.4	1.3	0.8	0.6	0.4	0.4	1.0
100506P	2.0	3.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0
100502	2.6	1.6	1.6	1.6	1.6	1.3	1.0	0.8	0.8	0.6	1.0
100502P	2.3	2.3	2.3	2.0	1.3	1.2	0.7	0.7	0.7	0.3	1.0
100504	1.6	1.4	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.6
100504P	2.0	2.0	1.3	0.0	1.0	0.5	0.0	0.0	0.0	0.0	1.0
100511P	2.8	2.0	1.0	1.0	1.0	1.8	1.4	1.6	1.6	2.0	2.0
100510P	2.8	2.0	1.8	2.0	1.4	1.7	1.6	1.6	0.8	0.8	0.6
103601	2.0	1.6	1.8	1.6	1.2	0.9	0.6	0.6	0.6	0.6	1.0
103601P	2.7	2.7	2.3	1.7	1.7	0.7	.7	0.3	0.3	3.0	3.0
100613	2.6	2.0	2.0	1.0	1.8	1.3	1.0	0.6	0.6	1.0	1.4
103605	1.6	1.6	1.2	1.4	1.0	0.9	1.0	0.8	0.6	0.6	1.0
100607	1.2	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
100607P	2.0	2.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
100606	2.8	2.8	2.5	2.0	2.3	1.0	2.0	1.0	1.3	1.3	3.0
100606P	3.0	2.7	2.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100609P	2.7	2.7	2.3	1.7	1.7	1.3	0.7	0.7	0.7	0.7	3.0
100608	1.6	1.8	1.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0
103701	3.0	3.0	2.0	1.6	1.4	2.1	0.8	0.8	0.6	0.6	3.0
103715	2.2	2.6	1.2	1.0	1.8	1.2	0.8	0.8	0.4	1.6	2.0
103712	1.6	1.6	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.2
100704	1.6	1.4	1.4	1.2	1.4	0.0	0.0	0.0	0.0	1.0	0.8
100709P	2.2	1.6	1.6	1.4	1.2	0.9	0.8	0.6	0.4	0.8	0.0
100706P	1.0	2.0	1.6	1.6	1.6	2.3	1.6	1.6	1.4	0.8	2.0
100702P	2.8	2.0	1.2	1.0	1.2	0.9	0.6	0.6	0.6	0.8	0.4

100804	2.4	2.6	2.4	2.0	1.6	1.0	0.8	0.8	0.8	1.0	1.0
100803	2.4	1.8	2.0	1.4	1.4	1.2	0.8	0.8	0.8	0.6	0.6
103807	1.6	1.6	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103804	1.6	1.6	1.4	1.2	1.4	0.0	0.0	0.0	0.0	1.0	0.8
100801P	2.2	1.6	1.6	1.4	1.4	1.4	1.6	.2	1.0	1.0	1.0

Course Code	PSO1	PSO2	PSO3
100302	3	2	2
100302P	3	2	2
100306	2.2	2.7	2.4
100306P	3	0.7	1.7
100307	3	0.4	2
100307P	3	1	1
100308	2.2	1.6	2.4
100310	0.2	0	0
100399P	2.2	2	1
100401	1	2	1
100403	1.8	0.8	1.8
100403P	2.3	0.3	1.3
100502	2.6	2.4	2.4
100502P	2.7	2.7	2.3
100504	0	0	0.2
100504P	2.3	2.3	2
100506	2.8	3	2.2
100506P	3	3	2
100507	2.8	1.8	2.2
100507P	1.7	2.7	1.7
100510P	2.2	2	1
100511P	2.2	2	1
100606	3	2.3	2.3
100606P	1.7	2	1.7
100607	1.8	1.4	2.2
100607P	2	1.7	2.7
100608	0.6	1	0.8
100609P	1.7	2.7	1.7
100613	2.4	2.6	2.4
100702	2.2	2	1
100704	2.2	2.8	1.2
100706P	0.8	0.6	0.6
100709P	0.8	0.4	0.8
100801P	2.2	0	1.6
100803	2.8	1.8	2.2
100804	2.4	0.6	2.6
103401	3	1.6	1.6
103401P	2.3	1.7	1.7
103402	3	1.8	2.4
103402P	3	1	1
103403	1	2.4	1

103404	3	2	2
103502	2.4	0.4	0.6
103601	2.8	2.2	2.2
103601P	1.7	2.7	1.7
103605	2.8	2.4	2.8
103701	3	1.6	2.8
103712	1.4	1.6	1.6
103715	2.4	2.4	0.6
103804	2.2	0.8	1.2
103807	0	0	0

2 OUTCOME-BASED TEACHING LEARNING (120)

Tc

2.1 Describe Processes Followed to Ensure Quality of Teaching & Learning (20)

The department of Electrical Engineering focuses on improving the quality of teaching and learning on regular basis. Following are some of the tools used to improve the teaching learning process:

- Special lectures are organized by experts.
- Weekly mock class tests are conducted.
- Student performance is analyzed time to time.
- Weak students are provided extra lecture by respective faculties.
- Bright students are encouraged to perform even better.
- Learning through research papers.
- Smart classes are used.

Academic Calendar2025-26

PURNEA COLLEGE OF ENGINEERING																	
ACADEMIC CALENDER																	
January 2025 to June 2025																	
Jan-25			Feb-25			Mar-25			Apr-25			May-25			Jun-25		
Wed	1	New Year Celebration	Sat	1		Sat	1		Tue	1		Thu	1	Labour Day	Sun	1	Commencement of Internship of 3rd Semester
Thu	2		Sun	2		Sun	2		Wed	2		Fri	2	Mid Sem of class of 5th Semester (2022 - 26 Batch)	Mon	2	
Fri	3		Mon	3	Vasant Panchami	Mon	3		Thu	3		Sat	3	Mid Sem of class of 5th Semester (2022 - 26 Batch)	Tue	3	
Sat	4		Tue	4		Tue	4		Fri	4		Sun	4		Wed	4	
Sun	5	UMANG 2025	Wed	5		Wed	5		Sat	5	Samrat Ashok Jayanti	Mon	5	Mid Sem of class of 5th Semester (2022 - 26 Batch)	Thu	5	
Mon	6	Guru Govind Singh Jayanti	Thu	6		Thu	6	Mid Sem of class of 3rd Semester (2023)	Sun	6	Ram Navami	Tue	6	Janaki Navami	Fri	6	
Tue	7	UMANG 2025	Fri	7		Fri	7	Mid Sem of class of 3rd Semester (2023)	Mon	7		Wed	7	Mid Sem of class of 5th Semester (2022 - 26 Batch)	Sat	7	
Wed	8	UMANG 2025/Commencement of class	Sat	8		Sat	8	Mid Sem of class of 3rd Semester (2023)	Tue	8		Thu	8	Mid Sem of class of 5th Semester (2022 - 26 Batch)	Sun	8	
Thu	9	UMANG 2025	Sun	9		Sun	9		Wed	9		Fri	9		Mon	9	
Fri	10		Mon	10		Mon	10	Mid Sem of class of 3rd	Thu	10	Mahavir Jayant	Sat	10		Tue	10	
Sat	11		Tue	11		Tue	11	Mid Sem of class of 3rd	Fri	11		Sun	11		Wed	11	
Sun	12		Wed	12	Sant Ravidas Jayanti	Wed	12	Mid Sem of class of 3rd	Sat	12		Mon	12	Buddha Purnima	Thu	12	
Mon	13		Thu	13		Thu	13	Holi Vacation	Sun	13		Tue	13		Fri	13	
Tue	14	Makar Sankranti	Fri	14	Shab-e-Barat	Fri	14	Holi Vacation	Mon	14	Dr. Bhim Rao	Wed	14		Sat	14	
Wed	15		Sat	15		Sat	15	Holi Vacation	Tue	15		Thu	15		Sun	15	
Thu	16		Sun	16		Sun	16		Wed	16	Good Friday	Fri	16		Mon	16	
Fri	17		Mon	17		Mon	17		Thu	17		Sat	17	University Exam of class of 3rd Semester	Tue	17	
Sat	18		Tue	18		Tue	18		Fri	18		Sun	18		Wed	18	
Sun	19		Wed	19		Wed	19		Sat	19		Mon	19	University Exam of class of 3rd Semester (2023 Batch)/Commencement of Internship of 5th Semester (2022 - 26 Batch)	Thu	19	
Mon	20		Thu	20		Thu	20		Sun	20		Tue	20	University Exam of class of 3rd Semester	Fri	20	
Tue	21		Fri	21		Fri	21		Mon	21		Wed	21	University Exam of class of 3rd Semester (2023 Batch)	Sat	21	
Wed	22		Sat	22		Sat	22	Bihar Day	Tue	22		Thu	22	University Exam of class of 3rd Semester (2023 Batch)	Sun	22	
Thu	23		Sun	23		Sun	23		Wed	23	Veer Kunwar Singh Jayanti	Fri	23	University Exam of class of 3rd Semester (2023 Batch)/Commencement of class of 2nd Semester (2024 - 28 Batch)	Mon	23	
Fri	24		Mon	24		Mon	24		Thu	24		Sat	24	University Exam of class of 3rd Semester (2023 Batch)	Tue	24	
Sat	25		Tue	25		Tue	25		Fri	25		Sun	25		Wed	25	
Sun	26	Republic Day Celebration	Wed	26	Mahashivratri	Wed	26		Sat	26		Mon	26	University Exam of class of 3rd Semester	Thu	26	
Mon	27		Thu	27		Thu	27		Sun	27		Tue	27		Fri	27	
Tue	28		Fri	28		Fri	28		Mon	28		Wed	28		Sat	28	
Wed	29					Sat	29		Tue	29		Thu	29		Sun	29	
Thu	30					Sun	30		Wed	30		Fri	30		Mon	30	Summer Vacation Ends
Fri	31					Mon	31	Eid-ul-Fitr (Tentative)				Sat	31				

PURNEA COLLEGE OF ENGINEERING													
ACADEMIC CALENDER													
July 2025 to December 2025													
Jul-25		Aug-25		Sep-25		Oct-25		Nov-25		Dec-25			
Tue	1	Fri	1	Mon	1	Wed	1	Sat	1	Mon	1	University Exam of class of 4th Semester	
Wed	2	Sat	2	Tue	2	Thu	2	Sun	2	Tue	2	University Exam of class of 4th Semester (2023 - 27 Batch)	
Thu	3	Sun	3	Wed	3	Fri	3	Mon	3	Wed	3	University Exam of class of 4th Semester (2023 - 27 Batch)/Commencement of class of 3rd Semester (2024 - 28 Batch)	
Fri	4	Mon	4	Thu	4	Sat	4	Tue	4	Thu	4	University Exam of class of 4th Semester (2023 - 27 Batch)	
Sat	5	Tue	5	Fri	5	Sun	5	Wed	5	Fri	5	University Exam of class of 4th Semester (2023 - 27 Batch)	
Sun	6	Wed	6	Sat	6	Mon	6	Thu	6	Sat	6	University Exam of class of 4th Semester (2023 - 27 Batch)	
Mon	7	Thu	7	Sun	7	Tue	7	Fri	7	Sun	7		
Tue	8	Fri	8	Mon	8	Wed	8	Sat	8	Mon	8	University Exam of class of 4th Semester (2023 - 27 Batch)	
Wed	9	Sat	9	Tue	9	Thu	9	Sun	9	Tue	9	University Exam of class of 4th Semester (2023 - 27 Batch)	
Thu	10	Sun	10	Wed	10	Fri	10	Mon	10	Wed	10	University Exam of class of 4th Semester (2023 - 27 Batch)	
Fri	11	Mon	11	Thu	11	Sat	11	Tue	11	Thu	11	University Exam of class of 4th Semester (2023 - 27 Batch)	
Sat	12	Tue	12	Fri	12	Sun	12	Wed	12	Fri	12	University Exam of class of 4th Semester (2023 - 27 Batch)	
Sun	13	Wed	13	Sat	13	Mon	13	Thu	13	Sat	13	University Exam of class of 4th Semester (2023 - 27 Batch)	
Mon	14	Thu	14	Sun	14	Tue	14	Fri	14	Sun	14		
Tue	15	Fri	15	Mon	15	Wed	15	Sat	15	Mon	15		
Wed	16	Sat	16	Tue	16	Thu	16	Sun	16	Tue	16		
Thu	17	Sun	17	Wed	17	Fri	17	Mon	17	Wed	17		
Fri	18	Mon	18	Thu	18	Sat	18	Tue	18	Thu	18		
Sat	19	Tue	19	Fri	19	Sun	19	Wed	19	Fri	19		
Sun	20	Wed	20	Sat	20	Mon	20	Thu	20	Sat	20		
Mon	21	Thu	21	Sun	21	Tue	21	Fri	21	Sun	21		
Tue	22	Fri	22	Mon	22	Wed	22	Sat	22	Mon	22	Commencement of Internship of 3rd Semester (2024 - 28 Batch)	
Wed	23	Sat	23	Tue	23	Thu	23	Sun	23	Tue	23		
Thu	24	Sun	24	Wed	24	Fri	24	Mon	24	Wed	24		
Fri	25	Mon	25	Thu	25	Sat	25	Tue	25	Thu	25	Christmas Vacation Starts	
Sat	26	Tue	26	Fri	26	Sun	26	Wed	26	Fri	26		
Sun	27	Wed	27	Sat	27	Mon	27	Thu	27	Sat	27		
Mon	28	Thu	28	Sun	28	Tue	28	Fri	28	Sun	28		
Tue	29	Fri	29	Mon	29	Wed	29	Sat	29	Mon	29		
Wed	30	Sat	30	Tue	30	Thu	30	Sun	30	Tue	30		
Thu	31	Sun	31			Fri	31			Wed	31	Christmas Vacation Ends	

Pedagogical Activities

- Bloom's taxonomy is followed while designing Course Outcomes (CO) of the subjects by concerned faculty members and same is also followed in classroom teaching.
- Motivating students by citing real life examples and also by quoting contribution of legendary personalities of their field.
- Students are involved in teaching-learning process to improve their communication and inter-personal skills.
- NPTEL video links and other sources (handwritten notes, guidelines, questions related to competitive exams) are also shared with the students for important topics to develop their competency for different subjects related to Electrical Engineering.
- Students are motivated to register for additional courses of their interest on SWAYAM portal.

Initiative to motivate weak and bright studentsIdentification of weak students

The weak students are identified on the basis of the assessment of their performance in classroom discussion, university result etc. and the factors affecting the students performance is also identified. After the weak students have been identified, remedial steps are taken which are as follows: -

- Classes start with easy topic and are then progressed towards difficult ones.
- Teachers move around in the class and solve their problems.
- Weaker students are made to sit in the front.
- Involving students while solving the problem.
- Teacher encourages the students to take part in the classroom discussion.
- Attempts are made by the teachers to give personal attention to these students.
- Peer learning is encouraged.

Identification of bright students

The bright students are identified on the basis of the assessment of their performance in classroom discussion, university result, their ability to ask the questions etc. and such students are encouraged to perform even better by :-

- Encouraging them to participate in events in which they can be made familiar with the latest trends.
- Students are encouraged to take up projects which will help them to develop skills beyond the curriculum under faculty guidance.
- They are encouraged for entrepreneurship development.

Class room teaching

For effective class room teaching, the lecture delivery is done by the faculty using various educational tools such as:-

- Interactive learning.
- Laboratory exposure.
- Tutorial classes.
- Making the students work on projects.
- Assignments.
- Stories on experience are shared with students.

In order to improve the effectiveness of teachers in the classroom, the faculty focuses on:-

- Updating his/her knowledge in the fields related.
- Taking up various pedagogical tools.
- Developing course outcomes as per the trends.
- By improving the condition of laboratory and library.

Experiment and Continuous Assessment in Lab

Name of Laboratories as per curriculum	Room No	Exclusive/Shared	No. of experiments	Quality of instruments	Lab Manual	Content beyond syllabus	Assessment method
Machine I	8	Exclusive	13	Working	Yes	No	Regular correction of lab records and Viva-voce
Machine II	8	Exclusive	12	Working	Yes	No	Regular correction of lab records and Viva-voce

Electrical Circuit Analysis	111	Exclusive	10	Working	Yes	No	Regular correction of lab records and Viva-voce
Digital Electronics	111	Exclusive	10	Working	Yes	No	Regular correction of lab records and Viva-voce
Power Electronics	111	Exclusive	10	Working	Yes	No	Regular correction of lab records and Viva-voce
Basic Electrical Engineering	121	Shared	10	Working	Yes	No	Regular correction of lab records and Viva-voce
Power System I	205	Exclusive	10	Working	Yes	No	Regular correction of lab records and Viva-voce
Power System II	205	Exclusive	10	Working	Yes	No	Regular correction of lab records, survey sheets and Viva-voce
Electronic Design	205	Exclusive	10	Working	Yes	Yes	Regular correction of lab records and Viva-voce
Control System	206	Exclusive	10	Working	Yes	No	Regular correction of lab records and Viva-voce
Electrical and Electronic Measurement	206	Exclusive	10	Working	Yes	No	Regular correction of lab records and Viva-voce

Student Feedback of Teaching-Learning Process and Action Taken Thereof

Feedback Assessment Process

- Feedback is collected from the students and is analyzed by the feedback co-ordinator.
- The contents of the feedback questionnaire are shared with the faculty.
- The faculty performance is assessed.

Link of Sample Feedback form is given below.

<https://forms.gle/8Da46L9QPHnypYpj9> (<https://forms.gle/8Da46L9QPHnypYpj9>)

STUDENT'S FEEDBACK FORM*(To be used by institutions)*

Academic Year:		Name of the Faculty	
Course		Semester	
		Date of the feedback	

For getting filled in through student

S. No.	Description	Very Poor	Poor	Good	Very Good	Excellent
		(1)	(2)	(3)	(4)	(5)
1	Has the Teacher covered entire Syllabus as prescribed by University/ College/ Board?					
2	Has the Teacher covered relevant topics beyond syllabus					
3	Effectiveness of Teacher in terms of:					
	(a) Technical content/course content					
	(b) Communication skills					
	(c) Use of teaching aids					
4	Pace on which contents were covered					
5	Motivation and inspiration for students to learn					
6	Support for the development of Students' skill					
	(i) Practical demonstration					
	(ii) Hands on training					
7	Clarity of expectations of students					
8	Feedback provided on Students' progress					
9	Willingness to offer help and advice to students.					
	Total					

Corrective Measures

- The concerned faculty is counseled by the Head of Department.
- The experience of old teachers is shared so as to improve the quality of teaching.
- The faculty is encouraged for attending Faculty Development Program (FDP) and various seminars associated with their field to enhance their teaching and upgrade their domain of knowledge.

2.2 Quality of Student Capstone Project (25)

Processes Related to Project Identification, Allotment, Continuous Monitoring, Evaluation, Demonstration of Prototypes, and Enhancing Project Relevance

1. Project Identification Process

The department adopts a **structured, transparent, and outcome-driven framework** to ensure that every capstone project is technically sound, feasible, and aligned with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs).

a. Idea Generation

- Students begin preliminary ideation in the **pre-final year** through:
 - Brainstorming sessions
 - Interaction with industry experts
 - Workshops/seminars on emerging technologies
 - Research paper discussions

b. Sources of Project Ideas

Project topics are sourced from diverse and meaningful channels:

- Industry-proposed problems
- Faculty R&D and consultancy projects
- Research labs & Center of Excellence activities
- Societal and community needs
- Interdisciplinary projects between departments
- Innovation cell / IIC / Start-up initiatives
- National competitions (SIH, IEEE, SAE, e-Yantra)
- Government initiatives (Smart Grid, Digital India, EV, Renewable energy)

c. Proposal Submission & Screening

- Students submit proposals including problem statement, literature review, methodology, tools, expected outcomes, and sustainability/ethical considerations.
- The **Project Review Committee (PRC)** screens proposals using predefined rubrics based on:
 - Technical depth
 - Innovation potential
 - Feasibility (time, resources, skillset)
 - Societal/environmental relevance
 - PO–PSO alignment

Only proposals meeting minimum quality standards are approved.

2. Project Allotment Methodology

The project allotment process is **student-centric**, transparent, and focused on ensuring balanced workload and expertise alignment.

a. Student Choice-Based Selection

- Students are encouraged to propose their own topics.
- In case of overlapping ideas, PRC guides merging or differentiation.

b. Faculty-Assisted Allocation

- When students cannot identify a suitable project, faculty mentors suggest topics based on:
 - Ongoing research
 - Industry needs
 - Departmental priorities

c. Guide Assignment

- Each project group is assigned a faculty guide based on:
 - Area of specialization
 - Research/industry experience
 - Workload distribution

d. Project Group Formation

- Groups consist of **3–4 students** with complementary skillsets.
- Roles and responsibilities are documented and approved by the mentor.

3. Continuous Monitoring of Projects

Continuous monitoring ensures timely progress, quality improvement, and consistent mentor guidance.

a. Regular Mentor Meetings

- Weekly/biweekly meetings recorded in:
 - ~~Minutes of discussions~~

b. Structured Review Stages

The department conducts **three formal phase reviews**:

Review-I:

- Problem definition
- Literature survey
- Methodology
- Proposed design

Review-II:

- Detailed design
- Simulation/modelling
- Initial prototype development
- Use of tools and technologies

Review-III:

- Complete implementation
- Testing & validation
- Results & analysis
- Error handling and optimization

c. PO-PSO Aligned Rubrics

Each review is evaluated using well-defined rubrics based on:

- Technical competence
- Problem-solving and analysis
- Tool usage
- Innovation and creativity
- Team coordination
- Documentation and communication
- Ethical/societal/environmental considerations

4. Evaluation Mechanism

Evaluation is performed through a combination of *internal*, *external*, and *peer-review* mechanisms.

a. Internal Evaluation

- Conducted via scheduled reviews
- Checked for milestone completion
- Includes accuracy of design, simulation, coding, hardware integration

b. External Evaluation

- Invited experts from industry / academia evaluate final project
- Emphasis on innovation, real-world applicability, and technical correctness

c. Final Viva Examination

Parameters include:

- Technical depth
- Problem analysis & justification
- Prototype demonstration
- Communication skills
- Report quality
- Individual contribution

d. Documentation Evaluation

Components assessed:

- Project report
- PPT presentation
- Software codes/ circuit diagrams/ PCB layouts

5. Demonstration of Working Prototypes

The department places a strong emphasis on **hands-on implementation**.

a. Prototype Development Mandate

- Every project includes:
 - Hardware prototype **OR**
 - Working simulation model **OR**
 - Software application **OR**
 - Automation/control system implementation

b. Final Demonstration

- Conducted in front INTERNAL + external expert
- Students demonstrate:
 - Functionality
 - Accuracy and efficiency
 - Safety compliance
 - Practical limitations

c. Display Events

- Best working models showcased in:
 - Project expo
 - Research exhibitions
 - Community outreach events
 - Industry-sponsored fairs

6. Enhancing the Relevance of Projects

To maximize academic, industrial, and societal impact, several initiatives are undertaken:

a. Focus on Emerging Technologies

Projects are encouraged in areas such as:

- Renewable energy systems
- Electric vehicles
- IoT & automation
- Artificial Intelligence
- Smart grids
- Robotics & control
- Power electronics & drives

b. Industry Collaboration

- MoUs with industry partners
- Problem statements sourced from companies

c. Societal and Environmental Impact

- Projects solving rural/community issues
- Emphasis on sustainability, safety, ethics

d. Innovation & Entrepreneurship Support

- IIC and EDC support for converting projects into start-ups
- Patent filing encouragement
- Prototype development funding

e. Research Orientation

- Projects aligned with:
 - Faculty research
 - Publications
 - IEEE/Elsevier journals
 - Conference presentations

Rubric R1: Project Synopsis / Proposal Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
1. Identification of Problem Domain and Detailed Analysis	Clarity of domain, relevance, depth of problem analysis.	Problem domain is clearly defined, highly relevant, and supported by detailed contextual/technical analysis.	Problem domain is partially clear; analysis is moderate with limited justification.	Problem domain unclear; little to no justification.
2. Study of Existing Systems and Feasibility of Project Proposal	Comparison with existing solutions, feasibility justification.	Comprehensive review of existing systems with strong feasibility analysis; proposed solution is realistic and well justified.	Partial review of existing systems; feasibility discussed but lacks depth or clarity.	Minimal or no literature review; feasibility addressed or unclear.
3. Objectives and Methodology of the Proposed Work	Clarity of objectives and appropriateness of methodology.	Objectives are clear, measurable, and logically linked to the problem; methodology is well-structured and technically sound.	Objectives partially clear; methodology mentioned but lacks detail or coherence.	Objectives unclear; methodology incomplete, or irrelevant.

Rubric R2: Mid-Term Project Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
1. Design Methodology	Quality, clarity, and technical strength of the adopted design approach; correctness of models, tools, and techniques used.	Clearly defined and technically strong design methodology; logical workflow, proper use of tools/models, and significant progress demonstrated.	Design methodology moderately clear; partial use of tools/models; progress evident but lacks refinement or depth.	Methodology unclear or missing; improper use of relevant tools; design progress poor.
2. Planning of Project Work and Team Structure	Work breakdown, scheduling, task distribution, and team coordination.	Well-structured project plan with detailed task allocation; excellent coordination and active participation by all team members.	Project plan moderately defined; uneven task distribution or coordination issues; some delays in scheduled work.	Poor planning or distribution; weak coordination; significant deviation from scheduled activities.

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
3. Demonstration and Presentation	Quality of mid-term demonstration, clarity of communication, technical justification.	Demonstration is clear, functional, and well-explained; presentation is structured, confident, and technically sound.	Demonstration partially complete; presentation adequate but lacking clarity or technical depth.	Demonstration very absent; presentation unstructured, or poor.

Rubric R3: End-Semester Internal Project Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
1. Incorporation of Suggestions	Implementation of corrective actions and improvements based on previous evaluations (R1 & R2).	All suggestions addressed effectively; clear improvement in project design, documentation, and execution.	Some suggestions implemented; partial improvement observed but not fully comprehensive.	Very few or no suggestions incorporated; minimal improvement evident.
2. Project Demonstration	Functionality, completeness, and technical soundness of the final prototype/system.	Fully functional demonstration with clear technical detailing; results validated and aligned with objectives.	Partially functional demonstration; some objectives met but with limitations or incomplete validation.	Weak, incomplete functional demonstration; objectives largely unmet.
3. Demonstration and Presentation	Quality of final presentation, clarity, technical justification, and confidence level.	Presentation well-structured, clear, and technically strong; team communicates confidently and answers questions effectively.	Presentation moderately clear; minor gaps in technical explanation or confidence.	Presentation unclear, disorganized; technical justification poor; team not responding to questions.

Rubric R4: End-Semester Project Report Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
1. Project Report	Quality, structure, formatting, depth of content, and adherence to departmental or university guidelines.	Report is well-structured, professionally formatted, and comprehensive; includes clear objectives, methodology, results, and references following guidelines.	Report is moderately structured; some formatting inconsistencies; certain sections lack depth or clarity.	Report poorly structured, incomplete; major issues; missing key information; lacks academic quality.
2. Description of Concepts and Technical Details	Clarity and correctness of theoretical background, system design, algorithms, circuit diagrams, and other technical explanations.	Technical concepts clearly described with accurate details, diagrams, and strong justification; demonstrates solid understanding.	Technical concepts described but with minor gaps; explanations present but lack depth or precision.	Technical descriptions incorrect, or missing; demonstrates weak understanding.
3. Conclusion and Discussion	Effectiveness of concluding remarks, discussion of results, limitations, and future scope.	Conclusion insightful with clear results discussion; limitations acknowledged; meaningful future scope presented.	Conclusion adequate but lacks detailed discussion; limited mention of constraints or future improvements.	Conclusion vague, poor discussion; lack of reflection on limitations; future scope unclear.

Rubric R5: Individual Performance Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
1. Self-Motivation and Determination	Commitment, enthusiasm, initiative, and ability to work independently when required.	Shows strong motivation, takes initiative consistently, completes tasks proactively, and demonstrates exceptional ownership of work.	Demonstrates adequate motivation; completes assigned tasks but rarely takes additional initiative.	Shows low motivation; dependent on others for progress; lacks initiative.
2. Working within a Team	Team communication, cooperation, leadership, and conflict management.	Works very effectively in a team; communicates clearly; contributes meaningfully; may take leadership when required.	Participates in team work but with occasional coordination issues; contribution average.	Poor teamwork; communication issues; minimal contribution; often causes conflicts.
3. Technical Knowledge and Awareness related to the Project	Understanding of project concepts, tools, methodology, and ability to answer technical questions.	Demonstrates strong technical understanding; clearly explains concepts, tools, and implementation details; answers questions confidently.	Demonstrates moderate technical knowledge; can answer basic questions but struggles with complex ones.	Shows limited technical knowledge; unable to answer questions satisfactorily.
4. Regularity	Attendance, timely completion of tasks, participation in reviews, and adherence to deadlines.	Highly regular; completes all tasks on time; attends all reviews and meetings without fail.	Regular but with occasional delays or absences; tasks completed with some reminders.	Irregular attendance; frequent delays; poor adherence to deadlines and schedules.

PROJECT LIST FOR 2021-25 BATCH

		PO	PSO
1	DESIGN AND IMPLEMENTATION OF VAN DE GRAAFF GENERATOR.	PO1, PO2, PO3, PO4	PSO1, PSO2
2	FOOTSTEP POWER GENERATION SYSTEM	PO3, PO6, PO7	PSO1, PSO3
3	POWER QUALITY IMPROVEMENT USING TSC FACTS DEVICE	PO1, PO2, PO5	PSO1, PSO2
4	SOLAR WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM.	PO1, PO3, PO7	PSO2
5	SMART ILLUMINATION SYSTEM.	PO3, PO5, PO11	PSO1
6	PROTECTION OF TRANSFORMERS AND TRANSMISSION LINES IN POWER SYSTEMS BASED ON MATLAB SIMULINK	PO1, PO2, PO4, PO5	PSO1, PSO2
7	TEMPERATURE CONTROL USING POWER ELECTRONICS DEVICES	PO1, PO2, PO3	PSO1
8	SIMULATION OF MATLAB FOR POWER FACTOR CORRECTION DEVICE USING SVC (TSC-TCR).	PO1, PO2, PO5	PSO1, PSO2
9	LIGHT FIDELITY (LI-FI) TECHNOLOGY	PO5, PO10, PO12	PSO3
10	IOT BASED SMART ENERGY METER	PO1, PO5, PO11	PSO2

Project details 2020-24 batch**Combined PO–PSO Mapping Table (Only PO & PSO Codes)**

S. No.	Project Title	Matching POs	Matching PSOs
1	Accident Detection and Alert System	PO1, PO2, PO3, PO5, PO6, PO9, PO10	PSO1, PSO2, PSO3
2	IoT Based Air Pollution Monitoring System Using Arduino	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO10	PSO1, PSO2, PSO3
3	Three Phase Fault Detection in Transmission Line Using Arduino Uno	PO1, PO2, PO3, PO4, PO5, PO6	PSO1, PSO2, PSO3
4	Energy Storage System Using Gravity Battery	PO1, PO2, PO3, PO4, PO6, PO7, PO11	PSO1, PSO2, PSO3
5	Power Quality Improvement Using TSC FACTS Device	PO1, PO2, PO3, PO4, PO5, PO6	PSO1, PSO2
6	Modeling and Implementation of Pure Sine Wave Inverter with SPWM Control Technique	PO1, PO2, PO3, PO4, PO5, PO11	PSO1, PSO2

7	Solar Wireless EV Charging System	PO1, PO2, PO3, PO5, PO6, PO7, PO11	PSO1, PSO2, PSO3
8	Li-Fi Audio Transmission	PO1, PO2, PO3, PO5, PO10	PSO1, PSO2
9	Electric Fault Location Detector	PO1, PO2, PO3, PO4, PO5, PO6	PSO1, PSO2, PSO3
10	Transmission Line Fault Safety System	PO1, PO2, PO3, PO5, PO6, PO7	PSO1, PSO2, PSO3

Project details 2019-23 batch

Combined PO–PSO Mapping Table (Only PO & PSO Codes) – Additional Project

S. No.	Project Title	Matching POs	Matching PSOs
1	Voltage Control via Radio Frequency	PO1, PO2, PO3, PO5, PO6, PO10	PSO1, PSO2
2	Transmission Line Fault Detection System	PO1, PO2, PO3, PO4, PO5, PO6	PSO1, PSO2, PSO3
3	Transformer Protection Using 8051 Microcontrollers	PO1, PO2, PO3, PO4, PO5, PO6	PSO1, PSO2, PSO3
4	Dual Axis Solar Tracker	PO1, PO2, PO3, PO5, PO6, PO7	PSO1, PSO2, PSO3
5	Single Axis Solar Tracking System	PO1, PO2, PO3, PO5, PO6, PO7	PSO1, PSO2, PSO3
6	Single Axis Automatic Solar Tracking System	PO1, PO2, PO3, PO5, PO6, PO7	PSO1, PSO2, PSO3
7	IoT Based Irrigation System	PO1, PO2, PO3, PO5, PO6, PO7, PO10	PSO1, PSO2, PSO3
8	Wireless Charging of Electrical Vehicles	PO1, PO2, PO3, PO5, PO6, PO7, PO11	PSO1, PSO2, PSO3
9	DC Motor Speed Controller Using Arduino and L298 Motor Driver	PO1, PO2, PO3, PO4, PO5	PSO1, PSO2
10	Driver Anti-Sleep Alarm	PO1, PO2, PO3, PO5, PO6, PO10	PSO1, PSO2, PSO3
11	Automatic Load Sharing Transformer with Extra Load Cut-Off	PO1, PO2, PO3, PO4, PO5, PO6	PSO1, PSO2, PSO3
12	Auto Load Shifting Transformer with Protection	PO1, PO2, PO3, PO4, PO5, PO6	PSO1, PSO2, PSO3

2.3 Internship/Industrial Training (10)

Internship duration and Credit:

<u>Semester</u>	<u>Duration</u>	<u>Credit</u>
3 semester	4 weeks	4
5 semester	6 weeks	6
7 semester	8 weeks	8

1. Industrial training/tours for students

Students tours are scheduled for different industries such as transmission company, distribution company and transformer workshop where they will understand high-voltage power flow, grid operations, and substation functioning. In distribution companies, they will observe consumer supply systems, metering, and network maintenance. Tours of transformer workshops will give them hands-on exposure to transformer manufacturing, testing, and repair activities.



Fig. 2.1 Industrial visit group photo

2. Industrial/internship/summer training of more than two weeks and post training Assessment

The students undergo for industrial training for the period of 4- weeks which is compulsory for final year students at various places Bihar state power transmission company limited, North Bihar power distribution company limited, Building construction department, PGCIL. Companies are allotted based on the applications submitted by students on the internship portal. After applying through <https://internship.bihar.gov.in/register> (<https://internship.bihar.gov.in/register>), students receive an allotment letter according to their merit.

(At **Bihar State Power Transmission Company Limited (BSPTCL)**, they observe high-voltage transmission systems, substation operations, and load management. At **North Bihar Power Distribution Company Limited (NBPCL)**, they learn about power distribution networks, consumer metering, and supply maintenance. The **Building Construction Department (BCD)** provides insights into civil on-site electrical project management. Meanwhile, **PGCIL** offers exposure to national-level transmission infrastructure, advanced grid technologies, SCADA systems, and large-scale power system operations.

#	Student	College Reg	Mobile	Email	Company	Job Title	Job Location	Allocated
1	Abhay Kumar	22103131044	9616832460	abhaykumar36535@gmail.com	Building construction department	INTERNSHIP,EEE,ELECTRIC BUILDING DIVISION,PURNIA	EEE,ELECTRIC BUILDING DIVISION,PURNIA,CONT NO-9264293431	Yes
2	Abhinay Kumar	22103131020	7250653193	abhinaykr9060@gmail.com	North Bihar Power Distribution Company Limited	4 Weeks Internship under NBPDC Purnea	Report to Electrical Superintending Engineer, Electric Supply Circle, Purnea-7763815365	Yes
3	aman kumar	22103131017	9661756003	aman122003kumar@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
4	ANJALI PRIYA	21103131053	7544028433	anjaliipriya77397243@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
5	Ankit raj Prince	22103131036	8434033142	bhumi61321@gmail.com	Building construction department	INTERNSHIP,EEE,ELECTRIC BUILDING DIVISION,PURNIA	EEE,ELECTRIC BUILDING DIVISION,PURNIA,CONT NO-9264293431	Yes
6	ANSHU PRIYA	22103131012	8271284596	anshupriyaap1234@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDC Purnea-Purnea (Purnia)-Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Yes
7	Anubhav Kumar	22103131004	8674819598	anubhav1074@gmail.com	Building construction department	INTERNSHIP,EEE,ELECTRIC BUILDING DIVISION,PURNIA	EEE,ELECTRIC BUILDING DIVISION,PURNIA,CONT NO-9264293431	Yes
8	Anukriti	22103131009	8863034604	anukritiaastha@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
9	Anupriya Kumari	23103131909	8102174436	anupriyakumari419@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
10	Anushka Singh	22103131023	9279267339	anushkabxr81@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
11	Aryan Kumar	22103131040	8757531272	aryankumar2182003@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
12	Ashish Aman	22103131008	6206452741	ashishaman25082004@gmail.com	BSPTCL	BSPTCL Purnea Internship	BSPTCL Transmission Division Purnea, Contact Person EEE-7763817744	Yes

13	Ashish Kumar	22103131035	8317789574	ashishkumar843101@gmail.com	MILK COOPERATIVE FEDERATION LTD	Internship Trainee-Purnea (Purnia)-Kosi Dairy Project, Maranga, Purnia - 854301.	Kosi Dairy Project, Maranga, Purnia - 854301.	Yes
14	Asrar Ahmad	22103131003	7762851854	asrarahmad961@gmail.com	BSPTCL	BSPTCL Gopalganj Internship	BSPTCL Transmission Division Gopalganj, Contact Person EEE-9262594663	Yes
15	Avinash Kumar	23103131904	7003186092	avirajbgs22@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
16	Badal Kumar	22103131019	9835912836	badalrajput1810@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
17	Ghanshyam Kumar	22103131030	8969181851	ghanshyamshc569@gmail.com	BSPTCL	BSPTCL Kishanganj	BSPTCL Transmission Division Kishanganj, Contact Person EEE-9264440629	Yes

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Students — PURNEA COLLEGE OF ENGINEERING (Branch: ELECTRICAL ENGINEERING)

#	Student	College Reg	Mobile	Email	Company	Job Title	Job Location	Allocated
18	Hariom Kumar	21103131017	6202258628	rajhariom924@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDC Patna	Offices under jurisdiction of NBPDC, Report to GM HR, NBPDC	Yes
19	HARSHIT KUMAR	21103131047	7857829651	harshitsinghkyati@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
20	Kanhaiya Kumar	23103131918	7654669554	kanhaiyak9544@gmail.com	BIHAR STATE MILK COOPERATIVE FEDERATION LTD	Internship Trainee- Begusarai-Deshratna Dr. Rajendra Prasad Dugdh Utpadak Sahkari Sangh, Barauni Dairy, Makhan Sala Road, Barauni.	Deshratna Dr. Rajendra Prasad Dugdh Utpadak Sahkari Sangh, Barauni Dairy, Makhan Sala Road, Barauni.	Yes
21	Khushi Anand	23103131908	8252758633	khushianand2019@gmail.com	North Bihar Power Distribution Company	4 to 6 Weeks Internship under NBPDC Purnea-Purnea (Purnia)-Electric Supply Circle, Purnea, Report to Electrical	Electric Supply Circle, Purnea, Report to Electrical Superintending	Yes

22	Komal Kumar	22103131027	7061252660	komalkumar07845@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDCI Kishanganj-Kishanganj-Electric Supply Circle, Kishanganj. Report to Electrical Superintending Engineer, ESC Kishanganj	Electric Supply Circle, Kishanganj, Report to Electrical Superintending Engineer, ESC Kishanganj	Yes
23	Krishan Kumar	23103131916	8540802731	krishankumar1582000@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
24	KUNDAN KUMAR YADAV	23103131917	7294800360	erkyadav360@gmail.com	BSPTCL	BSPTCL Purnea Internship	BSPTCL Transmission Division Purnea, Contact Person EEE-7763817744	Yes
25	Manish Kumar	22103131014	6200982253	chaurasiam170@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
26	Mannu Kumar	22103131011	6299125706	mannukumar9847@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDCI Purnea-Purnea (Purnia)-Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Yes
27	MD DANISH JAMAL	21103131045	6202580593	danishsamda@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDCI Patna	Offices under jurisdiction of NBPDCI, Report to GM HR, NBPDCI	Yes
28	Monu Kumar	22103131015	9473309722	monu72780@gmail.com	North Bihar Power Distribution Company Limited	4 Weeks Internship under NBPDCI Purnea	Report to Electrical Superintending Engineer, Electric Supply Circle, Purnea-7763815365	Yes
29	Muskan Kumari	23103131910	9006883632	prakashmuskan7895@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDCI Purnea-Purnea (Purnia)-Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Yes
30	Neha kumari	23103131901	8340106945	nk0764741@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDCI Purnea-Purnea (Purnia)-Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Yes

31	Neha Kumari	21103131012	6201566763	neha8512141516@gmail.com	SBPDCL	electrical engineering Internship	SBPDCL vidyut bhawan patna	Yes
32	Nisha Kumari	22103131037	8676040853	nishakumaribgp2213@gmail.com	Building construction department	INTERNSHIP,EEE,ELECTRIC BUILDING DIVISION,PURNIA	EEE,ELECTRIC BUILDING DIVISION,PURNIA,CONT NO-9264293431	Yes
33	Nitish Kumar	21103131002	6299674390	nknknitishkumar2002@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDC Patna	Offices under jurisdiction of NBPDC, Report to GM HR, NBPDC	Yes
34	Pankaj Kumar	21103131030	9135568816	pankajpcep@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
35	Parmeshwari Bharti	22103131043	8709163950	arohisinghactress@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDC Purnea-Purnea (Purnia)-Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Yes
36	Pintu Kumar Yadav	22103131042	8252952291	py4587691@gmail.com	SBPDCL	Electrical Engineering Internship	SBPDCL vidyut bhawan patna	Yes
37	PRIYANSHU BHARTI	23103131905	9709614043	priyanshubharti620@gmail.com	BSPTCL	BSPTCL Purnea Internship	BSPTCL Transmission Division Purnea, Contact Person EEE-7763817744	Yes
38	RAJEEV RANJAN KUMAR	22103131904	8252364214	kumarrajeev1470ranjan2@gmail.com	Building construction department	INTERNSHIP,EEE,ELECTRIC BUILDING DIVISION,PURNIA	EEE,ELECTRIC BUILDING DIVISION,PURNIA,CONT NO-9264293431	Yes
39	RAJ KUMAR	21103131004	7079390648	rajakumar707939@gmail.com	North Bihar Power Distribution Company Limited	4 Weeks Internship under NBPDC Purnea	Report to Electrical Superintending Engineer, Electric Supply Circle, Purnea-7763815365	Yes
40	Rajlakshmi	23103131911	9905236428	rajlakshmi.bih@gmail.com	North Bihar Power Distribution Company Limited	4 to 6 Weeks Internship under NBPDC Purnea-Purnea (Purnia)-Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Electric Supply Circle, Purnea, Report to Electrical Superintending Engineer, ESC Purnea	Yes

Fig.2.2 Company allocation letter for industrial training

(i)Post Training Assessment: After completion of training, students are required to submit a training report to the department. Their performance is continuously assessed and evaluated through regular monitoring during the training period. Additionally, a PowerPoint presentation is conducted to help students develop their soft skills.

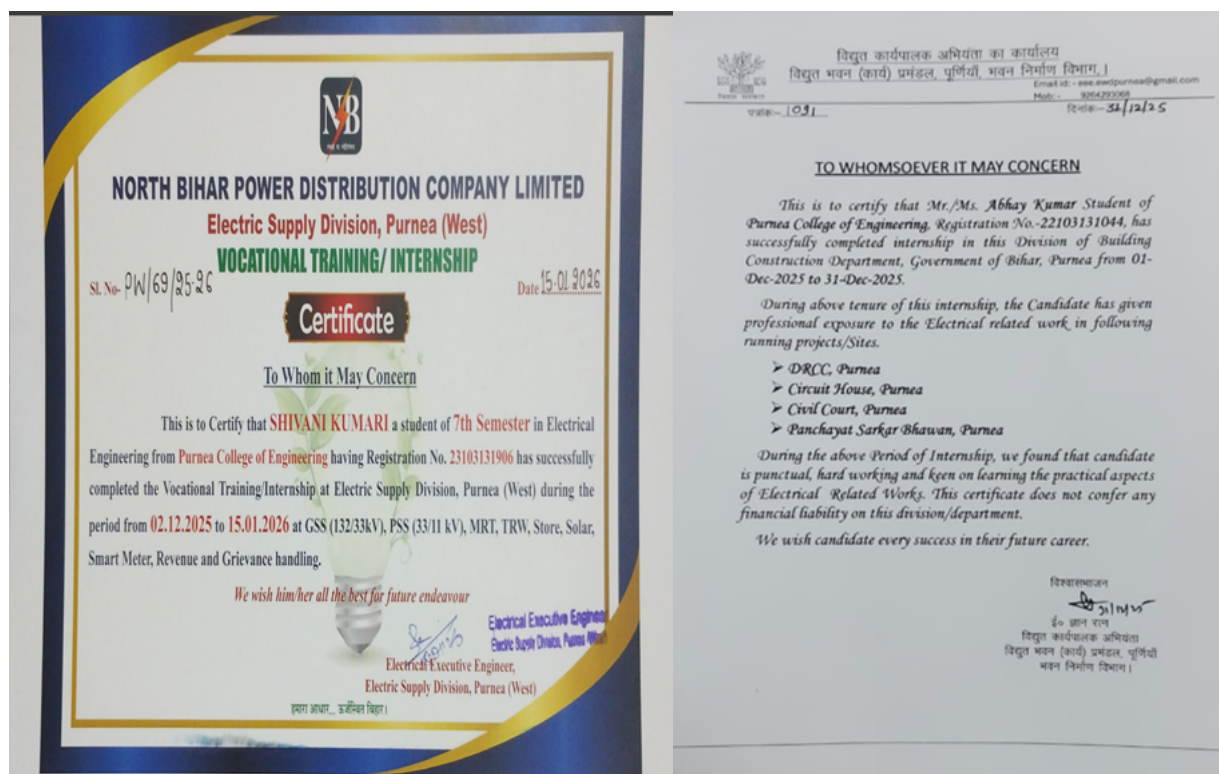


Fig.2.3 Industrial Training certificate

Rubric for Evaluation of Industrial Visit & Industrial Training

(Department of Electrical Engineering)

B. Rubric for Industrial / Internship / Summer Training

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Technical Knowledge Gained	Demonstrates strong understanding of systems (HV transmission, substations, SCADA, distribution)	Good understanding with minor gaps	Basic understanding	Poor technical understanding
Application of Classroom Knowledge	Effectively applies theory to real-world engineering problems	Applies theory in limited situations	Minimal application	No application
Hands-on Exposure / Practical Skills	Actively involved in practical tasks and operations	Observes and understands practical work	Limited exposure	No practical involvement
SWork Ethics & Professional Behavior	Highly punctual, responsible, and professional	Generally professional	Needs improvement	Unprofessional behavior
Industry Supervisor Feedback	Excellent feedback from industry mentor	Good feedback	Average feedback	Poor feedback

POs Addressed: PO1, PO3, PO5, PO8, PO10

C. Rubric for Post-Training Assessment (Report & Presentation)

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Training Report Quality	Well-structured, technically sound, comprehensive, and well-documented	Good structure with adequate technical content	Basic report with limited details	Poor report
Technical Depth & Analysis	Demonstrates strong analysis and critical understanding	Adequate analysis	Limited analysis	No analysis
Presentation Skills (PPT)	Clear, confident, and professional presentation	Good presentation with minor issues	Average communication	Poor presentation
Response to Questions	Answers confidently with technical clarity	Answers most questions	Partial responses	Unable to answer
Overall Learning Reflection	Clearly reflects learning outcomes and industry relevance	Good reflection	Limited reflection	No reflection

POs Addressed: PO4, PO9, PO10, PO12

3. Impact analysis of industrial training

Students gain valuable work experience that gives them an advantage in the job market and helps them secure employment more easily in their chosen field. They also get the opportunity to build networks with professionals, which supports their growth in the corporate environment. During the course of training, students apply their classroom knowledge to real-world engineering situations, which significantly boosts their confidence and practical understanding.

D. Rubric for Impact Analysis.

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Career Awareness & Readiness	Clear understanding of career roles and industry expectations	Good awareness	Limited awareness	No clarity
Confidence & Professional Growth	Significant improvement in confidence and skills	Moderate improvement	Slight improvement	No improvement
Networking & Industry Exposure	Actively builds professional connections	Some interaction	Limited interaction	No interaction

4. Student feedback on initiatives

PURNEA COLLEGE OF ENGINEERING, PURNEA, BIHAR – 854301 (Department of Electrical Engineering)				
<u>Student Industrial Visit Feedback Form</u>				
Name & Address of the Organization:				
Duration of Visit:				
This student evaluation is part of our regular effort to maintain quality instruction. The answer will be taken seriously.				
Tick in the relevant cell. 1- poor, 2-average, 3-good, 4- excellent				
Heads of Feedback	1	2	3	4
Learning Outcomes of Industrial Visit				
The use of industrial visit to enhance learning at engineering courses				
The visit was planned to help students to achieve the learning outcomes				
Level of Satisfaction				
Workplace				
The working environment was suitable for visit				
The instructor provides good support during visit				
Industrial Visit Preparation				
The visit attended has prepared me well to work in industry in terms of knowledge				
The visit attended has prepared me well to work in terms of techniques and skills				
The overall academic learning in the institution had helped me to go through industrial visit with confidence				
Any other comments:				
Name Roll No. Signature				

S. No.	Benefit of students	Feedback of students
1.	Gain Valuable Work Experience	Positive
2.	An Edge in the Job Market	Positive

3.	Transition into a Job	Positive
4.	Is this the Right Career	Positive
5.	Networking Opportunities	Positive
6.	Application of Classroom Knowledge	Positive
7.	Gain Confidence	Positive

2.4 Seminar and Mini/Micro Projects (10)

As an integral component of the academic curriculum and continuous assessment framework, students of the Electrical Engineering department actively engage in technical seminars on contemporary and emerging areas aligned with industry trends, research advancements, and societal requirements. These seminars aim to enhance students' conceptual thinking, simulation proficiency, and professional presentation skills.

Presented below is a list of seminar topics undertaken by the 2021–25 batch.

Group	Seminar Topic	Relevant Program Outcomes (POs)
Group 1	Wireless Electricity	PO1, PO2, PO3, PO4, PO5, PO12
Group 2	Automatic Meter Reading	PO1, PO2, PO3, PO5, PO6, PO10
Group 3	Wave Energy Converter	PO1, PO3, PO4, PO7, PO12
Group 4	Shape Memory Alloy	PO1, PO2, PO4, PO12
Group 5	Energy-efficient lighting for residential buildings	PO1, PO3, PO6, PO7, PO11
Group 6	Power system reliability improvement using distributed generation	PO1, PO2, PO3, PO4, PO5, PO7
Group 7	Electric power generation from kinetic energy	PO1, PO3, PO4, PO7, PO12
Group 8	Energy-efficient lighting for industrial facilities	PO1, PO3, PO5, PO6, PO7, PO11
Group 9	Power system reliability improvement using microgrids	PO1, PO2, PO3, PO5, PO6, PO7, PO11
Group 10	Electric power generation from magnetic energy	PO1, PO2, PO4, PO12

This structured process ensured that students not only gained strong conceptual knowledge but also developed practical skills in modeling, simulation, analysis, and professional communication.

Mapping with Program Outcomes (POs)
POs and PSOs Addressed through Seminar

PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO11,PO12

Impact and Relevance

The seminar activities enhanced students' industry readiness by familiarizing them with modern engineering tools and real-world problem scenarios.

Topics such as renewable energy systems, microgrids, wireless power transfer, and control applications also addressed contemporary challenges related to energy efficiency and sustainability.

The seminar was organized through a systematic and well-structured approach to ensure effective learning and achievement of the intended outcomes. The process included the following stages:

1. Group Formation:

Students were organized into small groups to encourage teamwork, collaborative learning, and peer engagement.

2. Selection of Topics:

Each group selected a topic of interest from core areas of Electrical Engineering such as control systems, power systems, renewable energy, power electronics, and microgrids.

3. Literature Survey and Planning:

A comprehensive literature review was conducted to understand the theoretical concepts, methodologies, and recent advancements related to the chosen topic, followed by proper planning of the work.

4. Faculty Guidance and Review:

Faculty members continuously monitored the progress of each group, provided technical guidance, and suggested improvements in modeling, simulation techniques, and result analysis.

5. Report Preparation:

Each group prepared a detailed technical report covering problem definition, methodology, simulation work, results, analysis, and conclusions.

6. Seminar Presentation:

The findings were presented through PowerPoint presentations, and graphical outputs.

7. Viva-Voce and Assessment:

A viva-voce examination was conducted to evaluate students' conceptual understanding, technical competence, and clarity of presentation. Assessment was carried out considering technical quality, presentation effectiveness, and practical relevance.

2.5 Case Studies and Real-Life Examples (10)

S.NO	Name of Participant	Case study	Outcome	Pos and PSOs mapping
1	1.Saloni kumari 2.Riya kumari 3.Manikant 4. Aaditya kumar 5.Ronit Raj	Energy audit of a single house.	The student has performed an energy audit of a residential building by estimating energy consumption, identifying inefficient loads, calculating energy cost, and suggesting suitable energy conservation and sustainability measures.	PO1, PO2, PO3, PO6, PO7 PSO1, PSO2
2	1.Aman kumar 2.Ravi kumar 3.Hareram kumar 4.Prashant kumar 5.Lal bahadur	Load test on 3 phase induction motor.	The student has performed a load test on a three-phase induction motor and evaluated its performance parameters such as efficiency, slip, losses, and power factor under varying load conditions.	PO1, PO2, PO4, PO5, PO10 PSO1, PSO3
3	1. Khushi Anand 2. Rajlakshmi 3. Shweta Kumari 4. Yamika Kumari 5. Avinash Kumar	Annual energy generation analysis of a grid connected solar PV plant.	The student has performed analysis of annual energy generation data of a grid-connected solar PV plant, calculated performance ratio, and studied seasonal variation.	PO1, PO2, PO4, PO5, PO7, PO12 PSO2, PSO3
4	1. Ashwini Kumar 2. Prashant Kumar 3. Anushka Shankar 4. Ravi Kumar	Analysis of smart meter Features in modern power distribution systems.	The student has performed analysis of smart meter features including real-time monitoring, demand response and data management in modern power distribution systems.	PO1, PO2, PO5, PO6, PO8, PO12 PSO1, PSO3

2.6 SWAYAM/NPTEL/MOOC/Self Learning (10)

Students are required to register for a mandatory SWAYAM/NPTEL/MOOC course as part of the curriculum. Each course incorporates a formal assessment mechanism to evaluate the attainment of learning outcomes. The evaluation scheme comprises 25 marks for continuous assessment through assignments and 75 marks for the end-term examination, ensuring sustained engagement and comprehensive assessment.

The course offering is semester-wise. In the fifth semester, students undertake non-technical or interdisciplinary courses to enhance soft skills, managerial aptitude, professional ethics, and general semester, students enroll in technical or core-domain courses aligned with the program curriculum to strengthen subject knowledge and gain exposure to advanced topics.

This structured integration of online learning platforms promotes independent learning, lifelong learning skills, and the effective use of modern digital educational resources.

BATCH (2021-2025)

5TH SEMESTERS

No. of students registered = 50

No. of students certification = 37

Sr. N o.	Registrati on No.	Name of the Student	Name of course	Course Week	Percentage
1	20103131020	Basid Alam			
2	20103131033	Bibhuti Kumar	SOFT SKILL DEVELOPMENT	8	49
3	20103131056	Kunal Kumar			
4	21103131003	Raman Kumar Verma	PSYCHOLOGY OF STRESS, HEALTH AND WELL BEING	12	58
5	21103131007	Saurav Kumar			
6	21103131008	Pallavi Joshi	ENHANCING SOFT SKILL AND PERSONALITY	8	70
7	21103131009	Sakshi Mehta			
8	21103131011	Muskan Kumari	EMOTIONAL INTELLIGENCE	8	54
9	21103131014	Waibhav Bharti	SOFT SKILL DEVELOPMENT	8	49
10	21103131015	Mritunjay Mohan	HUMAN BEHAVIOUR	8	51
11	21103131016	Md Jawed	EMOTIONAL INTELLIGENCE	8	60
12	21103131018	Ashish Kumar Sharma	SOFT SKILL DEVELOPMENT	8	57
13	21103131019	Manish Kumar	ETHICAL HACKING	12	55
14	21103131020	Ranju Kumari			
15	21103131021	Sandhya Kumari			
16	21103131022	Dipti Suman	EMOTIONAL INTELLIGENCE	8	52
17	21103131023	Md Sharique Akhtar	SOFT SKILLS	12	60
18	21103131025	Md Kaif Khan	SPEAKING EFFECTIVELY	8	60
19	21103131028	Sahil Raj	HUMAN BEHAVIOUR	8	64

20	21103131 029	Sidharth a Yadav			
21	21103131 031	Prashant Kumar Singh	PSYCHOLOGY OF STRESS, HEALTH AND WELL BEING	12	56
22	21103131 032	Divyans hu Gaurav	SOFT SKILLS	12	60
23	21103131 034	Abhiman yu Kumar	SOFT SKILLS	12	65
24	21103131 035	Surya Pratap Singh	SOFT SKILLS DEVELOPMENT	8	57
25	21103131 036	Dipali Raj	HUMAN BEHAVIOUR	8	50
26	21103131 037	Anvi Singh	SOFT SKILL DEVELOPMENT	8	52
27	21103131 038	Avinash Kumar	ENGLISH LANGUAGE FOR COMPETITIVE EXAMS	12	62
28	21103131 039	Aditya Kumar Pandit	ENGLISH LANGUAGE FOR COMPETITIVE EXAMS	12	57
29	21103131 042	Aditya Raj	SOFT SKILL DEVELOPMENT	8	66
30	21103131 043	Abhishe k Kumar	SOFT SKILL DEVELOPMENT	8	60
31	21103131 044	Niharika	EMOTIONAL INTELLIGENCE	8	54
32	21103131 045	Md Danish Jamal			
33	21103131 046	Ujjwal Kumar			
34	21103131 048	Sefali Shailja	SOFT SKILL DEVELOPMENT	8	53
35	21103131 049	Pragya Kumari	SOFT SKILL DEVELOPMENT	8	53
36	21103131 051	Shalini Kumari	EMOTIONAL INTELLIGENCE	8	52
37	21103131 052	Poonam Kumari	EMOTIONAL INTELLIGENCE	8	54
38	21103131 054	Aditi Anjana	SOFT SKILL DEVELOPMENT	8	57
39	21103131 055	Aditya Narayan	SPEAKING EFFECTIVELY	8	62
40	21103131 056	Pramod Kumar Das			
41	22103131 901	Nandani Priya	SOFT SKILL DEVELOPMENT	8	46
42	22103131 902	Alok Raj	ENGLISH LANGUAGE FOR COMPETITIVE EXAMS	12	81
43	22103131 903	Manisha Kumari	SOFT SKILL DEVELOPMENT	8	52
44	22103131 904	Rajeev Ranjan Kumar			
45	22103131 905	Aman Kumar			
46	22103131 906	Rahul Kumar Yadav	SOFT SKILL DEVELOPMENT	8	51

47	22103131 907	Siddhant Singh Tomar			
48	22103131 908	Raju Kumar	ENGLISH LANGUAGE FOR COMPETITIVE EXAMS	12	63
49	22103131 909	Asmita Kumari	SOFT SKILL DEVELOPMENT	8	54
50	22103131 910	Sumit Kumar			

BATCH (2021-2025)**6TH SEMESTER****No. of students registered = 50****No. of students certification = 37**

Sr. No.	Registration No.	Name of the Student	Name of course	Course Week	Percentage
1	20103131020	Basid Alam			
2	20103131033	Bibhuti Kumar	SUSTAINABLE ENGINEERING CONCEPTS AND LIFE CYCLE ANALYSIS	8	60
3	20103131056	Kunal Kumar			
4	21103131003	Raman Kumar Verma	SUSTAINABLE HAPPINESS	8	90
5	21103131007	Saurav Kumar			
6	21103131008	Pallavi Joshi	SOFT SKILLS	12	68
7	21103131009	Sakshi Mehta	SOFT SKILL DEVELOPMENT	8	52
8	21103131011	Muskan Kumari	SOFT SKILL DEVELOPMENT	8	49
9	21103131014	Waibhav Bharti	BASICS OF HEALTH PROMOTION AND EDUCATION INTERVENTION	8	65
10	21103131015	Mritunjay Mohan	HUMAN BEHAVIOUR	8	51
11	21103131016	Md Jawed	SOFT SKILL DEVELOPMENT	8	56
12	21103131018	Ashish Kumar Sharma	HUMAN BEHAVIOUR	8	67
13	21103131019	Manish Kumar	ENGLISH LANGUAGE FOR COMPETITIVE EXAMS	12	60
14	21103131020	Ranju Kumari			
15	21103131021	Sandhya Kumari			
16	21103131022	Dipti Suman	CORPORATE SOCIAL RESPONSIBILITY	8	49
17	21103131023	Md Sharique Akhtar	PLASTIC WASTE MANAGEMENT	8	63
18	21103131025	Md Kaif Khan	SOFT SKILL DEVELOPMENT	8	58
19	21103131028	Sahil Raj	SOFT SKILL DEVELOPMENT	8	51
20	21103131029	Sidhartha Yadav			

21	21103131031	Prashant Kumar Singh	SOFT SKILL DEVELOPMENT	8	48
22	21103131032	Divyanshu Gaurav			
23	21103131034	Abhimanyu Kumar	EV-VEHICLE DYNAMICS AND ELECTRIC MOTOR DRIVES	8	60
24	21103131035	Surya Pratap Singh			
25	21103131036	Dipali Raj	SOFT SKILL DEVELOPMENT	8	48
26	21103131037	Anvi Singh	THE PSYCHOLOGY OF LANGUAGE	8	62
27	21103131038	Avinash Kumar	CONSUMER PSYCHOLOGY	8	63
28	21103131039	Aditya Kumar Pandit	SPEAKING EFFECTIVELY	8	52
29	21103131042	Aditya Raj	SUSTAINABLE HAPPINESS	8	79
30	21103131043	Abhishek Kumar	SUSTAINABLE HAPPINESS	8	78
31	21103131044	Niharika	THE PSYCHOLOGY OF LANGUAGE	8	54
32	21103131045	Md Danish Jamal			
33	21103131046	Ujjwal Kumar			
34	21103131048	Sefali Shailja	HUMAN MOVEMENT SCIENCE	8	58
35	21103131049	Pragya Kumari	HUMAN MOVEMENT SCIENCE	8	53
36	21103131051	Shalini Kumari	SOFT SKILL DEVELOPMENT	8	53
37	21103131052	Poonam Kumari	SOFT SKILL DEVELOPMENT	8	53
38	21103131054	Aditi Anjana	EMOTIONAL INTELLIGENCE	8	52
39	21103131055	Aditya Narayan	SUSTAINABLE HAPPINESS	8	68
40	21103131056	Pramod Kumar Das			
41	22103131901	Nandani Priya	SOFT SKILL DEVELOPMENT	8	46
42	22103131902	Alok Raj	SOFT SKILL DEVELOPMENT	8	50
43	22103131903	Manisha Kumari	SOFT SKILL DEVELOPMENT	8	57
44	22103131904	Rajeev Ranjan Kumar			
45	22103131905	Aman Kumar			
46	22103131906	Rahul Kumar Yadav	SOFT SKILL DEVELOPMENT	8	51
47	22103131907	Siddhant Singh Tomar			
48	22103131908	Raju Kumar	SOFT SKILL DEVELOPMENT	8	50
49	22103131909	Asmita Kumari	SOFT SKILL DEVELOPMENT	8	54
50	22103131910	Sumit Kumar			

5th SEMESTER

No. of students registered = 59

No. of students certification = 57

Sr. No.	Registration No.	Name of the Student	Name of course	Course Week	Percentage
1	20103131001	Nitin Kumar	EDUCATION FOR SUSTAINABLE DEVELOPMENT	12	70
2	20103131002	Ugan Paswan	INTRODUCTION TO POLITICAL THEORY	12	43
3	20103131003	Ashish Kumar Ranjan	EDUCATION FOR SUSTAINABLE DEVELOPMENT	12	90
4	20103131004	Abhishek Kumar Gupta	PSYCHOLOGY OF STRESS,HEALTH AND WELL BEING	12	56
5	20103131005	Mandeep Kumar	FORESTS AND THEIR MANAGEMENT	12	90
6	20103131006	Anand Kumar Singh	SOFT SKILL DEVELOPMANT	8	58
7	20103131007	Ayush Raj	FORESTS AND THEIR MANAGEMENT	12	97
8	20103131009	Bhavna Kumari	FORESTS AND THEIR MANAGEMENT	12	71
9	20103131010	Manjeet Kumar Rajak	PSYCHOLOGY OF STRESS,HEALTH AND WELL BEING	12	61
10	20103131011	Sundaram Kumar	FORESTS AND THEIR MANAGEMENT	12	63
11	20103131012	Syed Shad Jami	ENHANCING SOFT SKILLS AND PERSONALITY	8	78
12	20103131013	Md Humayun	PYTHON	12	78
13	20103131014	Anurag Kumar	FORESTS AND THEIR MANAGEMENT	12	72
14	20103131015	Ravi Kumar	CONSERVATION GEOGRAPHY	12	99
15	20103131019	Ankit Kumar	FORESTS AND THEIR MANAGEMENT	12	81
16	20103131021	Ankur Mishra	EDUCATION FOR SUSTAINABLE DEVELOPMENT	12	93
17	20103131022	Prem Kumar Suman	FORESTS AND THEIR MANAGEMENT	12	97
18	20103131023	Priyanshu Kumar	PSYCHOLOGY OF STRESS,HEALTH AND WELL BEING	12	52
19	20103131024	Navneet Siddharth	EDUCATION FOR SUSTAINABLE DEVELOPMENT	12	93
20	20103131026	Shivam Kumar	ENGLISH LAIUNGAGE FOR COMPETITIVE EXAMS	12	73
21	20103131027	Saumya Shree	AIR POLLUTION AND CONTROL	12	58
22	20103131028	Anu Priya	FORESTS AND THEIR MANAGEMENT	12	95
23	20103131029	Shruti Kumari	CONTROL ENGINEERING	12	60
24	20103131030	Chandra Kishore Narayan	FORESTS AND THEIR MANAGEMENT	12	83
25	20103131031	Vimal Kumar	FORESTS AND THEIR MANAGEMENT	12	82
26	20103131032	Md Nadir	ENHANCING SOFT SKILLS AND PERSONALITY	8	69
27	20103131034	Aman Raj	FORESTS AND THEIR MANAGEMENT	12	75
28	20103131035	Suman Kumar	DEVELOPING SOFT SKILLS AND PERSONALITY	8	73
29	20103131036	Md Shoib Akhtar	SOFT SKILL DEVELOPMANT	8	69
30	20103131038	Sahil Kumar Jaiswal	SIGNALS AND SYSTEMS	12	64
31	20103131039	Avinash Kumar	DEVELOPING SOFT SKILLS AND PERSONALITY	8	57
32	20103131041	Yashwant Anand	PSYCHOLOGY OF STRESS,HEALTH AND WELL BEING	12	60
33	20103131042	Mantu Kumar Sah	EDUCATION FOR SUSTAINABLE DEVELOPMENT	12	75

34	20103131043	Aditya Kumar	FORESTS AND THEIR MANAGEMENT	12	62
35	20103131044	Anjali Kumari	FORESTS AND THEIR MANAGEMENT	12	98
36	20103131045	Ritesh Kumar Raushan	FORESTS AND THEIR MANAGEMENT	12	91
37	20103131046	Anmol Raj	WEB DESIGN	12	79
38	20103131047	Amit Kumar	ANDROID	12	81
39	20103131049	Om Narayan	TRAINING AND DEVELOPMENT	12	73
40	20103131050	Ankush Anand	WEB DESIGN	12	78
41	20103131051	Md Matiullah Izhar	PYTHON	12	79
42	20103131052	Gulshan Kumar	EDUCATION FOR SUSTAINABLE DEVELOPMENT	12	87
43	20103131053	Md Majid	PYTHON	12	81
44	20103131054	Abhinav Kumar	PSYCHOLOGY OF STRESS,HEALTH AND WELL BEING	12	83
45	20103131055	Sohrab Ali	PYTHON	12	75
46	20103131057	Anurag Anand	EDUCATION FOR SUSTAINABLE DEVELOPMENT	12	78
47	20103131058	Sangram Kumar	FORESTS AND THEIR MANAGEMENT	12	90
48	20103131059	Yuvraj Kumar	INTRODUCTION TO MDERN INDIAN POLITICAL THOUGHT	12	77
49	20103131060	Himanshu Kumar	PSYCHOLOGY OF STRESS,HEALTH AND WELL	12	60
50	20103131061	Anish Kumar	FORESTS AND THEIR MANAGEMENT	12	98
51	21103131901	Lavkush Kumar	ANDROID	12	80
52	21103131902	Pawan Kumar	PSYCHOLOGY OF STRESS , HEALTH AND WELL-BEING	12	70
53	21103131903	Jyotish Kumar	POWER SYSTEM ENGINEERING	12	82
54	21103131904	Manish Kumar	FORESTS AND THEIR MANAGEMENT	12	87
55	21103131905	Aditi Raj	INTRODUCTION TO COGNITIVE PSYCHOLOGY	12	68
56	21103131906	Vivek Ballabh			
57	21103131907	Roushan Singh	FORESTS AND THEIR MANAGEMENT	12	75
58	20103131037	Manish Kumar			
59	21103131908	Sujeet Kumar	POWER SYSTEM ENGINEERING	12	50

BATCH (2020-2024)**6TH SEMESTER****No. of students registered = 59****No. of students certification = 56**

Sr. No.	Registratio n No.	Name of the Student	Name of course	Course week	Percentage
1	201031310 01	Nitin Kumar	SOFT SKILLS	12	68
2	201031310 02	Ugan Paswan	SOFT SKILLS	12	62
3	201031310 03	Ashish Kumar Ranjan	ENVIRONMENT AND DEVELOPMENT	12	60
4	201031310 04	Abhishek Kumar Gupta	SOFT SKILL DEVELOPMENT	8	43
5	201031310 05	Mandeep Kumar	ENVIRONMENT AND DEVELOPMENT	12	53
6	201031310 06	Anand Kumar Singh	SOFT SKILLS	12	55
7	201031310 07	Ayush Raj	ENVIRONMENT AND DEVELOPMENT	12	63

8	201031310 09	Bhavna Kumari	SOFT SKILLS	12	53
9	201031310 10	Manjeet Kumar Rajak	SOFT SKILLS	12	74
10	201031310 11	Sundaram Kumar	SOFT SKILLS	12	73
11	201031310 12	Syed Shad Jami	SOFT SKILLS	12	69
12	201031310 13	Md Humayun	ENVIRONMENT AND DEVELOPMENT	12	75
13	201031310 14	Anurag Kumar			
14	201031310 15	Ravi Kumar	INTRODUCTION TO MODERN INDIAN POLITICAL THOUGHT	12	73
15	201031310 19	Ankit Kumar	SOFT SKILLS	12	62
16	201031310 21	Ankur Mishra	SOFT SKILLS	12	76
17	201031310 22	Prem Kumar Suman	SOFT SKILLS	12	66
18	201031310 23	Priyanshu Kumar	SOFT SKILLS	12	64
19	201031310 24	Navneet Siddharth	SOFT SKILLS	12	64
20	201031310 26	Shivam Kumar	SOFT SKILLS	12	70
21	201031310 27	Saumya Shree	SOFT SKILLS	12	54
22	201031310 28	Anu Priya	SOFT SKILLS	12	66
23	201031310 29	Shruti Kumari	ENVIRONMENT AND DEVELOPMENT	12	58
24	201031310 30	Chandra Kishore Narayan	DEVELOPING SOFT SKILLS AND PERSONALITY	8	54
25	201031310 31	Vimal Kumar	ENVIRONMENT AND DEVELOPMENT	12	61
26	201031310 32	Md Nadir	ENVIRONMENT AND DEVELOPMENT	12	60
27	201031310 34	Aman Raj	SOFT SKILLS	12	61
28	201031310 35	Suman Kumar	CONTROL ENGINEERING	12	56
29	201031310 36	Md Shoib Akhtar	PUBLIC SPEAKING	12	60
30	201031310 38	Sahil Kumar Jaiswal	AIR POLLUTION AND CONTROL	12	58
31	201031310 39	Avinash Kumar	ENVIRONMENT AND DEVELOPMENT	12	55
32	201031310 41	Yashwant Anand	SOFT SKILLS	12	62
33	201031310 42	Mantu Kumar Sah			
34	201031310 43	Aditya Kumar	ENVIRONMENT AND DEVELOPMENT	12	49
35	201031310 44	Anjali Kumari	ENVIRONMENT AND DEVELOPMENT	12	54
36	201031310 45	Ritesh Kumar Raushan	ENVIRONMENT AND DEVELOPMENT	12	62
37	201031310 46	Anmol Raj	SOFT SKILLS	12	58

38	201031310 47	Amit Kumar	SOFT SKILSS	12	55
39	201031310 49	Om Narayan			
40	201031310 50	Ankush Anand	SOFT SKILLS	12	54
41	201031310 51	Md Matiullah Izhar	SOFT SKILLS	12	75
42	201031310 52	Gulshan Kumar	SOFT SKILLS	12	66
43	201031310 53	Md Majid	SOFT SKILLS	12	72
44	201031310 54	Abhinav Kumar	SOFT SKILLS	12	84
45	201031310 55	Sohrab Ali	SOFT SKILLS	12	72
46	201031310 57	Anurag Anand	SOFT SKILLS	12	60
47	201031310 58	Sangram Kumar	ENVIRONMENT AND DEVELOPMENT	12	54
48	201031310 59	Yuvraj Kumar	SOFT SKILLS	12	67
49	201031310 60	Himanshu Kumar	SOFT SKILL DEVELOPMENT	12	52
50	201031310 61	Anish Kumar	SOFT SKILLS	12	70
51	211031319 01	Lavkush Kumar	SOFT SKILLS	12	73
52	211031319 02	Pawan Kumar	SOFT SKILLS	12	63
53	211031319 03	Jyotish Kumar	ELECTRICAL MACHINE-1	12	90
54	211031319 04	Manish Kumar	SOFT SKILLS	12	54
55	211031319 05	Aditi Raj	SOFT SKILLS	12	67
56	211031319 06	Vivek Ballabh	BASIC ELECTRICAL CIRCUITS	12	49
57	211031319 07	Roushan Singh	SOFT SKILLS	12	57
58	201031310 37	Manish Kumar			
59	211031319 08	Sujeet Kumar	SOFT SKILLS	12	53

POs / PSOs Addressed - Course Mapping (Table Format)

Course	POs Addressed	PSOs Addressed
SOFT SKILLS	PO9, PO10, PO12	—
ENVIRONMENT AND DEVELOPMENT	PO6, PO7, PO8	—
SOFT SKILL DEVELOPMENT	PO9, PO10	—
INTRODUCTION TO MODERN INDIAN POLITICAL THOUGHT	PO6, PO8	—
DEVELOPING SOFT SKILLS AND PERSONALITY	PO9, PO10	—
CONTROL ENGINEERING	PO1, PO2, PO3, PO5	PSO1, PSO2
PUBLIC SPEAKING	PO10	—

AIR POLLUTION AND CONTROL	PO6, PO7	—
ELECTRICAL MACHINE-1	PO1, PO2, PO3, PO4, PO5	PSO1, PSO2
BASIC ELECTRICAL CIRCUITS	PO1, PO2, PO3	PSO1
EDUCATION FOR SUSTAINABLE DEVELOPMENT	PO6, PO7, PO8	PSO3
INTRODUCTION TO POLITICAL THEORY	PO6, PO8	—
PSYCHOLOGY OF STRESS, HEALTH AND WELL BEING	PO9, PO12	—
FORESTS AND THEIR MANAGEMENT	PO6, PO7	—
ENHANCING SOFT SKILLS AND PERSONALITY	PO9, PO10	—
PYTHON	PO5, PO12	PSO2
CONSERVATION GEOGRAPHY	PO6, PO7	PSO3
AIR POLLUTION AND CONTROL	PO6, PO7	PSO3
WEB DESIGN	PO5, PO10	—
ANDROID	PO5, PO10	—
TRAINING AND DEVELOPMENT	PO9, PO10, PO11	—
POWER SYSTEM ENGINEERING	PO1, PO2, PO3, PO5	PSO1, PSO2
INTRODUCTION TO COGNITIVE PSYCHOLOGY	PO9, PO10	—
SUSTAINABLE ENGINEERING CONCEPTS AND LIFE CYCLE ANALYSIS	PO6, PO7	PSO3
SUSTAINABLE HAPPINESS	PO8, PO12	—
CORPORATE SOCIAL RESPONSIBILITY	PO6, PO8, PO11	PSO3
ENGLISH LANGUAGE FOR COMPETITIVE EXAMS	PO10, PO12	—
HUMAN BEHAVIOUR	PO9, PO10	—
EV-VEHICLE DYNAMICS AND ELECTRIC MOTOR DRIVES	PO1, PO2, PO3, PO5	PSO1, PSO2
THE PSYCHOLOGY OF LANGUAGE	PO9, PO10	—
HUMAN MOVEMENT SCIENCE	PO9, PO12	—
EMOTIONAL INTELLIGENCE	PO9, PO10	—

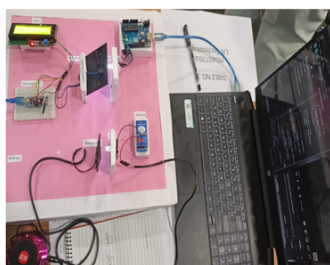
2.7 Solving Complex Engineering Problems Incorporating Sustainability Goals (20)

Problem based learning:-

Project Name	Name of student	Date and Venue	Certificate
Automated class routine & schedule creation system by Hackathon	Sameer 22103131002	28/01/2024 Katiyar Engineering College, Katiyar, Bihar	https://www.techfusion.org.in/

**Project based learning:-**

Project Name	Name of student	Date	Venue
Light fidelity technology	Shariq 21103131023 Waibhav Bharti 21103131014 Raju kumar 22103131908	16/05/2025	Katiyar Engineering College, Katiyar, Bihar

**Integrated design projects:-**

Project Name	Name of student	Date	Venue
Automated solar powered drift irrigation system	Ankit Raj Prince 22103131036 Ashish Aman 22103131008 Anubhav Kumar 22103131004	04/10/2024	District level Science fest organized by Art, culture and youth department, Bihar government.

**Mini Project:-**

Project Name	Name of student	Date	Venue
Smart illumination system using LDRs	Aman Kumar 23103131014	04/10/2025	District level Science fest organized by Art, culture and youth department, Bihar government.



Sl. No.	Project Name	PO	PSO	SDG
1	Automated Class Routine & Schedule Creation System (Hackathon)	PO1, PO2, PO3, PO5, PO10, PO12	PSO1	SDG 4, SDG 9
2	Light Fidelity (Li-Fi) Technology	PO1, PO2, PO4, PO5, PO7	PSO1, PSO2	SDG 7, SDG 9
3	Automated Solar Powered Drip Irrigation System	PO1, PO2, PO3, PO6, PO7	PSO2	SDG 7, SDG 11, SDG 12, SDG 13
4	Smart Illumination System Using LDRs	PO1, PO2, PO3, PO5, PO7	PSO2	SDG 7, SDG 9, SDG 12

1. Automated Class Routine & Schedule Creation System.

This project automates academic scheduling, reducing manual work and errors.

SDG Mapping:

SDG-4 (Quality Education), SDG-9 (Innovation).

Sustainability Impact: Saves time, reduces paper usage, and improves long-term efficiency in educational administration.

2. Light Fidelity (Li-Fi) Technology

Uses LED light for high-speed data communication along with illumination.

SDG Mapping:

SDG-7 (Clean Energy), SDG-9 (Innovation).

Sustainability Impact: Efficient energy use and reduced RF pollution by combining lighting and communication.

3. Automated Solar Powered Drip Irrigation System

Provides automated irrigation using solar energy and moisture sensing.

SDG Mapping: SDG-7, SDG-11, SDG-12, SDG-13.

Sustainability Impact: Conserves water, uses renewable energy, and reduces carbon emissions in agriculture.

4. Smart Illumination System Using LDRs

Automatically controls lighting based on ambient light conditions.

SDG Mapping: SDG-7, SDG-9, SDG-12.

Sustainability Impact: Reduces power consumption, energy wastage, and operating cost.

2.8 Steps Taken for Enhancing Industry Institute Partnerships (15)

Establishment of Dedicated Cells and Committees

- **Formation of an Industry–Institute Interaction Cell (IIIC) to coordinate all partnership activities.**

The institute has established an Industry–Institute Interaction Cell (IIIC) to effectively coordinate and strengthen all industry-related activities. The cell facilitates collaboration through MoUs, internships, industrial visits, expert lectures, and joint projects. IIIC ensures systematic planning, monitoring, and documentation of industry interactions in alignment with NBA quality parameters.

पूरुणीय अभियंत्रण महाविद्यालय
पूरुणीय-८६४२०३

PURNEA COLLEGE OF ENGINEERING
PURNEA-854303

पत्रांक..... दिनांक

कार्यालय-आदेश

अखिल भारतीय तकनीकी परिषद नई दिल्ली के निहित दिशानिर्देश में संस्थान में छात्रों के लिए Institution Industry cell हेतु निम्न रूप से समीति गठित की जाती है।

क्र० सं०	पदाधिकारियों का नाम	पद	अभियुक्ति
01.	प्रो० सौरभ कुमार	टी०पी०ओ० & विभागाध्यक्ष, (असैनिक)	अध्यक्ष
02.	प्रो० मो० इफतेखार आलम	विभागाध्यक्ष, (ई०टी०ई०)	सदस्य
03.	प्रो० साकिब अख्तर	विभागाध्यक्ष, (एम०ई०)	सदस्य
04.	प्रो० मनोज कुमार राजक	विभागाध्यक्ष, (ई०ई०)	सदस्य
05.	प्रो० राजु कुमार	विभागाध्यक्ष, (सी०एस०ई०)	सदस्य
06.	प्रो० डा० मनोज कुमार	विभागाध्यक्ष, (Humanities)	सदस्य
07.	प्रो० अमित मल्लिक	सहायक टी०पी०ओ०	सदस्य सचिव

ह०/-
प्राचार्य
पूरुणीय अभियंत्रण महाविद्यालय
पूरुणीय।

दिनांक: ०६/०५/२०२४

प्राचार्य
पूरुणीय अभियंत्रण महाविद्यालय
पूरुणीय।
Purnea College of Engineering
Purnea

प्रतिनिधि-
1. सभी संबंधित पदाधिकारियों को आवश्यक कारवाई हेतु सूचनाएं प्रेषित।
2. प्रगति पदाधिकारी, AICTE को सूचनाएं एवं
3. रक्षापत्रा: पूरुणीय अभियंत्रण महाविद्यालय, पूरुणीय।

Fig.2.4 IIIC committee formation letter

- **Regular meetings of IIIC to review progress and plan new activities.**
- The Industry–Institute Interaction Cell (IIIC) conducts regular meetings to review the progress of ongoing activities and assess the effectiveness of industry collaborations. These meetings help in identifying new opportunities, planning upcoming initiatives, and ensuring continuous improvement. All decisions, action plans, and outcomes are systematically recorded as part of NBA requirements.

पूरुणीय अभियंत्रण महाविद्यालय
पूरुणीय-८६४२०३

PURNEA COLLEGE OF ENGINEERING
PURNEA-854303

TRAINING & PLACEMENT OFFICE
Ref No. PCE/TP/12 Date: 10/05/24

Minutes of Meeting

Date: 10 May 2024
Time: 02:00 PM
Place: Room No- 04 (Training & Placement Office)

Attendees:

1. Prof. Saurabh Kumar, TPO & HOD (CE)
2. Prof. Amit Madhukar, Assistant TPO
3. Prof. Akash Noida, Assistant Professor (ME)
4. Prof. Manoj Kumar Rajak, HOD (EE)
5. Prof. Saikat Kumar, HOD (IT)
6. Prof. Md. Shikhar Khan, HOD (ECE)
7. Dr. Manoj Kumar, HOD (Humanities)
8. Prof. Raju Kumar, HOD (CSE)

Agenda:

1. Strengthening collaboration between Training & Placement Cell and IIIC.
2. Identifying industry partners for internship and placement.
3. Discussing strategies for enhancing industry-academic interaction.
4. Review of earlier MoUs and identification of new MoUs.

Proceedings:

1. Meeting commenced at scheduled time with TPOs with all members and introducing the agenda.
2. Discussions were held on organizing industry visits, workshops, and seminars to facilitate interaction between students and industry experts.
3. The members deliberated on creating a database of industry contacts and alumni to bridge the gap between the students and industry experts.
4. TPO and other members also reviewed the previous MoUs and emphasized on their performance.

S. TPO share that I&P Cell are in continuous follow-ups with local based industry and company to sign a MoUs with college.

Next Meeting: in June
Meeting ended with Vote of Thanks.

TPO
PCE, Purnea

Fig.2.5 MOM of IIIC meeting

1. Memorandum of Understanding (MoUs) with Industries

- The institute signs MoUs with reputed industries, research organizations, and training centers to formalize long-term collaboration. These MoUs support activities such as internships, industrial training, expert sessions, and joint projects. Each MoU is systematically recorded, monitored for

outcomes, and reviewed periodically as part of NBA documentation requirements.

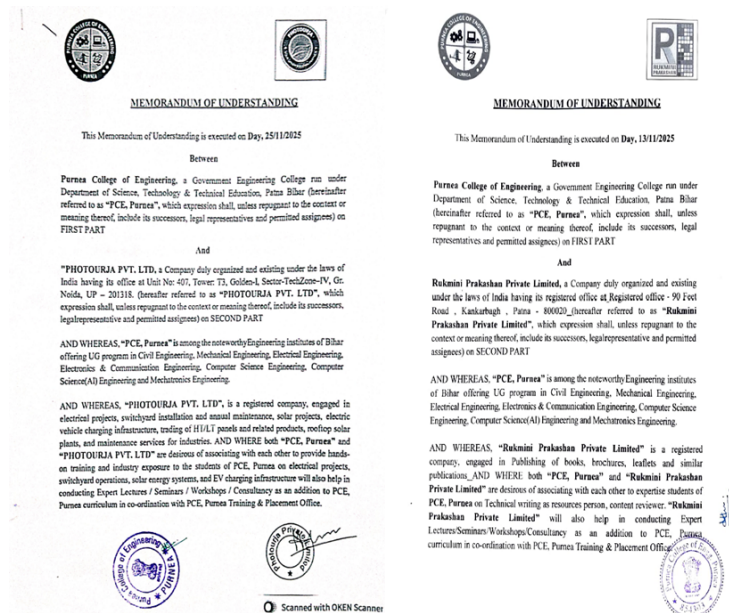


Fig.2.6 MOUs with different companies

2. Placement and Career Support Activities

- The institute strengthens the Training and Placement Cell (TPC) by establishing sustained partnerships with industries to enhance employability opportunities for students. These collaborations support placement drives, pre-placement training, internships, and industry-oriented skill development. All TPC activities and outcomes are systematically recorded and reviewed as part of NBA documentation.



Invitation to Conduct Virtual/Offline Placement Drive – Business Development Role | Wayspire EdTech Pvt. Ltd.

3 messages

Mon, 17 Nov, 2025 at 3:38 pm

Dear Placement Team,

Warm greetings from **Wayspire EdTech Private Limited**.

We are writing to explore the opportunity of conducting a campus placement drive at your institution for the role of **Business Development Associate (BDA)**. Wayspire EdTech Pvt. Ltd., headquartered in Gurugram, focuses on delivering industry-oriented upskilling programmes for students and early-career professionals across India.

Opportunity Overview

- Position:** Business Development Associate (Full-Time / Internship)
- Work Mode:** Work from Office (Sector 41, Gurugram, Haryana)
- Internship Duration:** 6 Months (Internship-cum-Probation)

Compensation Structure

During Internship:

- Stipend:** ₹22,000 per month
- Fixed:** ₹12,000 (linked to KPIs & attendance)
- Performance-based:** up to ₹10,000

Post Internship:

- CTC:** ₹4 LPA – ₹7 LPA (performance-linked)

Eligibility Criteria

- Open for all UG & PG students interested in Sales, Marketing, and Business Strategy
- Strong communication and interpersonal skills

Selection Process (Indicative)

- Application screening
- Online / Offline interview rounds (as mutually decided)

We are open to conducting the placement drive in either **Virtual** or **Offline** mode, depending on your preference and the number of participating students. We request you to kindly share suitable dates and any specific placement guidelines from your side.

The detailed **Job Description (BDA)** and a sample **Memorandum of Understanding (MoU)** are attached for your reference.

We look forward to the possibility of partnering with your institution.

Warm regards,
Aryan Tripathi
 +91 92205 05243
 Wayspire EdTech Private Limited
 Gurugram, Haryana
 Email: hr@wayspire.in
 Website: <https://wayspire.in>

Recruitment Drive Details :

- Positions Available:** Technical Site Engineer (Core)
- Target Audience:** Final-year engineering students (B.Tech/ Diploma) of Electrical, Electronics, Mechanical, Electronics & Communication.
- Drive Dates:** Will be decided accordingly
- Process:** Our recruitment process includes : Company presentation round, Aptitude Test, Technical & HR round
- Package :** 3.5 to 4.75 Lacs per annum
- Projects :** PAN India basis
- Benefits :** Travelling Allowance, Accommodation + PF + ESI + Bonus
- Currently we have 20-25 openings for these roles but in case we find exceptional talent and participation , we could go up to increase in number.**

We would be delighted to partner with your college to identify and onboard the next generation of talented engineers. We believe that the students possess the skills and enthusiasm that align with our company's vision, and we are excited about the prospect of engaging with them through this recruitment initiative.

I am sharing the **Job details** attached with this mail for your ready reference. I request you to follow our JD carefully & proceed further. Please share the Job Details with the students and make a list of the interested students. Share the list with us, according to the number of students we will proceed for the further process.

- Feel free to contact us @ 9593159146 for any further details.

We are happy to work with you to finalize the details of the drive and ensure a smooth and efficient process.

We look forward to the opportunity to collaborate with your college and contribute to the career development of its students.

With Regards

D. Samantha
 Head - HR Dept. I
 Mob: 9593159146
 High-Tech Engineering & Telecom Pvt Ltd.
 GST No. 29AAECT848112N
 Certified ISO 9001:2015
 MSME Certification Number : UDAM-WB-03-0021363

Corporate Office:
 Block - C-13, Anandkumar Tech Park,
 Sector-13, Noida-201305, Uttar Pradesh, India.
 (Employee Work Location)

JOB DETAILS - High-Tech Engineering - 2026.pdf
 642 KB

3 OUTCOME-BASED ASSESSMENT (120)

Tc

3.1 Evaluation of Continuous Assessment: Assignments, Unit Tests, Mid-Term, etc. (10)

The continuous assessment process is systematically designed and implemented to ensure quality, transparency, and effective constructive alignment with the defined Course Outcomes (COs). This alignment further ensures the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs). The overall evaluation framework strictly adheres to the principles of Outcome-Based Education (OBE).

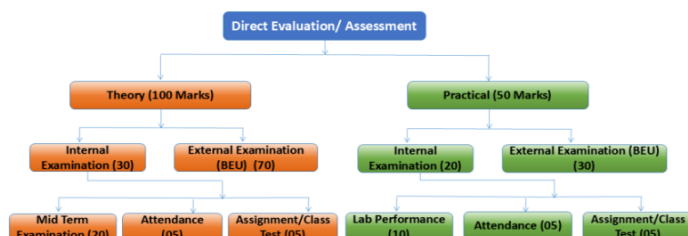


Fig. 3.1 Complete course structure of the program

Assessment Planning and CO Alignment

At the beginning of the semester, a Course Assessment Plan (schedule of class tests, assignments, and mid-term examination) is prepared. The plan clearly identifies the Course Outcomes (COs), their mapping with relevant Program Outcomes (POs) and Program Specific Outcomes (PSOs), and the assessment tools used for evaluating each CO.

Continuous Assessment Components

Continuous assessment is conducted through internal tests, quizzes, assignments, tutorials, laboratory performance (where applicable), and presentations. These assessment tools are designed to evaluate different cognitive levels such as understanding, application, analysis, and design.

Constructive Alignment of Questions with COs

Each question in internal tests and assignments is mapped to a specific Course Outcome. A question paper blueprint is prepared to ensure balanced CO coverage and appropriate cognitive levels in accordance with Bloom's Taxonomy.

Rubrics and Evaluation Criteria

Rubrics are prepared for subjective assessments to ensure objectivity, consistency, and transparency in evaluation. Clear performance indicators and well-defined marking schemes are used for uniform assessment.

Transparency and Feedback Mechanism

Evaluated answer scripts and assignments are shown to students, and constructive feedback is provided. Remedial actions such as extra classes, additional assignments, and presentations are undertaken for students with low performance to enhance learning outcomes.

3.2 Evaluation of the Semester End Exam (SEE) Question Paper (10)

The Semester End Examination (SEE) is conducted by the affiliating University, Bihar Engineering University (BEU), through a centralized and standardized mechanism to ensure uniformity, transparency, and assessment. External examiners appointed by BEU are involved in the evaluation of answer scripts.

Setting of SEE Question Papers

The SEE question papers are prepared by University-appointed external subject experts with relevant academic and examination experience. The University ensures adequate coverage of the prescribed syllabus, a balanced distribution of questions across different cognitive levels as per Bloom's Taxonomy, and the inclusion of both conceptual and analytical/problem-solving questions. It is assumed that constructive alignment of SEE questions with the Course Outcomes (COs) and their corresponding Program Outcomes (POs) and Program Specific Outcomes (PSOs) is ensured by the University during the paper-setting process.

Conduct of SEE

The SEE is conducted in accordance with strict University examination regulations. Uniform examination procedures, secure handling of question papers, and standardized invigilation practices are followed across all examination centers to ensure fairness, transparency, and credibility of the assessment process.

Evaluation of SEE Answer Scripts

The evaluation of SEE answer scripts is carried out by University-appointed external examiners who are independent of the course instructor. Standardized marking schemes or model answers provided by the University are used to maintain consistency and objectivity in evaluation. Provisions for scrutiny, re-evaluation, and result moderation are in place to further enhance the reliability and quality of assessment.

Quality Assurance and Alignment with COs and POs/PSOs

As the SEE question paper setting and evaluation processes are fully managed by the University, the assessment is considered to be inherently aligned with the defined Course Outcomes and their linkage to relevant Program Outcomes and Program Specific Outcomes. Accordingly, SEE results serve as a reliable direct assessment tool for measuring Course Outcome attainment at the course level.

3.3 Evaluation of Laboratory Work and Workshop (Continuous and SEE) (10)

The assessment of laboratories and workshops is carried out using well-defined rubrics to ensure objective, transparent, and outcome-based evaluation in alignment with Course Outcomes (COs) and the corresponding Program Outcomes (POs) and Program Specific Outcomes (PSOs). The rubric-based assessment framework is implemented in accordance with Outcome-Based Education (OBE) principles.

Identification of COs and PO/PSO Linkage

Each laboratory or workshop experiment is mapped to specific Course Outcomes. These COs are further linked to relevant Program Outcomes and Program Specific Outcomes, with emphasis on engineering knowledge, problem analysis, investigation of complex problems, use of modern tools, teamwork, ethics, and safety considerations.

Rubric Design and Performance Indicators

Rubrics are developed for each laboratory and workshop activity with clearly defined performance indicators. Typical assessment criteria include:

- Understanding of experimental objectives and underlying theory
- Experimental setup and adherence to procedures
- Data collection, observations, and accuracy
- Analysis, calculations, and interpretation of results
- Use of modern tools and instruments
- Safety practices and ethical conduct
- Teamwork and communication skills

Table: Rubric-Based Assessment for Laboratory Experiments

Sl. No.	Assessment Parameter	Performance Indicators	Marks	COs Assessed
1	Objective of the Experiment	Mentioned / Not Mentioned	1 / 0	CO1
2	Equipment Table with Specifications	Mentioned / Not Mentioned	1 / 0	CO1
3	Circuit Diagram	Neat and complete / Partially drawn / Not drawn	3 / 2 / 0	CO2
4	Explanation of the Experiment	Excellent / Very good / Good / Needs improvement	4 / 3 / 2 / 1	CO2, CO3
5	Observation Table	Signed and complete / Not submitted	1 / 0	CO3
6	Calculations and Graphs	Complete / Partially complete / Not attempted	3 / 2 / 0	CO3
7	Results and Discussion	Complete / Partially complete / Not attempted	2 / 1 / 0	CO4
8	Viva Voce	Excellent / Very good / Good / Needs improvement	5 / 4 / 3 / 2	CO1–CO4

Assessment and Evaluation Process

Faculty members use the approved rubrics during laboratory and workshop sessions for continuous assessment. Marks awarded through rubric-based evaluation are recorded experiment-wise and aggregated CO-wise to determine the level of attainment.

Evidence of Assessment and Documentation

The following evidence is maintained in the course file:

- Approved rubrics for each laboratory or workshop experiment
- Sample evaluated rubrics of students
- Laboratory records with rubric-based marks
- CO-wise attainment calculations derived from rubric scores
- Summary of PO and PSO attainment based on laboratory and workshop assessments

Feedback and Continuous Improvement

Students are provided with feedback based on rubric evaluations, highlighting strengths and areas requiring improvement. Attainment analysis is reviewed periodically, and corrective actions such as additional demonstrations, revised experiments, or enhanced safety training are implemented to improve overall learning outcomes.

This structured rubric-based assessment approach ensures fairness, consistency, and effective measurement of laboratory and workshop learning in alignment with COs, POs, and PSOs.

3.4 Evaluation of Industrial Training/ Internship (Continuous and SEE) (10)

The assessment of internships and industrial training is conducted using structured rubrics to ensure objective, transparent, and outcome-based evaluation. The rubric framework is aligned with the targeted Program Outcomes (POs) and Program Specific Outcomes (PSOs), as internships primarily contribute to the development of professional skills, industry exposure, and the practical application of engineering knowledge.

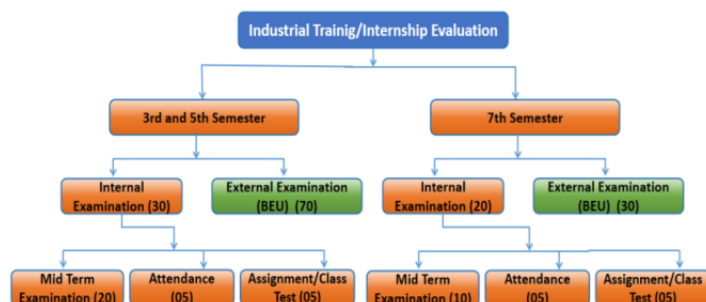


Fig. 3.4.1 Industrial Training/ Internship Evaluation Assessment Structure of the Program

Targeted POs and PSOs

Internships and industrial training primarily address the following Program Outcomes (POs):

- Application of engineering knowledge in real-world industrial environments
- Problem analysis and implementation of appropriate solutions
- Conduct of investigations and interpretation of industrial data
- Use of modern engineering tools and exposure to current industrial practices
- Adherence to professional ethics, safety standards, and societal responsibilities
- Development of individual working ability and teamwork skills
- Enhancement of communication skills and project/documentation abilities
- Promotion of lifelong learning, self-learning, and adaptability

Relevant Program Specific Outcomes (PSOs) are mapped based on the nature of the industry, training area, and the tasks assigned during internships and industrial training.

Rubric for Evaluation of Industrial Visit & Industrial Training

A. Rubric for Industrial Visit Assessment

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Understanding of Industrial Processes	Demonstrates complete understanding of transmission, distribution, or transformer operations with clear technical explanation	Demonstrates good understanding with minor gaps	Demonstrates basic understanding with limited clarity	Unable to explain industrial processes
Achievement of Learning Outcomes	All intended learning outcomes of visit achieved effectively	Most learning outcomes achieved	Some learning outcomes achieved	Learning not achieved
Industry Exposure & Observation Skills	Actively observes, asks relevant questions, and correlates theory with practice	Observes processes and relates some concepts	Passive observation with limited correlation	No active observation
Interaction with Industry Personnel	Excellent interaction with engineers/technicians and clear professional behavior	Adequate interaction with industry staff	Minimal interaction	No interaction
Professional Conduct & Discipline	Highly disciplined and follows all safety and professional norms	Follows most norms	Occasionally ignores norms	Poor discipline and safety awareness

POs Addressed: PO1, PO2, PO4, PO6, PO11

B. Rubric for Industrial / Internship / Summer Training .

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Technical Knowledge Gained	Demonstrates strong understanding of systems (HV transmission, substations, SCADA, distribution)	Good understanding with minor gaps	Basic understanding	Poor understanding
Application of Classroom Knowledge	Effectively applies theory to real-world engineering problems	Applies theory in limited situations	Minimal application	No application
Hands-on Exposure / Practical Skills	Actively involved in practical tasks and operations	Observes and understands practical work	Limited exposure	No practical involvement
Work Ethics & Professional Behavior	Highly punctual, responsible, and professional	Generally professional	Needs improvement	Unprofessional behavior

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Industry Supervisor Feedback	Excellent feedback from industry mentor	Good feedback	Average feedback	Poor feedback

POs Addressed: PO1, PO3, PO5, PO8, PO10

C. Rubric for Post-Training Assessment (Report & Presentation)

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Training Report Quality	Well-structured, technically sound, comprehensive, and well-documented	Good structure with adequate technical content	Basic report with limited details	Poorly structured and incomplete
Technical Depth & Analysis	Demonstrates strong analysis and critical understanding	Adequate analysis	Limited analysis	No analysis
Presentation Skills (PPT)	Clear, confident, and professional presentation	Good presentation with minor issues	Average communication	Poor presentation
Response to Questions	Answers confidently with technical clarity	Answers most questions	Partial responses	Unable to answer questions
Overall Learning Reflection	Clearly reflects learning outcomes and industry relevance	Good reflection	Limited reflection	No reflection

POs Addressed: PO4, PO9, PO10, PO12

D. Rubric for Impact Analysis & Feedback

Criteria	Level 4 (Excellent – 4)	Level 3 (Good – 3)	Level 2 (Average – 2)	Level 1 (Poor – 1)
Career Awareness & Readiness	Clear understanding of career roles and industry expectations	Good awareness	Limited awareness	No clarity
Confidence & Professional Growth	Significant improvement in confidence and skills	Moderate improvement	Slight improvement	No improvement
Networking & Industry Exposure	Actively builds professional connections	Some interaction	Limited interaction	No interaction
Student Feedback	Strongly positive	Mostly positive	Neutral	Negative

Assessment Process

The assessment of internship training is carried out using the following components:

- Periodic internship progress reports submitted by the student
- Final internship report evaluated at the end of the training period
- Presentation and viva-voce conducted at the institute

Faculty coordinators assess student performance using approved rubrics and award marks as per predefined evaluation criteria.

Linking Rubrics with POs and PSOs

Each criterion in the internship evaluation rubric is explicitly mapped to one or more Program Outcomes (POs) and Program Specific Outcomes (PSOs) to ensure outcome-based assessment and attainment measurement.

3.5 Evaluation of Projects (20)

The assessment of student projects, including mini projects, major projects, and capstone projects, is conducted through a structured, rubric-based evaluation system to ensure objectivity, transparency, and outcome-based assessment. The project evaluation framework is aligned with the targeted Program Outcomes (POs) and Program Specific Outcomes (PSOs) in accordance with the principles of Outcome-Based Education (OBE).

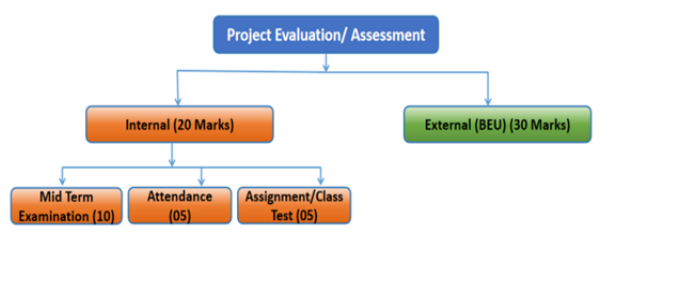


Fig. 3.5.1 Project Assessment Structure of the Program

Evaluation Mechanism

Evaluation of the project work is carried out through a structured combination of **internal evaluation**, **external evaluation including final viva-voce**, and **documentation assessment** to ensure comprehensive and outcome-based evaluation.

a. Internal Evaluation

Internal evaluation is conducted by the project supervisor and departmental committee through periodic and scheduled reviews. The assessment focuses on:

- Completion of predefined project milestones
- Accuracy and appropriateness of system design
- Correctness of simulation, coding, and hardware integration (where applicable)
- Regularity, involvement, and individual contribution of students

This continuous monitoring helps track progress and provides timely feedback for improvement.

b. External Evaluation and Final Viva-Voce Examination

External evaluation and the final viva-voce are conducted jointly and are treated as a **single integrated assessment process**. External experts from industry and/or academia are invited to evaluate the final project outcomes. The evaluation emphasizes:

- Technical depth and conceptual understanding
- Problem identification, analysis, and justification of the proposed solution
- Innovation and real-world applicability of the project
- Prototype/model demonstration and functionality
- Communication skills and ability to defend technical decisions
- Individual contribution of each team member

This combined evaluation ensures objectivity, industry relevance, and alignment with program outcomes.

c. Documentation Evaluation

Project documentation is evaluated as a separate component to assess clarity, completeness, and professional presentation. The following documents are reviewed:

- Final project report
- PowerPoint presentation
- Software source codes, circuit diagrams, PCB layouts, and related technical drawings

Documentation quality reflects students' ability to communicate technical work effectively and maintain professional standards.

This multi-level evaluation mechanism ensures fairness, transparency, and effective measurement of technical competence, teamwork, communication skills, and attainment of Course Outcomes (COs), Program Outcomes (POs), and Program Specific Outcomes (PSOs).

Rubric R1: Project Synopsis / Proposal Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
1. Identification of Problem Domain and Detailed Analysis	Clarity of domain, relevance, depth of problem analysis.	Problem domain is clearly defined, highly relevant, and supported by detailed contextual/technical analysis.	Problem domain is partially clear; analysis is moderate with limited justification.	Problem domain unclear; little to no justification.

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
2. Study of Existing Systems and Feasibility of Project Proposal	Comparison with existing solutions, feasibility justification.	Comprehensive review of existing systems with strong feasibility analysis; proposed solution is realistic and well justified.	Partial review of existing systems; feasibility discussed but lacks depth or clarity.	Minimal or no literature/system feasibility poorly unrealistic.
3. Objectives and Methodology of the Proposed Work	Clarity of objectives and appropriateness of methodology.	Objectives are clear, measurable, and logically linked to the problem; methodology is well-structured and technically sound.	Objectives partially clear; methodology mentioned but lacks detail or coherence.	Objectives unclear; methodology incomplete, or irrelevant.

Rubric R2: Mid-Term Project Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0)
1. Design Methodology	Quality, clarity, and technical strength of the adopted design approach; correctness of models, tools, and techniques used.	Clearly defined and technically strong design methodology; logical workflow, proper use of tools/models, and significant progress demonstrated.	Design methodology moderately clear; partial use of tools/models; progress evident but lacks refinement or depth.	Methodology unclear or missing; improper use of relevant tools; little design progress.
2. Planning of Project Work and Team Structure	Work breakdown, scheduling, task distribution, and team coordination.	Well-structured project plan with detailed task allocation; excellent coordination and active participation by all team members.	Project plan moderately defined; uneven task distribution or coordination issues; some delays in scheduled work.	Poor planning or distribution; weak coordination; significant deviation from scheduled activities.
3. Demonstration and Presentation	Quality of mid-term demonstration, clarity of communication, technical justification.	Demonstration is clear, functional, and well-explained; presentation is structured, confident, and technically sound.	Demonstration partially complete; presentation adequate but lacking clarity or technical depth.	Demonstration very absent; presentation unstructured, or poor.

Rubric R3: End-Semester Internal Project Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0 Marks)
1. Incorporation of Suggestions	Implementation of corrective actions and improvements based on previous evaluations (R1 & R2).	All suggestions addressed effectively; clear improvement in project design, documentation, and execution.	Some suggestions implemented; partial improvement observed but not fully comprehensive.	Very few or no suggestions incorporated; minimal improvement evident.
2. Project Demonstration	Functionality, completeness, and technical soundness of the final prototype/system.	Fully functional demonstration with clear technical detailing; results validated and aligned with objectives.	Partially functional demonstration; some objectives met but with limitations or incomplete validation.	Weak, incomplete functional demonstration; objectives largely unmet.
3. Demonstration and Presentation	Quality of final presentation, clarity, technical justification, and confidence level.	Presentation well-structured, clear, and technically strong; team communicates confidently and answers questions effectively.	Presentation moderately clear; minor gaps in technical explanation or confidence.	Presentation unclear and disorganized; technical justification poor; team not responding to questions.

Rubric R4: End-Semester Project Report Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0 Marks)
1. Project Report	Quality, structure, formatting, depth of content, and adherence to departmental or university guidelines.	Report is well-structured, professionally formatted, and comprehensive; includes clear objectives, methodology, results, and references following guidelines.	Report is moderately structured; some formatting inconsistencies; certain sections lack depth or clarity.	Report poorly structured; incomplete; major issues; missing key elements; lacks academic quality.
2. Description of Concepts and Technical Details	Clarity and correctness of theoretical background, system design, algorithms, circuit diagrams, and other technical explanations.	Technical concepts clearly described with accurate details, diagrams, and strong justification; demonstrates solid understanding.	Technical concepts described but with minor gaps; explanations present but lack depth or precision.	Technical descriptions incorrect, or miss key details; demonstrates weak understanding.
3. Conclusion and Discussion	Effectiveness of concluding remarks, discussion of results, limitations, and future scope.	Conclusion insightful with clear results discussion; limitations acknowledged; meaningful future scope presented.	Conclusion adequate but lacks detailed discussion; limited mention of constraints or future improvements.	Conclusion vague and unclear; poor discussion of results; reflection on limitations and future scope.

Rubric R5: Individual Performance Evaluation (Total Marks = 6)

Parameter	Description	High (6–5 Marks)	Medium (4–3 Marks)	Low (2–0 Marks)
1. Self-Motivation and Determination	Commitment, enthusiasm, initiative, and ability to work independently when required.	Shows strong motivation, takes initiative consistently, completes tasks proactively, and demonstrates exceptional ownership of work.	Demonstrates adequate motivation; completes assigned tasks but rarely takes additional initiative.	Shows low motivation; dependent on others for progress; lacks initiative.
2. Working within a Team	Team communication, cooperation, leadership, and conflict management.	Works very effectively in a team; communicates clearly; contributes meaningfully; may take leadership when required.	Participates in team work but with occasional coordination issues; contribution average.	Poor teamwork; communication issues; minimal contribution; often causes conflicts.
3. Technical Knowledge and Awareness related to the Project	Understanding of project concepts, tools, methodology, and ability to answer technical questions.	Demonstrates strong technical understanding; clearly explains concepts, tools, and implementation details; answers questions confidently.	Demonstrates moderate technical knowledge; can answer basic questions but struggles with complex ones.	Shows limited technical knowledge; unable to answer basic questions or concepts unsatisfactorily.
4. Regularity	Attendance, timely completion of tasks, participation in reviews, and adherence to deadlines.	Highly regular; completes all tasks on time; attends all reviews and meetings without fail.	Regular but with occasional delays or absences; tasks completed with some reminders.	Irregular attendance; frequent delays; poor adherence to deadlines and schedules.

3.6 Evidence of Addressing Sustainable Development Goals (SDG) (10)

Integration of Sustainable Development Goals (SDGs)

The program systematically integrates the United Nations Sustainable Development Goals (SDGs) into its teaching–learning processes, research activities, and co-curricular initiatives to foster sustainability-oriented learning and responsible engineering practices. Students are encouraged to identify real-world engineering problems related to sustainability and to develop technically feasible, environmentally responsible, and socially relevant solutions. Student engagement with SDGs is ensured through curriculum-linked projects, research work, laboratory activities, internships, and outreach programs. Documented evidence of these activities is maintained in the form of an SDG portfolio for internal assessment and NBA peer review.

1. Integration of SDGs in Student Projects

Undergraduate students undertake mini projects, major projects, and capstone projects aligned with relevant SDGs, including:

SDG 7: Affordable and Clean Energy

SDG 9: Industry, Innovation, and Infrastructure

SDG 11: Sustainable Cities and Communities

SDG 12: Responsible Consumption and Production

SDG 13: Climate Action

SDG 14: Life Below Water

Project and research themes include renewable energy systems, energy efficiency, smart grids, waste management, water conservation, sustainable construction materials, pollution mitigation, and climate-resilient infrastructure. Student research outputs are explicitly mapped to the relevant SDGs and documented as part of the SDG portfolio.

2. Internships and Industrial Training

Students undertake internships and industrial training in industries, research organizations, and start-ups operating in sustainability-related domains such as renewable energy, electric mobility, environmental monitoring, smart manufacturing, and green technologies. Internship and training reports clearly indicate SDG relevance, defined learning outcomes, and practical contributions toward environmental sustainability and societal development.

3. Laboratory Practices and Experiential Learning

Laboratory and workshop activities emphasize efficient resource utilization, energy conservation, reduction of losses, and environmentally benign engineering practices. These experiential learning components reinforce sustainable engineering principles and align practical skills with SDG objectives. Industrial training further familiarizes students with sustainable technologies, applicable regulatory frameworks, and professional ethics related to environmental and societal impact.

4. Student Activities and Outreach Programs

The institute actively promotes student participation in SDG-aligned activities, including:

Technical workshops, seminars, and expert lectures on sustainability and green technologies. Participation in national initiatives such as Swachh Bharat Abhiyan, Smart City programs, and energy conservation campaigns. Community engagement programs addressing local sustainability challenges. Students document outcomes through project reports, internship records, research publications, posters, presentations, photographs, and outcome-based assessments, ensuring measurable evidence of SDG integration and student involvement.

Sl. No.	Project Title	Student Name(s)	Registration No(s)	Guide Name	POs	PSOs	SDGs
1	Voltage Control via Radio Frequency	Sanjay Kumar, Vivek Kumar, Manish Kumar, Sudhir Shekhar	20103131903, 19103131041, 19103131047, 19103131025	Md Amjad Ali	PO1, PO2, PO3, PO5	PSO1, PSO2	SDG7, SDG9, SDG11
2	Transmission Line Fault Detection System	Aryan Kumar, Golden Kumar, Shriram Kumar, Deepak Kumar, Abhishek Kumar, Sweta Kumari	19103131006, 19103131005, 19103131017, 19103131054, 19103131054, 19103131026	Tabish Shanu	PO1, PO2, PO3, PO4, PO5	PSO1, PSO2	SDG7, SDG9, SDG11

3	Transformer Protection using 8051 Microcontrollers	Sanjeet Kumar, Mritunjay Kr. Madhesiya, Shivam	19103131023, 19103131009,	Tabish Shanu	PO1, PO2, PO3, PO5	PSO1, PSO2	SDG7, SDG9
		Priyadarshi, Krishnandan Kumar, Md. Shahnawaz Alam	19103131035, 19103131001, 18103131037				
4	Dual Axis Solar Tracker	Susant Kumar, Rupa Kumari, Shipra Shalini, Prachi Kumari, Adarsh Kumar Jha	19103131045, 19103131015, 19103131014, 19103131046, 19103131059	Nishi Gandha Anupam	PO1, PO2, PO3, PO5	PSO1	SDG7, SDG12, SDG13
5	Single Axis Solar Tracking System	Nikhil Kumar, Shubham Raj, Kausal Kumar, Anand Raj, Saurabh Kumar, Ankit Gupta, Prabhat Kumar Ranjan	19103131056, 19103131027, 19103131048, 19103131049, 19103131053, 19103131024, 19103131008	Piyush	PO1, PO2, PO3	PSO1	SDG7, SDG12, SDG13
6	Single Axis Automatic Solar Tracking System	Raj Kumar, Ashish Ranjan, Sujit Kumar, Sah, Rahul Kumar, Adwait Asmit, Prashant Kumar Kamat	19103131031, 19103131038, 19103131007, 19103131050, 19103131019, 19103131020	Abhimanyu Kumar	PO1, PO2, PO3	PSO1	SDG7, SDG12, SDG13
7	IoT Based Irrigation System	Shivam Kumar, Md. Shadab Alam, Sambhuti Anand, Monu Roy, Abhishek Kumar	19103131037, 19103131016, 19103131011, 19103131057, 19103131003	Manoj Kumar Rajak	PO1, PO2, PO3, PO4	PSO2	SDG2, SDG6, SDG9, SDG13
8	Wireless Charging of Electrical Vehicles	Saurabh Kumar, Manish Kumar Bharti, Shiv Kumar, Gaurav Kumar, Shubham Kumar, Brijbihari Jha	20103131910, 19103131010, 19103131044, 20103131904, 19103131013, 19103131002	Manoj Kumar Rajak	PO1, PO2, PO3, PO5	PSO1, PSO2	SDG7, SDG9, SDG11, SDG13
9	DC Motor Speed Controller using Arduino & L298	Priya Kumar, Amit Kumar, Raushan Kumar, Abhishek Kumar, Mohit Kumar Jha, Nitesh Kumar, Shubham Kumar	19103131036, 19103131055, 19103131042, 19103131032, 19103131058, 19103131040, 19103131004	Satyam Kumar Singh	PO1, PO2, PO3	PSO1	SDG9, SDG12
10	Driver Anti-Sleep Alarm	Diksha Kumari, Akriti Verma, Pallavi Kumari, Satrupa Kumari, Narayani Kumari	19103131028, 19103131051, 19103131030, 19103131029, 19103131052	Ajay Kumar	PO1, PO2, PO3	PSO2	SDG3, SDG9, SDG11
11	Automatic Load Sharing Transformer with Extra Load Cut-Off	Jyotish Kumar, Ranjeet Kumar, Sachin Kumar, Praduman Kumar	20103131901, 20103131909, 20103131905, 19103131012	Priyanka Rani	PO1, PO2, PO3, PO5	PSO1	SDG7, SDG9, SDG12

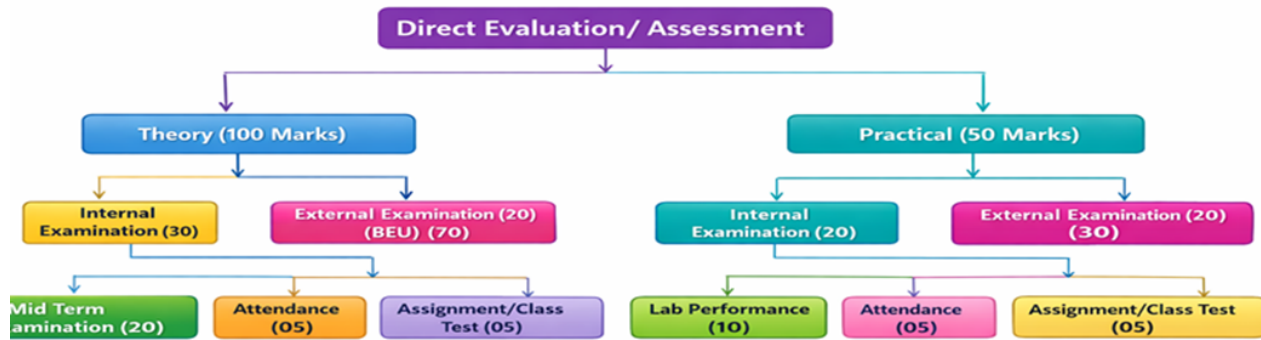
Auto Load Shifting 12 Transformer with Protection	Anamika Kumari, Priyanshee Kumari, Divyam Raj, Adhiraj Anand, Aayush Gaurav, Vikash Kumar Gautam	20103131908, 20103131907, 19103131033, 19103131043, 19103131020, 19103131021	Dr. Manoj Kumar	PO1, PO2, PO3, PO5	PSO1	SDG7, SDG9, SDG11
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Sl. No.	Project Title	Student Name(s)	Registration No(s)	Guide Name	POs Addressed	PSOs Addressed	SDG No.
1	Design and Implementation of Van de Graaff Generator	Rahul Kumar Yadav, Asmita Kumari, Aman Kumar, Aditi Anjana	22103131906, 22103131909, 22103131905, 21103131054	Prof. Satyam Kumar Singh	PO1, PO2, PO3, PO5	PSO1	4, 7, 9
2	Footstep Power Generation System	Manish Kumar, Prashant Kumar Singh, Avinash Kumar, Ranju Kumari	21103131019, 21103131031, 21103131038, 21103131020	Prof. Tabish Shanu	PO1, PO2, PO3, PO5	PSO1	7, 11, 12, 13
3	Power Quality Improvement using TSC FACTS Device	Sidharth Yadav, Sahil Raj, Surya Pratap Singh, Abhishek Kumar, Alok Raj	21103131029, 21103131028, 21103131035, 21103131043, 22103131902	Dr. Manoj Kumar	PO1, PO2, PO3, PO4, PO5	PSO1	7, 9, 11
4	Solar Wireless Electric Vehicle Charging System	Md Jawed, Niharika, Anvi Singh, Aditya Kumar Pandit	21103131016, 21103131044, 21103131037, 21103131039	Dr. Ajay Kumar	PO1, PO2, PO3, PO5	PSO1, PSO2	7, 9, 11, 13
5	Smart Illumination System	Aditya Narayan, Pallavi Joshi, Md Kaif Khan, Manisha Kumari	21103131055, 21103131008, 21103131025, 22103131903	Prof. Md. Amjad Ali	PO1, PO2, PO3, PO5	PSO1	7, 9, 11, 12
6	Protection of Transformers and Transmission Lines using MATLAB Simulink	Abhimanyu Kumar, Ashish Kumar Sharma, Mritunjay Mohan, Pragya Kumari	21103131034, 21103131018, 21103131015, 21103131049	Prof. Priyanka Rani	PO1, PO2, PO3, PO4, PO5	PSO1	7, 9
7	Temperature Control using Power Electronics Devices	Divyanshu Gaurav, Dipali Raj, Pramod Kumar Das, Nandani Priya	21103131032, 21103131036, 21103131056, 22103131901	Prof. Nishi Gandha Anupam	PO1, PO2, PO3, PO5	PSO1	7, 9, 12

			2110313104 2,			
	Simulation of Power Factor	Aditya Raj,	2110313100	Prof. Piyush	PO1, PO2,	
8	Correction using SVC (TSC– TCR)	Verma, Muskan Kumari, Dipti Suman	3, 2110313101 1, 2110313102 2		PO3, PO4, PO5	7, 9, 11
			2010313103 3,			
		Bibhuti Kumar	2110313101	Prof. Manoj	PO1, PO2,	
9	Light Fidelity (Li- Fi) Technology	Mishra, Waibhav Bharti, Raju Kumar, Md Sharique Akhtar	4, 2210313190 8, 2110313102 3	Kumar Rajak	PO3, PO5	9, 11
			2110313105 1,			
	IoT Based	Shalini	2110313104	Prof.	PO1, PO2,	
10	Smart Energy Meter	Sefali Shailja, Sakshi Mehta, Poonam Kumari	8, 2110313100 9, 2110313105 2	Prof. Abhimanyu Kumar	PO3, PO4, PO5	7, 9, 11, 12

3.7 Attainment of Course Outcomes (25)

3.7.1. Describe the Assessment Tools and Processes Used to Gather the Data for the Evaluation of Course Outcome (5)



3.7.2 Record the Attainment of Course Outcomes of all Courses with Respect to Set Attainment Levels (20)

% CO Attained and Target			
1	Course Code	COs	CO Attained CO Target
		CO1	69.22% 65.00%
		CO2	70.66% 65%
	103502	CO3	65.81% 70%
		CO4	63.50% 70%
		CO5	66.03% 70%
2	Course Code	COs	CO Attained CO Target
		CO1	77.17% 65.00%
		CO2	73.61% 65%
	103605	CO3	70.77% 70%
		CO4	80.43% 70%
		CO5	79.99% 70%
3	Course Code	COs	CO Attained CO Target
		CO1	80.48% 80.00%
	100609P	CO2	80.43% 80%
		CO3	81.78% 80%
4	Course Code	COs	CO Attained CO Target
		CO1	52.40% 60.00%
		CO2	67.02% 65%
	103401	CO3	65.43% 60%
		CO4	65.70% 70%
		CO5	65.70% 70%
5	Course Code	COs	CO Attained CO Target
		CO1	67.58% 65.00%
		CO2	62.69% 65%
	100803	CO3	69.40% 65%
		CO4	60.94% 75%
		CO5	61.80% 70%
6	Course Code	COs	CO Attained CO Target
		CO1	60.00% 60.00%
		CO2	62.67% 65%
	103701	CO3	56.20% 65%
		CO4	68.33% 60%
		CO5	64.13% 60%
7	Course Code	COs	CO Attained CO Target
		CO1	83.31% 80.00%
	103401P	CO2	83.17% 80%
		CO3	76.97% 80%
8	Course Code	COs	CO Attained CO Target
		CO1	54.99% 60.00%
		CO2	53.63% 60%
	100502	CO3	57.13% 60%
		CO4	65.26% 60%
		CO5	65.26% 60%
9	Course Code	COs	CO Attained CO Target
		CO1	79.22% 85.00%
	100502P	CO2	79.19% 80.00%
		CO3	79.90% 80.00%
10	Course Code	COs	CO Attained CO Target
		CO1	60.67% 60.00%
		CO2	64.67% 60%
	103402	CO3	61.88% 60%
		CO4	59.18% 60%
		CO5	71.16% 60%
11	Course Code	COs	CO Attained CO Target
		CO1	79.87% 85.00%
	103402P	CO2	79.84% 80.00%
		CO3	80.61% 80.00%
12	Course Code	COs	CO Attained CO Target
		CO1	63.16% 65.00%
		CO2	64.30% 65%
	100308	CO3	73.19% 65%
		CO4	73.49% 70%
		CO5	73.07% 70%
13	Course Code	COs	CO Attained CO Target
		CO1	59.98% 65.00%
		CO2	59.28% 65%
	100504	CO3	64.62% 65%
		CO4	88.14% 70%
		CO5	77.70% 70%
14	Course Code	COs	CO Attained CO Target
		CO1	60.79% 65.00%
		CO2	61.19% 65%
	100606	CO3	63.22% 65%
		CO4	67.61% 70%
		CO5	67.53% 70%

15	Course Code	COs	CO Attained	CO Target
		CO1	50.86%	65.00%
		CO2	49.11%	65%
		100607 CO3	77.80%	65%
		CO4	63.63%	75%
16	Course Code	COs	CO Attained	CO Target
		CO1	84.01%	85.00%
		100606P CO2	83.91%	85%
		CO3	85.06%	85%
		CO4	63.63%	75%
17	Course Code	COs	CO Attained	CO Target
		CO1	84.66%	80.00%
		100607P CO2	84.63%	80%
		CO3	85.65%	80%
		CO4	63.63%	75%
18	Course Code	COs	CO Attained	CO Target
		CO1	65.80%	65.00%
		CO2	63.16%	60%
		100613 CO3	68.30%	65%
		CO4	65.46%	70%
19	Course Code	COs	CO Attained	CO Target
		CO1	65.73%	62.00%
		CO2	57.91%	60%
		100506 CO3	63.75%	62%
		CO4	68.31%	70%
20	Course Code	COs	CO Attained	CO Target
		CO1	76.66%	80.00%
		100307P CO2	75.90%	80%
		CO3	77.22%	80%
		CO4	63.63%	75%
21	Course Code	COs	CO Attained	CO Target
		CO1	80.41%	80.00%
		100506P CO2	80.04%	80%
		CO3	81.41%	80%
		CO4	63.63%	75%
22	Course Code	COs	CO Attained	CO Target
		CO1	56.14%	60.00%
		CO2	59.07%	60%
		100307 CO3	48.24%	50%
		CO4	59.52%	60%
23	Course Code	COs	CO Attained	CO Target
		CO1	63.61%	62.00%
		CO2	58.30%	60%
		100506 CO3	60.05%	62%
		CO4	67.81%	70%
24	Course Code	COs	CO Attained	CO Target
		CO1	62.26%	65.00%
		CO2	68.89%	65%
		103712 CO3	68.79%	65%
		CO4	68.54%	75%
25	Course Code	COs	CO Attained	CO Target
		CO1	71.49%	65.00%
		CO2	76.19%	65%
		103712 CO3	70.76%	75%
		CO4	75.54%	75%
26	Course Code	COs	CO Attained	CO Target
		CO1	60.56%	65.00%
		CO2	51.96%	65%
		100306 CO3	67.08%	65%
		CO4	67.41%	65%
27	Course Code	COs	CO Attained	CO Target
		CO1	78.97%	80.00%
		100306P CO2	78.93%	80%
		CO3	80.00%	80%
		CO4	63.63%	75%
28	Course Code	COs	CO Attained	CO Target
		CO1	57.03%	65.00%
		CO2	56.63%	65%
		100607 CO3	58.99%	65%
		CO4	60.60%	60%
29	Course Code	COs	CO Attained	CO Target
		CO1	82.99%	75.00%
		100607P CO2	82.96%	80%
		CO3	83.64%	80%
		CO4	63.63%	75%

30	Course Code	COs	CO Attained	CO Target
		CO1	50.33%	60.00%
		CO2	51.01%	60%
		100310 CO3	48.42%	60%
		CO4	57.65%	60%
		CO5	57.70%	60%
31	Course Code	COs	CO Attained	CO Target
		CO1	56.47%	60.00%
		CO2	51.89%	60%
		100310 CO3	55.76%	60%
		CO4	64.98%	60%
		CO5	56.40%	60%
32	Course Code	COs	CO Attained	CO Target
		CO1	70%	65.00%
		CO2	68%	65%
		100302 CO3	66%	65%
		CO4	73%	75%
		CO5	73%	70%
33	Course Code	COs	CO Attained	CO Target
		CO1	59%	65.00%
		CO2	63%	65%
		103404 CO3	65%	65%
		CO4	65%	75%
		CO5	65%	70%
34	Course Code	COs	CO Attained	CO Target
		CO1	63.59%	65.00%
		CO2	70.67%	65%
		100504 CO3	70.97%	65%
		CO4	71.69%	75%
		CO5	72.80%	70%
35	Course Code	COs	CO Attained	CO Target
		CO1	49%	65%
		CO2	57%	65%
		100504 CO3	58%	65%
		CO4	58%	75%
		CO5	58%	70%
36	Course Code	COs	CO Attained	CO Target
		CO1	50.33%	60.00%
		CO2	51.01%	60%
		103804 CO3	48.42%	60%
		CO4	57.65%	60%
		CO5	57.70%	60%
37	Course Code	COs	CO Attained	CO Target
		CO1	50.33%	60.00%
		CO2	51.01%	60%
		103804 CO3	48.42%	60%
		CO4	57.65%	60%
		CO5	57.70%	60%
38	Course Code	COs	CO Attained	CO Target
		CO1	55.84%	60.00%
		CO2	55.93%	60%
		100201 CO3	53.94%	60%
		CO4	66.64%	65%
		CO5	66.64%	65%
39	Course Code	COs	CO Attained	CO Target
		CO1	54.04%	60.00%
		CO2	59.18%	65%
		100403 CO3	63.03%	60%
		CO4	63.30%	70%
		CO5	63.30%	70%
40	Course Code	COs	CO Attained	CO Target
		CO1	56.77%	60.00%
		CO2	60.11%	60%
		100507 CO3	63.67%	65%
		CO4	67.54%	70%
		CO5	67.54%	70%
41	Course Code	COs	CO Attained	CO Target
		CO1	83.27%	80.00%
		100403P CO2	83.24%	80%
		CO3	83.99%	80%
42	Course Code	COs	CO Attained	CO Target
		CO1	80.66%	80.00%
		100507P CO2	80.72%	80%
		CO3	81.64%	85%
43	Course Code	COs	CO Attained	CO Target

		CO1	61.91%	65.00%
		CO2	58.66%	65%
	103807	CO3	62.64%	65%
		CO4	55.04%	65%
		CO5	55.04%	65%
44	Course Code	COs	CO Attained	CO Target
		CO1	60.54%	60.00%
		CO2	61.09%	60%
	103403	CO3	63.72%	60%
		CO4	69.29%	60%
		CO5	69.29%	60%
45	Course Code	COs	CO Attained	CO Target
		CO1	64.23%	60%
		CO2	60.94%	60%
	100815	CO3	68.61%	60%
		CO4	70.40%	65%
		CO5	69.25%	65%
46	Course Code	COs	CO Attained	CO Target
		CO1	70.44%	65.00%
		CO2	68.01%	65%
	100815	CO3	68.33%	60%
		CO4	73.77%	60%
		CO5	72.50%	60%
47	Course Code	COs	CO Attained	CO Target
		CO1	63.92%	60.00%
		CO2	57.44%	60%
	100606	CO3	63.85%	60%
		CO4	66.76%	65%
		CO5	65.57%	65%
48	Course Code	COs	CO Attained	CO Target
		CO1	59.90%	60%
		CO2	62.90%	60%
	100704	CO3	60.25%	60%
		CO4	64.48%	60%
		CO5	59.93%	60%
49	Course Code	COs	CO Attained	CO Target
		CO1	55.97%	55%
		CO2	53.38%	55%
	100607	CO3	59.42%	55%
		CO4	57.45%	55%
		CO5	58.62%	55%
50	Course Code	COs	CO Attained	CO Target
		CO1	64.23%	60%
		CO2	60.94%	60%
	100815	CO3	68.61%	60%
		CO4	70.40%	65%
		CO5	69.25%	65%
51	Course Code	COs	CO Attained	CO Target
		CO1	86.48%	80.00%
	100606P	CO2	86.51%	80%
		CO3	86.82%	80%
52	Course Code	COs	CO Attained	CO Target
		CO1	85.36%	80.00%
	100607P	CO2	85.36%	80%
		CO3	87.36%	80%
53	Course Code	COs	CO Attained	CO Target
		CO1	63.65%	65.00%
		CO2	67.50%	65%
	103715	CO3	73.37%	65%
		CO4	67.10%	75%
		CO5	73.72%	70%
54	Course Code	COs	CO Attained	CO Target
		CO1	64.26%	65.00%
		CO2	62.00%	65%
	103601	CO3	66.26%	65%
		CO4	70.68%	75%
		CO5	67.23%	70%
55	Course Code	COs	CO Attained	CO Target
		CO1	64.26%	54.24%
		CO2	62.00%	61.49%
	100804	CO3	66.26%	66.99%
		CO4	70.68%	66.07%
		CO5	67.23%	67.89%
56	Course Code	COs	CO Attained	CO Target
		CO1	89.86%	80.00%
	103601P	CO2	78.32%	80%
		CO3	79.07%	80%
57	Course Code	COs	CO Attained	CO Target

58	103601P	CO1	85.05%	80.00%
		CO2	85.20%	85%
		CO3	86.14%	85%
	Course Code	COs	CO Attained	CO Target
	100706P	CO1	51.65%	50.00%
		CO2	51.60%	50%
		CO3	52.62%	50%

3.8 Attainment of Program Outcomes and Program Specific Outcomes (25)

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
100502	2.33	2.36	2.43	2.43	2.00	2.50	2.50	2.50	2.00	2.00	3.00	2.40
103402	2.13	2.20	2.20	2.20	2.20	2.0	0	2.00	0	2.0	2.20	2.20
103807	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00
100308	2.00	2.00	2.00	2.00	2.00	0	0	0	0	0	0	2.00
100504	2.43	2.50	2.50	2.75	2.60	0	0	2.40	2.33	0	0	2.43
103403	2.00	2.00	2.00	2.00	2.00	0	0	0	0	0	0	0
103403	1.27	1.46	1.00	2.00	1.00	0	0	0	0	0	0	0
100504	2.00	2.00	2.00	2.00	2.00	2.00	0	0	0	0	0	2.00
100302	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	0	0	0	2.00
103404	2.00	2.00	2.00	2.00	2.00	2.00	0	0	0	0	0	2.00
100606	2.00	2.00	2.00	2.00	2.00	2.00	0	0	0	0	0	2.00
100310	2.00	2.00	0	2.00	2.00	0	0	0	0	0	0	2.00
100310	2.00	2.00	2.00	2.00	2.00	0	0	0	0	0	0	2.00
103401	2.00	2.00	2.00	2.00	2.00	0	2.00	0	0	2.00	0	2.00
100613	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
100307	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
100506	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
100609P	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
103502	2.77	2.85	2.88	2.73	2.82	2.83	2.71	2.86	2.80	2.67	2.75	2.80
103605	2.50	2.63	2.67	2.57	2.60	2.33	2.50	2.60	2.75	2.33	2.33	2.60
100815	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00
100815	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00
100606	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00
100704	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00
100704	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00
100607	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00
100606	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	0	2.00	0	2.00
100607	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	0	2.00	0	2.00
103712	2.00	2.00	2.00	0	2.00	2.00	2.00	2.00	0	0	2.00	2.00
103712	2.31	2.33	2.00	0.00	2.13	2.71	2.75	3.00	0.00	0.00	3.00	2.50
100306	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
100306P	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
103401	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
103601	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
100804	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
103601P	2.38	2.38	2.29	2.40	2.40	2.00	2.50	2.00	3.00	3.00	2.00	2.33
100607	2.00	2.00	2.00	0	0	0	0	0	0	0	0	2.00
100201	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	0	0	0	2.00
100403	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
100403P	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00	2.00	2.00	2.00
100507	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	0	0	0	2.00
100507P	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
100506P	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	2.00	2.00	2.00	2.00
100307P	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0	3.00	3.00
100507	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

100706P	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
100607P	3.00	3.00	3.00	3.00	3.00	0	3.00	0	0	3.00	0	3.00
100606P	3.00	3.00	3.00	3.00	3.00	0	3.00	0	0	3.00	0	3.00
100607P	3.00	3.00	3.00	0	0	0	0	0	0	0	0	3.00
100502P	3.00	3.00	3.00	3.00	3.00	0	0	0	0	0	3.00	3.00
103402P	3.00	3.00	0	3.00	3.00	0	0	0	0	0	0	3.00
103804	2.00	2.00	0	2.00	2.00	0	0	0	0	0	0	2.00
103804	2.00	2.00	0	2.00	2.00	0	0	0	0	0	0	2.00
103401P	3.00	3.00	3.00	3.00	3.00	0	0	0	0	0	3.00	3.00
100803	2.00	2.00	2.00	2.00	2.00	0	0	0	0	0	0	0
100506	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0	2.0	2.00	2.0	2.00
100607P	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

PO Attainment Indirect

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
END SURVE	2	1.87	1.66	1.53	1.30	1.54	1.05	1.12	2.06	1.80	1.21	1.40
EMPLOYER	1.24	1.68	1.73	1.53	1.43	1.21	1.71	1.62	2.00	1.89	1.52	1.29
ALUMINI	1.87	2.04	2.52	1.92	2.51	2.64	2.87	2.92	2.64	2.4	2.52	2.30

PO Attainment Level

Note: The Institution can fix the weightage of the indirect attainment maximum up to 20%.

Define the Weightage for Indirect Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.23	2.24	2.23	2.21	2.21	2.18	2.26	2.27	2.19	2.17	2.30	2.26
InDirect Attainment	1.70	1.86	1.97	1.66	1.75	1.80	1.88	1.89	2.23	2.03	1.75	1.66
Overall Attainment	2.12	2.16	2.18	2.1	2.12	2.10	2.18	2.19	2.20	2.14	2.19	2.14

PSO Attainment

Course	PSO1	PSO2	PSO3
100502	2.43	2.40	2.45
103402	2.20	2.11	2.25
103807	2.00	2.00	2.00
100308	2.00	2.00	2.00
100504	2.43	2.50	2.38
103403	2.00	2.00	0
103403	1.36	1.5	0
100504	2.00	2.00	2.00
100302	2.00	2.00	2.00
103404	2.00	2.00	2.00
100606	2.00	2.00	2.00
100310	2.00	0	0
100310	2.00	0	0
103401	2.00	2.00	2.00
100613	2.00	2.00	2.00
100307	2.00	2.00	2.00
100506	2.00	2.00	2.00
100609P	2.00	2.00	2.00
103502	2.75	3.00	3.00

103605	2.64	2.50	2.64
100815	2.00	2.00	2.00
100815	2.00	2.00	2.00
100606	2.00	2.00	2.00
100704	2.00	2.00	2.00
100704	2.00	2.00	2.00
100607	2.00	2.00	2.00
100606	2.00	2.00	2.00
100607	2.00	2.00	2.00
103712	2.00	2.00	2.00
103712	2.22	2.25	2.67
100306	2.00	2.00	2.00
100306P	3.00	3.00	3.00
103401	2.00	2.00	2.00
103601	2.00	2.00	2.00
100804	2.00	2.00	2.00
103601P	2.40	2.38	2.40
100607	2.00	2.00	2.00
100201	2.00	2.00	2.00
100403	2.00	2.00	2.00
100403P	2.00	2.00	2.00
100507	2.00	2.00	2.00
100507P	3.00	3.00	3.00
100506P	2.00	2.00	2.00
100307P	3.00	3.00	3.00
100507	3.00	3.00	3.00
100706P	2.00	2.00	2.00
100607P	3.00	3.00	3.00
100606P	3.00	3.00	3.00
100607P	3.00	3.00	3.00
100502P	3.00	3.00	3.00
103402P	3.00	3.00	3.00
103804	2.00	2.00	2.00
103804	2.00	2.00	2.00
103401P	3.00	3.00	3.00
100803	2.00	2.00	2.00
100506	2.00	2.00	2.00
100607P	3.00	3.00	3.00

PSO Attainment Indirect

Survey	PSO1	PSO2	PSO3
END SURVEY	1.76	1.02	1.00
EMPLOYER	1.20	1.50	1.40
ALUMINI	2.64	2.40	2.00

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	2.24	2.25	2.28
InDirect Attainment	1.87	1.64	1.47
Overall Attainment	2.17	2.13	2.12

4 STUDENTS' PERFORMANCE (120)

1

Table No. 4A: Admission details for the program excluding those admitted through multiple entry and exit points.

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)	2021-22 (CAYm4)	2020-21 (CAYm5)	2019-20 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	60	60	60	60	60	60
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	56	53	40	46	56	61	59
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	13	17	19	10	8	11
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	0	0	0	0	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	56	66	57	65	66	69	70

Table No. 4B: Admission details for the program through multiple entry and exit points.

	Item (No. of students admitted/exited through multiple entry and exit points) in the respective batch	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)	2021-22 (LYG)	2020-21 (LYGm1)	2019-20 (LYGm2)
N52=No. of students admitted in 2nd year via multiple entry and exit points in same batch	N52=No. of students admitted in 2nd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N5=N52+N53+N54	N5=N52+N53+N54	0	0	0	0	0	0	0
N61=No. of students exits after 1st year via multiple entry and exit points in same batch	N61=No. of students exits after 1st year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N62=No. of students exit after 2nd year via multiple entry and exit points	N62=No. of students exit after 2nd year via multiple entry and exit points	0	0	0	0	0	0	0
N63=No. of students exit after 3rd year via multiple entry and exit points in same batch	N63=No. of students exit after 3rd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N6=N61+N62+N63	N6=N61+N62+N63	0	0	0	0	0	0	0

Table No. 4C: No. of students graduated within the stipulated period of the program.

Year of entry	Total no. of students (N1 + N2 + N3+ N4 + N5 - N6 as defined above)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2025-26 (CAY)	56				
2024-25 (CAYm1)	66	50			
2023-24 (CAYm2)	57	28	44		
2022-23 (CAYm3)	65	36	54	54	
2021-22 (LYG)	66	38	47	40	40
2020-21 (LYGm1)	69	54	59	59	59
2019-20 (LYGm2)	70	57	68	66	65

4.1 Enrolment Ratio (20)
[Get Details from Table 4.1](#)

Table No.4.1.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2025-26 (CAY)	60	56	0	93.33
2024-25 (CAYm1)	60	53	0	88.33
2023-24 (CAYm2)	60	40	0	66.67

Average [(ER1 + ER2 + ER3) / 3] = 82.78 $\approx$ 17.00

Assessment : 17.00

4.2 Success Rate of the Students in the Stipulated Period of the Program (15)

Table No.4.2.1: The success rate in the stipulated period of a program.

Item	(2021-22) LYG	(2020-21) LYGm1	(2019-20) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	70.00	68.00	71.00
B=No. of students who graduated from the program in the stipulated course duration	40.00	59.00	65.00

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 71.56

SR Points : 10.73

Note *: If the value of A in Table No. 4.2.1 is less than the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2), then the value of A in Table No. 4.2.1 should be the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2).

4.3 Academic Performance of the First-Year Students of the Program (10)

Table No.4.3.1: Academic Performance of the First-Year Students of the Program.

Academic Performance	CAYm1(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
Mean of CGPA or mean percentage of all successful students(X)	6.80	6.98	6.71
Y=Total no. of successful students	50.00	28.00	35.00
Z=Total no. of students appeared in the examination	50.00	28.00	41.00
API [X*(Y/Z)]	6.80	6.98	5.73

Average API[(AP1+AP2+AP3)/3] : 6.50

Assessment = Average API : 6.50

4.4 Academic Performance of the Second Year Students of the Program (10)

Table No.4.4.1: Academic Performance of the Second Year Students of the Program.

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2nd year/10)	6.95	6.94	6.73
Y=Total no. of successful students	44.00	54.00	47.00
Z=Total no. of students appeared in the examination	45.00	55.00	48.00
API [X * (Y/Z)]	6.80	6.81	6.59

Average API [(AP1 + AP2 + AP3)/3] : 6.73

Assessment [AverageAPI] : 6.73

4.5 Academic Performance of the Third Year Students of the Program (10)

Table No.4.5.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	6.94	7.21	7.33
Y=Total no. of successful students	54.00	40.00	59.00
Z=Total no. of students appeared in the examination	54.00	47.00	59.00
API [X*(Y/Z)]:	6.94	6.14	7.33

Average API [(AP1 + AP2 + AP3)/3] : 6.80

Assessment [1.5 * AverageAPI] : 6.80

4.6 Placement, Higher Studies and Entrepreneurship (30)

Table No. 4.6.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2021-22)	LYGm1(2020-21)	LYGm2(2019-20)
FS*=Total no. of final year students	70.00	68.00	71.00
X=No. of students placed	14.00	33.00	35.00
Y=No. of students admitted to higher studies	1.00	1.00	4.00
Z= No. of students taking up entrepreneurship	0.00	0.00	1.00
Placement Index(P) = $\frac{(X + Y + Z)}{FS} * 100$:	21.43	50.00	56.34

Average Placement Index = $(P_1 + P_2 + P_3)/3$: 42.59

Placement Index Points: 12.78

4.7 Professional Activities (25)

4.7.1 Professional Societies/ Bodies, Chapters, Clubs, and Professional Engineering Events Organized (5)**Table No. 4.7.1.1: List of active professional societies/bodies/chapters/clubs.**

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs
1	TECHNICAL CLUB

Table No. 4.7.1.2: List of events/programs organized.**(CAYm1) 2024-25**

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	TECHNICAL CLUB	SIH 2025	COLLEGE	27/09/2025

(CAYm2) 2023-24

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	TECHNICAL CLUB	SIH 2024	COLLEGE	12/09/2024

(CAYm3) 2022-23

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	TECHNICAL CLUB	SIH 2023	COLLEGE	23/09/2023

4.7.2 Student's Participations in Professional Events (10)**Table No. 4.7.2.1: List of students participated in professional events.****(CAYm1) 2024-25**

S.No	Name of the Student	Name of the Event	State /State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Raju Kumar, Waibhav Bharti, Md. Sharique Akhtar	Project Exhibition Industry-Institute Meet	Division	16/05/2025	3rd
2	Abhinav Anand	SCIENCE MELA 2025	DISTRICT	28/11/2025	na
3	Pradum Kumar	SCIENCE MELA 2025	DISTRICT	28/11/2025	na
4	Anand Kishor Gupta	SCIENCE MELA 2025	DISTRICT	28/11/2025	na

(CAYm2) 2023-24

S.No	Name of the Student	Name of the Event	State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Sameer	SCIENCE MELA 2024	DISTRICT	04/10/2024	na

(CAYm3) 2022-23

S.No	Name of the Student	Name of the Event	State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1					

4.7.3 Publication of Journals, Magazines, Newsletters, etc. in the Department (5)**Table No. 4.7.3.1: List of students involved in publication of journals, magazines, and newsletters, etc. in the Department.****(CAYm1) 2024-25**

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1	Impulse	Priyanka Rani	Sameer	6	1	Soft Copy

(CAYm2) 2023-24

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1						

(CAYm3) 2022-23

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1						

4.7.4 Student Publications (5)

Table No. 4.7.4.1: List of student publications.

(CAYm1) 2024-25

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1							

(CAYm2) 2023-24

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1							

(CAYm3) 2022-23

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1							

5 FACULTY INFORMATION (100)

Sr.No	Name of the Faculty	PAN No.	APAAR faculty ID*(if any)	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Na As (R Cc Ac
1	Manoj Kumar	ANBPK0058L	758076769092	Ph.D	BIT Sindri, VBU Hazaribagh	Control System and Renewable Energy	28/01/2023	2.10	Professor	Professor	28/01/2023	Re
2	Ajay Kumar	DTAPK9578K	652990686342	Ph.D	KIIT deemed to be university Bhubaneswar	Restructured Power System	07/06/2023	2.5	Assistant Professor	Assistant Professor		Re
3	Manoj Kumar Rajak	ARRPR0696R	945521791436	M.Tech	N.I.T Jamshedpur	Power system	18/07/2017	8.4	Assistant Professor	Assistant Professor		Re
4	Nishi Gandha Anupam	BQPPA4015H	759790345607	M.Tech	SRK university, Bhopal	Power Electronics	08/06/2023	2.5	Assistant Professor	Assistant Professor		Re
5	Abhimanyu Kumar	CQPPK0318E	746395540653	M.Tech	MNNIT Allahabad	Power System	09/06/2023	2.5	Assistant Professor	Assistant Professor		Re
6	Piyush	BZPPP5294J	448430004691	M.Tech	National Institute of Technology, Patna	Control System	11/07/2023	2.4	Assistant Professor	Assistant Professor		Re
7	Priyanka Rani	APVPR8938Q	268778810505	M.Tech	Lovely Professional University	Power System	07/06/2023	2.5	Assistant Professor	Assistant Professor		Re
8	Satyam Kumar Singh	FQQPS5309F	984303158701	M.Tech	IIT(ISM) Dhanbad	Power System	09/06/2023	2.5	Assistant Professor	Assistant Professor		Re
9	MD AMJAD ALI	BRRPA8329K	623647039163	M.Tech	Jamia Millia Islamia	Control and Instrumentation System	01/07/2023	2.4	Assistant Professor	Assistant Professor		Re
10	Tabish Shanu	CJFPS5172K	219707910448	M.Tech	NIT Surat	Power System	07/06/2023	2.5	Assistant Professor	Assistant Professor		Re

5.1 Student-Faculty Ratio (SFR) (30)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)
C= No. of Students in UG 3rd year (ST)
D= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
A= No. of Students in PG 1st year
B= No. of Students in PG 2nd year
Student Faculty Ratio (**SFR**) = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.
No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)
Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.
F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

UG

No. of UG(Engineering) programs in Department including allied departments/clusters(UGn):

Electrical Engineering						
Year of Study	CAY		CAYm1		CAYm2	
	(2025-26)		(2024-25)		(2023-24)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	60	6	60	6	60	6
3rd Year	60	6	60	6	60	6
4th Year	60	6	60	6	60	6
Sub-Total	180	18	180	18	180	18
Total	198		198		198	
Grand Total	198		198		198	

PG

No. of PG Programs in the Department

Grand Total			
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SFR

No. of UG Programs in the Department

No. of PG Programs in the Department

Electrical Engineering			
Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	66	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Electrical Engineering	198	198	198
DS=Total no. of students in all UG and PG programs in the Department	198	198	198
AS=Total no. of students of all UG and PG programs in allied departments	0	0	0
S=Total no. of students in the Department (DS) and allied departments (AS)	S1= 198	S2= 198	S3= 198
DF=Total no. of faculty members in the Department	10	10	10
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	F1= 10	F2= 10	F3= 10
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	SFR1= 19.80	SFR2= 19.80	SFR3= 19.80
Average SFR for 3 years	SFR= 19.80		

Average SFR for three assessment years : 19.80

Assessment SFR : 18

5.2 Faculty Qualification (25)

Year	X	Y	RF	$FQ = 2.5 \times [(10X + 4Y) / RF]$
2025-26(CAY)	2	8	9.00	14.44
2024-25(CAYm1)	2	8	9.00	14.44
2023-24(CAYm2)	2	8	9.00	14.44

Average Assessment : 14.44

5.3 Faculty Cadre Proportion (25)

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2025-26)	1.00	1.00	2.00	0.00	6.00	9.00
CAYm1(2024-25)	1.00	1.00	2.00	0.00	6.00	9.00
CAYm2(2023-24)	1.00	1.00	2.00	0.00	6.00	9.00
Average Numbers	1.00	1.00	2.00	0.00	6.00	9.00

Cadre Ratio Marks $[(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5$: 20.00**5.4 Visiting/Adjunct/Emeritus Faculty etc. (10)****Table No. 5.4.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.****(CAYm1) 2024-25**

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. Mani Kant Bhusan	Director	Photourja Pvt. Ltd.	Renewable Energy Systems	26.00
2	Dr. Vivek Kumar	Associate Professor	BRCM CET Bahal, Haryana	High Voltage Engineering	26.00

(CAYm2) 2023-24

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handle
1	Dr. Arun Kumar	Research Directore	Prerna Society of Technical Education & Research	AI, VLSI Design, Semiconductor Devices	26.00
2	Mr. Prabhat Kumar	MD	Nagarro Software	PLC Programming, Digital Electronics	26.00

(CAYm3) 2022-23

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1					

5.5 Faculty Retention (10)

Description	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section 5.1 of SAR; (RF=S/20).	9	9	8
AF=The no. of available faculty members in the Department including allied Departments	10	10	5
A= The no. of faculty members at the current institute with less than 1 year of experience (A in AF)	0	0	1
B= The no. of faculty members at the current institute with more than 1 year and less than 2 years of experience (B in AF)	0	0	0
C= The no. of faculty members at the current institute with more than 2 years and less than 3 years of experience (C in AF)	9	9	0
D= The no. of faculty members at the current institute with more than 3 years and less than 4 years of experience (D in AF)	0	0	3
E= The no. of faculty members at the current institute with more than 4 years of experience (E in AF)	1	1	1
FR=((A*0) +(B*1)+(C*2)+(D*3)+(E*4))/RF) *2.50 (points limited to 10)	6	6	4

Average : 5.33

Assessment Marks : 5.33

6 FACULTY CONTRIBUTIONS (120)

6.1 Professional Development Activities (60)

6.1.1 Memberships in Profession Societies at National/International Levels (5)**Table No. 6.1.1.1: List of faculty members and their memberships.**

S.No	Name of the Faculty	Name of the Professional Society /Body at National and International Level	Name of the Grade/ Level/Position
1	Dr. Manoj Kumar	FIE(I) , ISTE , SESI , IAENG	14
2	Dr. Ajay Kumar	IAENG, IFERP	10
3	Mr. Manoj Kumar Rajak	IAENG, IFERP	10
4	Mr. Abhimanyu Kumar	IAENG, IFERP	10
5	Mr. Nishi Gandha Anupam	IAENG, IFERP	10
6	Mr. Satyam Kumar Singh	IAENG, IFERP	10
7	Mr. Tabish Shanu	IAENG, IFERP	10
8	Mr. Priyanka Rani	IAENG, IFERP	10
9	Mr. Md Amjad Ali	IAENG, IFERP	10
10	Mr. Piyush	IAENG, IFERP	10

6.1.2 Faculty as Resource Persons or Participants in STTPs/FDPs (15)**6.1.2.1 Faculty as Resource Persons in STTPs/FDPs (5)****Table No. 6.1.2.1: List of faculty members as resource person in STTP/FDP events.****(CAYm1) 2024-25**

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1					

(CAYm2) 2023-24

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1					

(CAYm3) 2022-23

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1					

6.1.2.2 Faculty Members' Participation in STTPs/FDPs (10)

Name of the faculty	Max 5 Per Faculty		
	2024-25(CAYm1)	2023-24(CAYm2)	2022-23(CAYm3)
Dr. Ajay Kumar	5.00	0.00	0.00
Mr. Manoj Kumar Rajak	5.00	0.00	0.00
Mr. Abhimanyu Kumar	5.00	5.00	0.00
Mrs. Nishi Gandha Anupam	5.00	0.00	0.00
Mr. Satyam Kumar Singh	5.00	5.00	0.00
Mr. Tabish Shanu	5.00	5.00	0.00
Mrs Priyanka Rani	5.00	0.00	0.00
Md Amjad Ali	5.00	0.00	0.00
Mr. Piyush	5.00	0.00	0.00
Sum	45.00	15.00	0.00
RDF = Number of faculty required to comply with the 20:1 student - faculty ratio in the Department alone, as per section 5.1 of SAR(RDF= DS / 20).	9.90	9.90	9.90
Assessment Points (AP)= 2 * (Sum/(0.5* RDF)) (Points limited to 5 for each assessment year)	10.00	6.06	0.00

Average assessment over 3 years: 5.35

6.1.3 Faculty Certification of MOOCs through SWAYAM, etc. (10)

Table No. 6.1.4.1: List of faculty members obtained certification of MOOCs for the past 3 years.

S.No	Name of the Faculty	Name of Course Passed	Course Offered by (agency)	Grade obtained if an
1	Mrs. Nishi Gandha Anupam	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
2	Mr. Satyam Kumar Singh	Eight Module MOOC Courses	NITTTR Bhopal	NA
3	Mr. Satyam Kumar Singh	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
4	Mr. Satyam Kumar Singh	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
5	Mr. Satyam Kumar Singh	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
6	Mr. Satyam Kumar Singh	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
7	Mr. Satyam Kumar Singh	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
8	Mr. Satyam Kumar Singh	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
9	Mr.Tabish Shanu	Eight Module MOOC Courses	NITTTR Bhopal	NA
10	Mr.Tabish Shanu	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
11	Mr.Tabish Shanu	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
12	Mr. Tabish Shanu	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
13	Mr.Tabish Shanu	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
14	Mr.Tabish Shanu	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
15	Mr.Tabish Shanu	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
16	Mrs.Priyanka Rani	Eight Module MOOC Courses	NITTTR Bhopal	NA
17	Mrs.Priyanka Rani	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
18	Mrs.Priyanka Rani	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
19	Mrs.Priyanka Rani	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
20	Mrs.Priyanka Rani	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
21	Mrs.Priyanka Rani	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
22	Mrs.Priyanka Rani	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
23	Md Amjad Ali	Eight Module MOOC Courses	NITTTR Bhopal	NA
24	Md Amjad Ali	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
25	Md Amjad Ali	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
26	Md Amjad Ali	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
27	Md Amjad Ali	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
28	Md Amjad Ali	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
29	Md Amjad Ali	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
30	Mr. Piyush	Eight Module MOOC Courses	NITTTR Bhopal	NA
31	Mr. Piyush	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
32	Mr. Piyush	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
33	Mr. Piyush	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
34	Mr. Piyush	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
35	Mr. Piyush	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
36	Mr. Piyush	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
37	Dr. Ajay Kumar	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
38	Dr. Manoj Kumar	Eight Module MOOC Courses	NITTTR Bhopal	NA
39	Dr. Manoj Kumar	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
40	Dr. Manoj Kumar	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
41	Dr. Manoj Kumar	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
42	Dr. Manoj Kumar	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
43	Dr. Manoj Kumar	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
44	Dr. Manoj Kumar	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
45	Dr. Ajay Kumar	Eight Module MOOC Courses	NITTTR Bhopal	NA
46	Dr. Ajay Kumar	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
47	Dr. Ajay Kumar	Basic Computer Troubleshooting	Deptt. Of Personal and Training, Govt. of India	NA
48	Dr. Ajay Kumar	Introduction to sellers and service provider	Deptt. Of Personal and Training, Govt. of India	NA
49	Dr. Ajay Kumar	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA

50	Dr. Ajay Kumar	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
51	Dr. Ajay Kumar	Empowering connectivity	Deptt. Of Personal and Training, Govt. of India	NA
52	Dr. Ajay Kumar	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
53	Dr. Ajay Kumar	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
54	Dr. Ajay Kumar	Heart in governance	Deptt. Of Personal and Training, Govt. of India	NA
55	Mr. Manoj Kumar Rajak	Eight Module MOOC Courses	NITTTTR Bhopal	NA
56	Mr. Manoj Kumar Rajak	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
57	Mr. Manoj Kumar Rajak	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
58	Mr. Manoj Kumar Rajak	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
59	Mr. Manoj Kumar Rajak	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
60	Mr. Manoj Kumar Rajak	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
61	Mr. Manoj Kumar Rajak	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
62	Mr. Abhimanyu Kumar	Eight Module MOOC Courses	NITTTTR Bhopal	NA
63	Mr. Abhimanyu Kumar	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
64	Mr. Abhimanyu Kumar	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
65	Mr. Abhimanyu Kumar	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
66	Mr. Abhimanyu Kumar	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
67	Mr. Abhimanyu Kumar	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA
68	Mr. Abhimanyu Kumar	Prevention of Sexual Harrasment of women at workplace	Deptt. Of Personal and Training, Govt. of India	NA
69	Mrs. Nishi Gandha Anupam	Eight Module MOOC Courses	NITTTTR Bhopal	NA
70	Mrs. Nishi Gandha Anupam	Yoga Break at Workplace	Deptt. Of Personal and Training, Govt. of India	NA
71	Mrs. Nishi Gandha Anupam	Orientation module on mission life	Deptt. Of Personal and Training, Govt. of India	NA
72	Mrs. Nishi Gandha Anupam	Stay Safe in Cyber Space	Deptt. Of Personal and Training, Govt. of India	NA
73	Mrs. Nishi Gandha Anupam	Introduction to Emerging Technology	Deptt. Of Personal and Training, Govt. of India	NA
74	Mrs. Nishi Gandha Anupam	Code of Conduct for Govt. Employee	Deptt. Of Personal and Training, Govt. of India	NA

6.1.4 FDP/STTP Organized by the Department (10)

Table No. 6.1.5.1: List of FDPs/STPs organized by Department for the past 3 years.

(CAYm1) 2024-25

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1					

(CAYm2) 2023-24

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1					

(CAYm3) 2022-23

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1					

6.1.5 Faculty Support in Student Innovative Projects (10)

Table No. 6.1.6.1: List of faculty members involved in student innovative projects.

(CAYm1) 2024-25

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Mr. Abhimanyu Kumar	SIH2025	27/09/2025	PCE Purnea	https://www.sih.gov.in/sih2025

(CAYm2) 2023-24

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Dr. Ajay Kumar	SIH 2024	12/09/2024	PCE Purnea	https://www.sih.gov.in/sih2024
2	Mr. Tabish Shanu	SIH 2024	12/09/2024	PCE Purnea	https://www.sih.gov.in/sih2024

(CAYm3) 2022-23

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Mr. Piyush	SIH 2023`	23/09/2023	PCE Purnea	https://www.sih.gov.in/sih2024

6.1.6 Faculty Internship/Training/Collaboration with Industry (10)**Table No. 6.1.7.1: Faculty internship/training/collaboration details.**

S.No	Name of the Faculty	Name of the Internship/ Training/ Collaboration	Name of the Company & Place	Duration	Outcomes of Internship/ Training/ Collaboration
1	Dr. Ajay Kumar	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
2	Mr. Piyush	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
3	Mr. Tabish Shanu	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
4	Mrs.Priyanka Rani	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
5	Mrs. Nishi Gandha Anupam	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
6	Mr. Manoj Kumar Rajak	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
7	Md Amjad Ali	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
8	Mr. Satyam Kumar Singh	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
9	Mr. Abhimanyu Kumar	Professional Development Course	BIPARD Gaya	1 Week	Administrative knowledge, professional skills, and ethical orientation for efficient public service
10	Dr. Ajay Kumar	IP 1	NITTTR, Bhopal	2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
11	Mr. Piyush	IP 1 and IP2	NITTTR, Bhopal	2+2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
12	Mr. Tabish Shanu	IP 1	NITTTR, Bhopal	2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
13	Mrs.Priyanka Rani	IP 1 and IP2	NITTTR, Bhopal	2+2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
14	Mrs. Nishi Gandha Anupam	IP 1	NITTTR, Bhopal	2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
15	Mr. Manoj Kumar Rajak	IP 1	NITTTR, Bhopal	2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
16	Md Amjad Ali	IP 1	NITTTR, Bhopal	2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
17	Mr. Satyam Kumar Singh	IP 1 and IP2	NITTTR, Bhopal	2+2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies
18	Mr. Abhimanyu Kumar	IP 1	NITTTR, Bhopal	2 Weeks	Strengthens faculty members pedagogical, assessment and professional competencies

6.2 Research and Development Activities (60)

6.2.1 Academic Research (15)

Table No. 6.2.1.1: Faculty publication details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of peer reviewed journal papers published	11	0	0
2	No. of peer reviewed conference papers published	0	0	0
3	No. of books/book chapters published	0	0	0

6.2.2 Development Activities (10)

2021-25 Batch

Sl. No.	Project Title	Faculty Name
1	Design And Implementation Of Van De Graaff Generator.	Prof. Satyam Kumar
2	Footstep Power Generation System	Prof. Tabish Shanu
3	Power Quality Improvement Using TSC Facts Device	Dr. Manoj Kumar
4	Solar Wireless Electric Vehicle Charging System.	Dr. Ajay kumar
5	Smart Illumination System.	Prof. Md. Amjad Ali
6	Protection Of Transformers And Transmission Lines In Power Systems Based On Matlab Simulink	Prof. Priyanka Rani
7	Temperature Control Using Power Electronics Devices	Prof. Nishi Gandha Anupam
8	Simulation Of Matlab For Power Factor Correction Device Using Svc (Tsc-Tcr)	Prof. Piyush
9	Light Fidelity (Li-Fi) Technology	Prof. Manoj kumar Rajak
10	IoT Based Smart Energy Meter.	Prof. Abhimanyu Kumar

2020-24 batch

S. No.	Project Title	Faculty Name
1	Accident Detection and Alert System	Prof. Priyanka Rani
2	IoT Based Air Pollution Monitoring System Using Arduino	Prof. Nishi Gandha Anupam
3	Three Phase Fault Detection in Transmission Line Using Arduino Uno	Prof. Abhimanyu Kumar
4	Energy Storage System Using Gravity Battery	Prof. Tabish Shanu
5	Power Quality Improvement Using TSC FACTS Device	Dr. Ajay Kumar
6	Modeling and Implementation of Pure Sine Wave Inverter with SPWM Control Technique	Prof. Manoj Kumar Rajak
7	Solar Wireless EV Charging System	Prof. Piyush
8	Li-Fi Audio Transmission	Dr. Manoj Kumar
9	Electric Fault Location Detector	Prof. Satyam Kumar Singh
10	Transmission Line Fault Safety System	Prof. Amjad Ali

2019-23 batch

S. No.	Project Title
1	Voltage Control via Radio Frequency
2	Transmission Line Fault Detection System
3	Transformer Protection Using 8051 Microcontrollers

4	Dual Axis Solar Tracker
5	Single Axis Solar Tracking System
6	Single Axis Automatic Solar Tracking System
7	IoT Based Irrigation System
8	Wireless Charging of Electrical Vehicles
9	DC Motor Speed Controller Using Arduino and L298 Motor Driver
10	Driver Anti-Sleep Alarm
11	Automatic Load Sharing Transformer with Extra Load Cut-Off
12	Auto Load Shifting Transformer with Protection

6.2.3 Sponsored Research Project (15)

2024-25 (CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25

2023-24 (CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25

2022-23 (CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25

Total Amount (Lacs) Received for the Past 3 Years:

Note*:

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

6.2.4 Consultancy Work (15)

2024-25 (CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25

2023-24 (CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25

2022-23 (CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25

Total amount (Lacs) received for the past 3 years:

Note*:

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

6.2.5 Institution Seed Money or Internal Research Grant to its Faculty for Research Work(5)**6.2.5 A Amount received (3)****2024-25 (CAYm1)**

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project

2023-24 (CAYm2)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project

2022-23 (CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project

Total amount (Lacs) received for the past 3 years :

6.2.5 B Amount utilized (2)**7 FACILITIES AND TECHNICAL SUPPORT (100)****7.1 Adequate and well equipped laboratories, and technical manpower (40)**

Sr. No	Name of the Laboratory	Number of students per set up (Batch Size)	Name of the Important Equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	EM I LAB	35	• Study of Thr	5	Ravi kumar	Technician	B.Tech
2	AE LAB	35	• BEL-COT: Di	5	Pinaki Ranjan	Technician	B.Tech
3	ECA LAB	35	• Superpositio	5	Hiralal	Instructor	ITI
4	Electrical and E	35	• Maxwell Brid	5	Ravi Kumar	Technician	B.Tech
5	EM II lab	35	• Single Phase	5	Ravi Kumar	Technician	B.Tech
6	DE LAB	35	• Analog to Di	5	Ravi Kumar	Technician	B.Tech
7	PS-I LAB	35	• Power Trans	5	Ravi Kumar	Technician	B.Tech
8	Power Electror	35	• Study of the	5	Ravi Kumar	Technician	B.Tech
9	Control System	35	• AC Servo Mc	5	Ravi Kumar	Technician	B.Tech
10	Microprocesso	35	• 8085 Micro	5	Pinaki Ranjan	Technician	B.Tech
11	NPTEL	35	Computers	5	Ravi Kumar	Technician	B.Tech
12	PS-II LAB	35	• Three-Phase	5	Ravi Kumar	Technician	B.Tech
13	DSP LAB	35	• Computer	5	Pinaki Ranjan	Technician	B.Tech
14	ED lab	35	• Embedded S	5	Ravi Kumar	Technician	B.Tech
15	Seminar	50	Smart Class ro	5	Ravi Kumar	Technician	B.Tech

7.2 Additional Facilities Created for Improving the Quality of Learning Experience in Laboratories (20)

Sr. No	Name of the Facility	Details	Purpose for creating facility	Utilization	Relevance to POs/PSOs
1	MATLAB	Software tool, Version: R-2023b	To support modeling, simulation, analysis, and algorithm development in Electrical Engineering subjects	Used in MATLAB Lab courses, project work, mini-projects, research, and data analysis	PO1, PO2, PO3, PO4, PO5, PO10, PO12; PSO1, PSO2
2	PROTEUS LAB	Software Tool	To design, simulate, and test electrical and electronic circuits before hardware implementation	Used in simulation-based experiments, project development, fault analysis, and circuit validation	PO1, PO2, PO3, PO4, PO5, PO9, PO10; PSO1, PSO2
3	Virtual Laboratory Access	Virtual Laboratory Access Students are encouraged to utilize national virtual laboratory platforms to perform experiments beyond scheduled lab hours	Access to utilize national virtual laboratory platforms to perform experiments beyond scheduled lab hours	utilize national virtual laboratory	PO1, PO2, PO3, PO4, PO5, PO9, PO10; PSO1, PSO2, PSO3
4	Wi-Fi	Up to 100 Mbps wireless internet access across campus	For easy access to online resources and knowledge sharing	Used for research, online learning, and collaboration	PO10
5	White Boards	All labs equipped with whiteboards	For explaining experiments and procedures	Used during experiments and demonstrations	PO1, PO2, PO3, PO10
6	Safety & Electrical Protection Facilities	MCBs, ELCBs, earthing and safety equipment in laboratories	To ensure safe working environment during experiments	Safe conduct of laboratory experiments	PO6, PO8, PO10
7	Computational Lab	High performance computers with latest configuration	To support simulation, programming and computational analysis	Used for numerical analysis, simulations, software-based experiments	PO1, PO2, PO3, PO5, PSO1

7.3 Maintenance of laboratories and overall ambience (10)

1. Laboratory Maintenance

- Regular preventive and corrective maintenance of laboratory equipment, instruments, and furniture through designated laboratory in-charges.
- Periodic servicing, calibration, and repair of instruments to ensure accuracy and reliability.
- Annual stock verification of equipment, components, and consumables, with timely replacement of obsolete or non-functional items.
- Proper documentation maintained for maintenance schedules, service records, and stock registers.

2. Infrastructure Upkeep

- Well-maintained laboratory spaces with adequate lighting, ventilation, and power supply.
- Clean and organized workstations with proper seating arrangements for students.
- Availability of uninterrupted power supply (UPS) and backup facilities wherever required.

3. Cleanliness and Housekeeping

- Daily cleaning of laboratories, corridors, and common areas by housekeeping staff.
- Proper waste disposal mechanisms for e-waste, chemical waste (where applicable), and general waste.
- Periodic sanitation and pest control measures to maintain hygiene.

4. ICT and Learning Support

- Laboratories equipped with updated software, licensed tools, and internet connectivity to support practical learning.
- Regular updating of systems and antivirus protection to ensure smooth functioning.
- Display of charts, posters, and instructions related to experiments, safety norms, and learning outcomes.

5. Overall Ambiance

- Calm, disciplined, and student-friendly environment conducive to learning and experimentation.
- Aesthetic enhancements such as notice boards, departmental displays, student project exhibits, and motivational posters.
- Green initiatives like indoor plants and energy-efficient lighting to promote sustainability.

6. Monitoring and Continuous Improvement

- Continuous monitoring by the Head of the Department and laboratory committees.
- Feedback collected from students and faculty regarding laboratory facilities and ambiance.
- Necessary improvements implemented based on feedback and audit recommendations.

Through these practices, the Department ensures well-maintained laboratories and a positive, professional ambiance that enhances academic excellence and student engagement.

7.4 Safety measures in laboratories (10)

Sr. No	Laboratory Name	Safety Measures
1	EM I LAB	Fire Extinguisher, Insulating Mat, First Aid Kit,Clear operating instructions displayed
2	AE LAB	Fire Extinguisher, First Aid Kit
3	ECA LAB	Fire Extinguisher, First Aid Kit
4	Electrical and Electronic Measurement lab	Fire Extinguisher, First Aid Kit
5	EM II lab	Fire Extinguisher, Insulating Mat, First Aid Kit
6	DE LAB	Fire Extinguisher, First Aid Kit
7	PS-I LAB	Fire Extinguisher, Insulating Mat, First Aid Kit,Insulating Mat
8	Power Electronics lab	Fire Extinguisher, First Aid Kit
9	Control System lab	Fire Extinguisher, First Aid Kit
10	Microprocessor lab	Fire Extinguisher, First Aid Kit
11	NPTEL	Fire Extinguisher, First Aid Kit
12	PS-II LAB	Fire Extinguisher, Insulating Mat, First Aid Kit
13	VLSI LAB	Fire Extinguisher, First Aid Kit
14	DSP LAB	Fire Extinguisher, First Aid Kit
15	ED lab	Fire Extinguisher, First Aid Kit

16	PROJECT-I	Fire Extinguisher, First Aid Kit
17	Seminar	Fire Extinguisher, First Aid Kit
18	PROJECT-II	Fire Extinguisher, First Aid Kit
19	Computational Lab	Proper seating and ergonomics,Electrical safety of systems, Fire extinguisher

7.5 Project laboratory/research laboratory /centre of excellence (20)

Project Work Station Laboratory is established to support student projects, research activities, innovation, startups, and Centre of Excellence initiatives.

The lab is equipped with a **Digital Storage Oscilloscope (DSO)**, Waveform Generator, two Digital Multimeters, and Soldering & Desoldering Stations for testing and prototyping.

It facilitates hardware development, circuit analysis, PCB fabrication, and experimental validation of projects.

The laboratory supports UG projects, research work, and prototype development for innovative ideas.

It also encourages product development, technical skill enhancement, and startup incubation activities within the department.

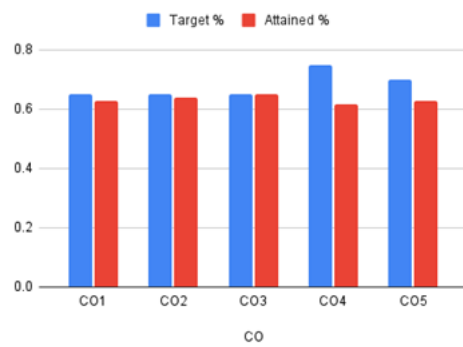
8 CONTINUOUS IMPROVEMENT (80)

8.1 Actions taken based on the results of evaluation of each of the COs, POs & PSOs (40)

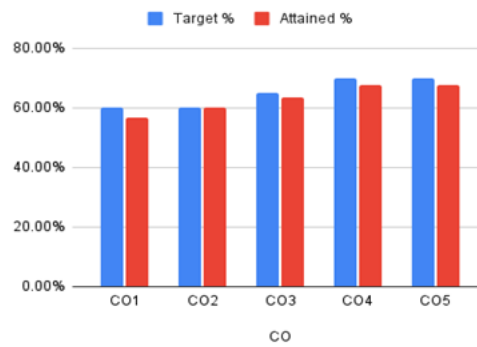
8.1.1 Actions Taken Based on the Results of Evaluation of the COs Attainment (20)

Power System-I (100302)

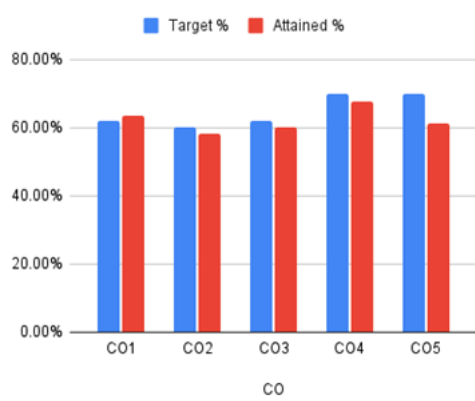
2021-25 Batch



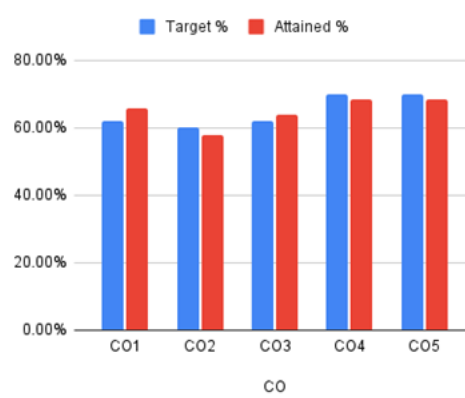
2022-26 Batch

**Power Electronics (100506)**

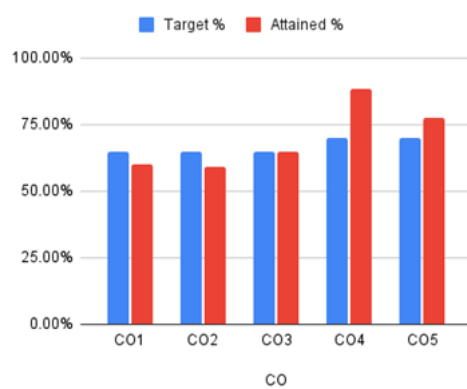
2021-25 Batch



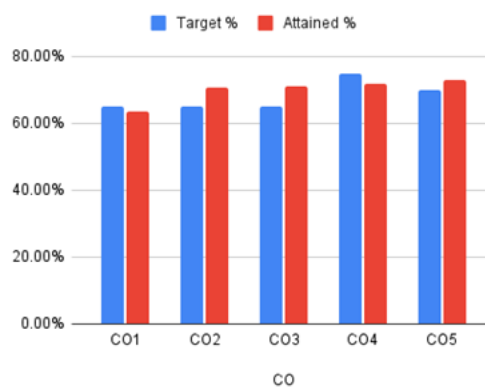
2022-26 Batch

**Microprocessor (100504)**

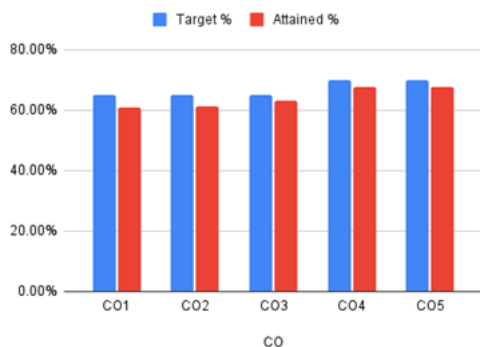
2021-25 Batch



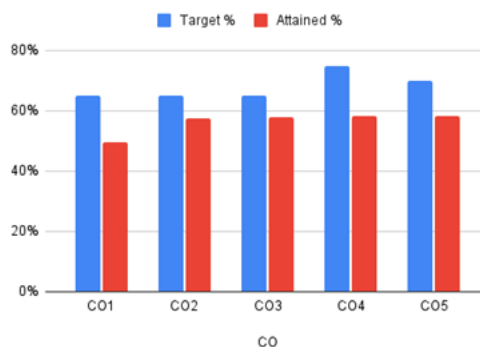
2022-26

**DSP (100606)**

2021-25



2022-26



Step 1: Identification of Weak Areas

- COs with **low or partial attainment** are identified.
- Detailed analysis is carried out to determine possible causes such as:
 - Difficulty level of the topic
 - Inadequate prerequisite knowledge
 - Low student participation or attendance
 - Gaps in teaching-learning methods
 - Insufficient practical exposure or resources

Step 2: Root Cause Analysis

- Faculty members conduct **course-wise discussions** to identify root causes for low CO attainment.
- Inputs from **student feedback**, question paper analysis, and performance trends are considered.
- Weaknesses are mapped to specific:
 - Topics or modules
 - Teaching methods
 - Assessment strategies

Step 3: Identification of Corrective Measure

Based on the identified weaknesses, corrective actions are planned, such as:

- **Curriculum interventions** (addition of tutorials, extra topics, revision of course content)
- **Pedagogical initiatives** (active learning, problem-based learning, flipped classroom, ICT tools)
- **Assessment reforms** (more application-based questions, continuous evaluation)
- **Support system improvements** (remedial classes, mentoring)

Step 4: Implementation of Improvement Measures

- Identified measures are implemented during the **current or subsequent academic year**.
- Examples include:
 - Conducting remedial and bridge courses
 - Organizing additional tutorials
 - Introducing case studies, simulations, and mini-projects
 - Faculty training and workshops

Step 5: Monitoring and Documentation

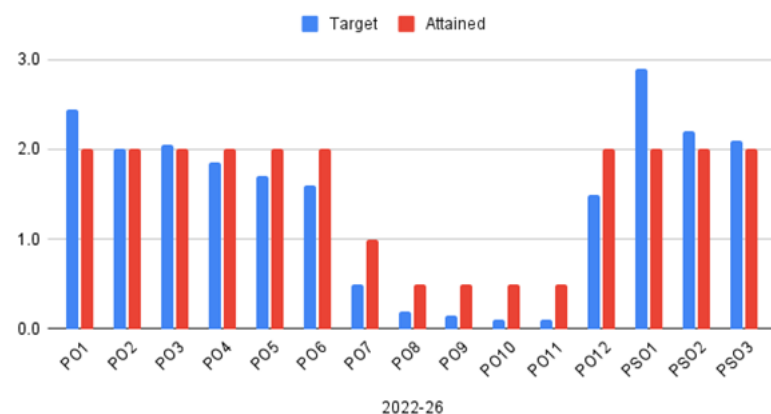
- Implementation of actions is monitored through:
 - Attendance records
 - Student performance in subsequent assessments
 - Feedback from students

Step 6: Closing the Loop

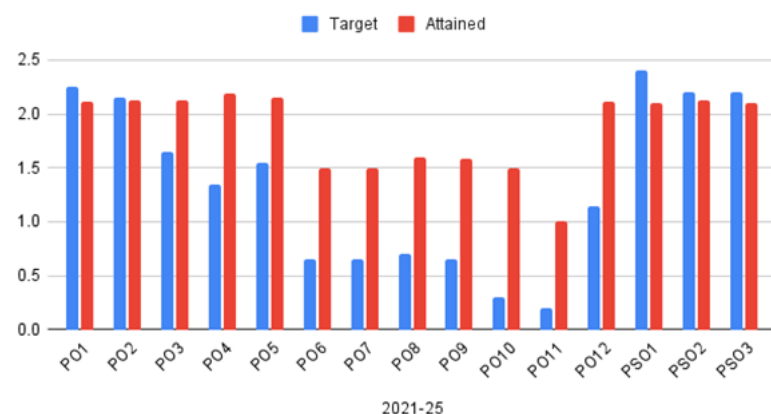
- Effectiveness of the implemented measures is reviewed.
- Successful practices are **standardized and continued**, while ineffective measures are revised.
- The process ensures **continuous improvement**.

8.1.2 Actions Taken Based on the Results of Evaluation of the POs/PSOs Attainment (20)

2022-26 Batch



2021-25 Batch



Subjects - Power System-I, Power Electronics, Microprocessor & DSP

Step 1: Root Cause Analysis

- To conduct departmental review meetings.
- To analyse:
 - Course delivery methods
 - Assessment design
 - Curriculum gaps
 - Industry exposure levels
 - Student preparedness and participation
- Collect faculty and stakeholder inputs.

Step 2: Identification of Improvement Measures

Measures are categorized as follows:

A. Curriculum Interventions

- Revision of syllabus through BOS.
- Inclusion of advanced tools, case studies, and industry-relevant content.
- Introduction of value-added courses, skill-based electives, and interdisciplinary subjects.
- Strengthening project and internship components.

B. Pedagogical Initiatives

- Adoption of active learning methods (Case-based learning, flipped classroom).
- Increased use of ICT tools and simulation software.
- Conducting technical workshops, seminars, and guest lectures.
- Incorporation of mini-projects and design-based assignments.

C. Assessment Reforms

- Inclusion of higher-order (application/design) questions.
- Rubric-based evaluation for projects and presentations.
- Continuous internal evaluation improvements.

D. Support System Improvements

- Remedial classes for slow learners.
- Mentoring and counselling support.
- Soft-skill and communication training programs.
- Industry interaction, internships, and MoUs.

8.2 Academic Audit and actions taken thereof during the period of Assessment (15)

Step 1: Planning and Audit Schedule

- Academic audits are conducted periodically.
- An internal academic audit committee and IQAC is constituted.

Step 2: Data Collection and Documentation Review

The following documents are reviewed:

- Course plans and lesson plans.
- CO–PO/PSO mapping and attainment analysis
- Question papers and evaluation methods
- Student feedback, course exit surveys
- Result analysis and pass percentage
- Teaching–learning innovations
- Faculty development activities
- Laboratory and project assessment records

Step 3: Audit Execution

- Interaction with faculty members and students
- Evaluation of academic support systems (mentoring, remedial classes)

Step 4: Identification of Gaps and Strengths

- Identification of low CO/PO attainment areas
- Analysis of reasons such as:
 - Curriculum gaps
 - Inadequate assessment tools
 - Weak prerequisite knowledge
 - Limited practical exposure
- Documentation of best practices and innovations

Step 5: Recommendations

- - Areas for improvement
 - Actionable recommendations

8.3 Improvement in Faculty Qualification/Contribution (15)

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
No. of faculty members with Ph.D. degree	2.00	2.00	0.00
No. of publications in peer reviewed journals	11.00	0.00	0.00
No. of publications in conferences	0.00	0.00	0.00

8.4 Improvement in Academic Performance (10)

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
Academic Performance Index (API) of the First-Year Students in the Program (Refer to section 4.3)	6.05	5.14	6.11
Academic Performance Index of the Second-Year Students in the Program (Refer to section 4.4)	5.65	6.52	6.53
Academic Performance Index of the Third Year Students in the Program (Refer to section 4.5)	7.59	7.04	7.33

9 STUDENT SUPPORT AND GOVERNANCE (120)

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9.1 First Year Student-Faculty Ratio (FYSFR) (5)

Please provide First year faculty information considering load

Name of the faculty member	PAN No.	Qualification	From Engineering Courses	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associatec is 'No')
Raju Kumar	DEYPK4136L	M.Tech	Yes	14/09/2015	Machine Learning	Assistant Professor	26/09/2022	Yes	Regular	
RAVI ANAND	AWPPA8269A	M.Tech	Yes	31/05/2018	THERMAL ENGINEERING	Assistant Professor	11/05/2023	Yes	Regular	
Tapan Kumar	CMBPK9566L	M.Tech	Yes	30/06/2016	Artificial intelligence Data Science and Data Analytics	Assistant Professor	31/03/2024	Yes	Regular	
PAYAL PRIYA	CODPP7074Q	M.Tech	Yes	01/08/2017	Manufacturing	Assistant Professor	27/04/2024	Yes	Regular	
Uday Kumar Si	ICTPS9814M	M.Tech	Yes	12/06/2016	Thermal	Assistant Professor	18/04/2023	Yes	Regular	
AMIT RANJAN	DTZPR6691M	M.Sc	No	26/06/2018	Physical Chemistry	Assistant Professor	18/12/2023	Yes	Regular	
Dr. Manoj Kum	BAFPK6339A	M.Sc. and PhD	No	13/10/2012	Physics	Assistant Professor	31/07/2019	Yes	Regular	
Dr.Uttam Kum	BZBPK4007J	M.A and Ph.D	No	26/03/2018	English	Assistant Professor	11/10/2023	Yes	Regular	
Amit Madhukar	CKNPM9708A	M.Tech	Yes	31/07/2019	CTM	Assistant Professor	28/10/2022	Yes	Regular	
Dr Purvika Aga	BLVPA1714N	Ph.D	No	31/03/2022	Nanotechnology	Assistant Professor	20/02/2023	No	Contractual	22/12/2023
Shubhlaxmi	AIOPK9227E	M.Tech	Yes	31/10/2019	CSE	Assistant Professor	19/03/2024	Yes	Regular	
Dr. Debasis Pa	CGJPP0646N	Ph.D	No	15/07/2022	Geology	Assistant Professor	07/10/2023	Yes	Regular	
RAUSHAN KU	CIEPK0250N	M.Tech	Yes	17/10/2020	HEAT POWER	Assistant Professor	13/01/2025	Yes	Regular	
UTSAV MANI	BMRPM7099D	M.Tech	Yes	26/05/2014	STRUCTURAL ENGINEERING	Assistant Professor	27/01/2018	Yes	Regular	
Dr. Priti Kumari	DDSPK2193A	Ph.D	Yes	05/08/2023	Machine learning	Assistant Professor	05/04/2024	Yes	Regular	
Ramchandra s.	BYMPS0758J	M.Tech	Yes	30/04/2012	Advanced material science	Assistant Professor	09/03/2018	Yes	Contractual	
Supriya Kumar	BLIPK3973J	M.Tech	Yes	29/09/2016	Image Processing	Assistant Professor	20/03/2024	Yes	Regular	
Dr shwetambai	JHPPS6153F	Ph.D	No	27/07/2017	Fuzzy set theory and operation Reaserch	Assistant Professor	07/11/2023	Yes	Regular	
Dr shwetambai	JHPPS6153F	Ph.D	No	27/07/2017	Fuzzy set theory and operation Reaserch	Assistant Professor	12/03/2018	No	Contractual	06/11/2023
Yadesh Kumar	EUTPP5916F	M.Sc	No	12/07/2018	Applied Mathematics	Assistant Professor	06/11/2023	Yes	Regular	
Dr.Minal Vijay	ADKPV8135E	Ph.D	No	04/04/2009	Linguistics	Assistant Professor	09/03/2018	No	Contractual	04/10/2023
Supriya Kumar	BLIPK3973J	M.Tech	Yes	29/09/2016	Image Processing	Assistant Professor	28/02/2018	No	Contractual	25/10/2023

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Perc facu ((NS (NS2 requ Perc +(NS
2023-24(CAYm2)	360	18	1	6	11
2024-25(CAYm1)	360	18	6	11	39
2025-26(CAY)	360	18	6	12	40
Average Percentage					30.00

9.2 Mentoring system (5)

The Institute has established a **structured and comprehensive mentoring system** to support students in their **academic progression, professional development, career planning, and overall personal growth**. The mentoring framework is designed to address diverse student needs in a systematic and continuous manner.

Types of Mentoring Provided

The mentoring system covers multiple dimensions, including:

- **Course Work Specific Mentoring:**
Guidance related to syllabus understanding, examination preparation, internal assessments, and academic performance improvement.
- **Laboratory Specific Mentoring:**
Support for laboratory experiments, practical skills development, project work, and hands-on technical competencies.
- **Professional Guidance and Career Advancement:**
Mentoring for career planning, internships, placements, higher studies, competitive examinations, and skill enhancement.
- **All-Round Development:**
Counseling related to personal development, time management, discipline, ethical values, stress management, and extracurricular participation.

Faculty Mentors and Mentor–Mentee Ratio

- Each faculty member is assigned as a **mentor** to a group of students.
- The **number of faculty mentors** is adequate to ensure personalized attention.
- The **mentor–mentee ratio** is maintained at an optimal level (approximately **15–25 students per mentor**), enabling effective interaction and monitoring.

Frequency and Mode of Mentoring

- **Regular mentoring meetings** are conducted:
 - At least **once every semester**
 - Additionally, **as and when required**, based on student needs
- Meetings are conducted through:
 - Individual interactions
 - Group mentoring sessions
 - Counseling during academic hours

Monitoring and Documentation

- Mentors maintain **mentoring records**, including attendance, discussion points, identified issues, and suggested actions.
- Academic progress, attendance, and behavioral aspects are periodically reviewed.
- Issues requiring additional support are escalated to the **Head of Department or concerned committees**.

Effectiveness and Efficacy of the Mentoring System

The mentoring system has demonstrated effectiveness through:

- Enhanced student confidence and motivation
- Better awareness of career opportunities and higher education options
- Early identification and resolution of academic or personal challenges
- Strengthened student–faculty interaction and support mechanisms

Outcome and Impact

The structured mentoring framework contributes to:

- Holistic student development
- Improved retention and progression rates
- Enhanced preparedness for professional and academic challenges

Overall, the Institute's mentoring system functions as an **effective support mechanism**, ensuring **academic excellence, career readiness, and all-round development of students**, in alignment with NBA quality assurance requirements.

The Institute has a **systematic and well-defined feedback mechanism** to evaluate and continuously improve the **Teaching–Learning Process (TLP)**. The process ensures stakeholder participation, objective analysis, and implementation of corrective and reward-based measures.

Feedback Collection Process

- **Structured student feedback** on the Teaching–Learning Process is collected **at the end of each semester**.
- Feedback is obtained using **standardized questionnaires** covering parameters such as:
 - Subject knowledge of faculty
 - Teaching methodology and clarity
 - Pace of teaching and coverage of syllabus
 - Interaction, doubt resolution, and use of teaching aids
 - Overall effectiveness of the course delivery
- Feedback is collected through **offline/online modes** as approved by the Institute to ensure confidentiality and unbiased responses.

Student Participation

- On average, **more than 80–90% of students** participate in the feedback process across programs and semesters.
- Participation is ensured through:
 - Awareness during classes and mentoring sessions
 - Scheduled feedback windows
 - Monitoring by departmental feedback coordinators

Feedback Analysis Process

- Collected feedback data is **compiled and analyzed at the department level**.
- Quantitative scores are averaged for each faculty member and course.
- The analyzed reports are shared with:
 - Concerned faculty members
 - Head of the Department

Corrective and Reward Measures

Based on the feedback analysis, the following actions are taken:

Corrective Measures

- Faculty counseling and mentoring by senior faculty or HoD
- Improvement in teaching methods, pace, and interaction
- Adoption of ICT tools and innovative pedagogies
- Additional tutorial/remedial classes where required
- Faculty participation in FDPs/STTPs on pedagogy and subject upgradation

Reward / Encouragement Measures

- Appreciation during departmental or academic meetings
- Consideration in **annual performance appraisal (ACR/e-PAR)**
- Encouragement for leadership roles in academic activities

Documentation and Evidence of Analysis

The Institute maintains:

- Feedback questionnaires
- Participation records
- Faculty-wise and course-wise feedback analysis reports

Outcome and Impact

The structured feedback system has resulted in:

- Improved teaching effectiveness and student engagement
- Enhanced adoption of innovative teaching practices
- Strengthened accountability and continuous improvement culture

Overall, the Institute ensures that **student feedback is effectively collected, analyzed, and utilized** for improving the Teaching–Learning Process.

9.3.2 Feedback on Academic Facilities (10)

Institute Marks : 10.00

The Institute has a **structured feedback mechanism** to assess the adequacy, quality, and effectiveness of **institutional facilities** provided to students and faculty. The objective of this process is to ensure continuous improvement in infrastructure and support services in line with academic and stakeholder requirements.

Feedback Collection Process on Facilities

- Feedback on facilities is collected **periodically, at least once in an academic year**, from students and faculty.
- A **standardized feedback format/questionnaire** is used, covering major facility-related aspects such as:
 - Classrooms and laboratories
 - Computing and internet facilities
 - Library and learning resources
 - Sports facilities
 - Campus safety and cleanliness
- Feedback is collected through **offline/online modes**, ensuring anonymity to encourage honest and unbiased responses.

Participation and Coverage

- A **substantial percentage of students and faculty** participate in the facilities feedback process.
- Participation is ensured through announcements, mentoring interactions, and coordination by departmental and administrative committees.

Feedback Analysis Process

- Quantitative ratings are averaged to assess satisfaction levels for each facility.
- Qualitative suggestions and concerns are categorized to identify:
 - Facilities requiring immediate attention
 - Areas for improvement or upgradation
 - Long-term infrastructure planning needs
- The analyzed feedback is reviewed in **administrative and academic review meetings**.

Corrective Actions Taken

Based on the feedback analysis, appropriate **corrective and improvement measures** are implemented during the assessment period, such as:

- Maintenance and repair of classrooms, laboratories, and common areas
- Upgradation of laboratory equipment and computing resources where required
- Improvement in library services and access to learning resources
- Enhancement of cleanliness, sanitation, and drinking water facilities
- Strengthening of internet connectivity and IT support services
- Redressal of hostel and student amenity-related issues

Outcome and Impact

The feedback-driven improvement process has resulted in:

- Improved functionality and usability of institutional facilities
- Enhanced student and faculty satisfaction
- Timely identification and resolution of infrastructure-related issues
- Better alignment of facilities with academic and professional needs

Overall, the Institute ensures that **feedback on facilities is systematically collected, analyzed, and acted upon**, contributing to a safe, supportive, and quality learning environment.

9.4 Training and Placement Support (10)

The Institute has a **structured Training and Placement support system** to enhance student employability, career readiness, and opportunities for higher education. These activities are coordinated through the **Training and Placement Cell (TPC)** with active involvement of faculty coordinators and industry stakeholders.

Training and Placement Support System

The Institute provides continuous training support to students through:

- **Aptitude training** (quantitative, logical reasoning, verbal ability)
- **Technical skill enhancement programs** aligned with branch-specific requirements
- **Soft skill development**, including communication skills, resume writing, group discussions, and interview preparation
- **Mock tests and mock interviews** conducted prior to placement drives

Training Calendar and Scheduled Activities

A **semester-wise and annual training calendar** is prepared by the Training and Placement Cell, which includes:

- Pre-placement training sessions
- Career awareness programs
- Industry expert talks
- Internship and placement readiness programs

These activities are conducted systematically for pre-final and final year students.

Career Guidance and Counseling

The Institute provides career guidance through:

- **Faculty mentoring system** for academic and career counseling
- Guidance on **career options, core engineering jobs, IT roles, government jobs, and higher studies**
- Counseling sessions for students opting for **GATE, PSU, higher education, and competitive examinations**
- One-to-one interaction with placement coordinators for personalized career planning

The effectiveness of career guidance is reflected in improved student awareness, participation in placement drives, and readiness for diverse career paths.

Industry Interaction and Placement Activities

The Institute ensures industry exposure and interaction through:

- **Industry interaction sessions and guest lectures** focused on placement and internship preparation
- **Internship facilitation** and guidance for industry-oriented projects
- **Pre-placement talks and recruitment drives** conducted by visiting organizations
- Coordination with industries for **campus and pooled placement opportunities**

These interactions help students understand industry expectations and workplace requirements.

Placement Performance (As per Institute Records)

Based on the placement data maintained by the Institute (as reflected in the uploaded placement sheet):

- Students from multiple programs including **CSE, ECE, EE, ME, Civil, and allied branches** registered for placements.
- A **significant number of students were placed** across branches with **multiple job offers** in some cases.
- **Salary packages** offered range from **entry-level packages to higher packages**, indicating diversity in opportunities and recruiter profiles.
- Placement statistics such as **number of students registered, placed, offers received, and package details** are systematically documented and verified.

Support for Higher Studies

The Institute supports students aspiring for higher education through:

- Guidance for **GATE, postgraduate studies, and research opportunities**
- Faculty mentoring for **exam preparation strategies and academic planning**
- Recommendation and academic support for students pursuing higher studies

Outcome and Effectiveness

The integrated training and placement ecosystem has resulted in:

- Improved employability skills among students
- Increased participation in placement and internship activities
- Better career clarity and preparedness
- Positive placement outcomes and higher study enrollments

Overall, the Institute ensures that **training, placement, career guidance, industry interaction, and higher study support** are **well-planned, documented, and effective**, contributing to holistic student development and career success.

9.5 Start-up and Entrepreneurship Activities (5)

The Institute has taken structured initiatives to promote **innovation, entrepreneurship, start-up culture, and incubation activities** among students by establishing a **Startup Cell** in coordination with the **Department of Industries, Government of Bihar**. The initiatives are aimed at nurturing innovative ideas, providing mentorship, and guiding students towards entrepreneurial ventures.

Startup Cell and Institutional Support

- A **Startup Cell** has been formally constituted at the Institute level with **Faculty-in-Charge, Coordinator, and Student Coordinators** duly appointed through institute orders.
- The Startup Cell functions under government guidelines and is aligned with the **Bihar Start-up Policy 2022**, ensuring institutional linkage with state-level entrepreneurship support mechanisms.
- The Institute initiated the process for engagement of a **Startup Expert** sponsored by the Department of Industries, Government of Bihar, to provide professional mentoring, idea nurturing, prototype development, and networking support to students

Facilities Created and Utilization

- **Dedicated Startup Cell framework** for coordination of innovation and entrepreneurship activities.
- **Regular meetings** of the Startup Cell with documented notices, agendas, minutes of meetings, and action points.
- **Interaction with industry and government officials**, including meetings with District Nodal Officers of the Industry Department.
- **Guest lectures and interaction sessions** with local entrepreneurs and experts.
- **Local industry visits** and exposure activities for students.
- Structured **monthly activity plans**, including intra-college and inter-college innovation events, idea pitching sessions, and student interactions

Student Engagement and Capacity Building

- Students are actively involved through:
 - Startup awareness programs
 - Innovation and idea development sessions
 - Mentoring support by faculty and coordinators
- **Student coordinators** are nominated to facilitate peer engagement and effective implementation of startup activities.
- The Startup Cell encourages students to convert innovative ideas into feasible start-up proposals through continuous guidance and review.

Effectiveness of the Initiatives

The effectiveness of these initiatives is reflected through:

- Active student participation in Startup Cell activities
- Regular conduct of meetings, planning, and review mechanisms
- Increased awareness of entrepreneurship and start-up opportunities among students
- Structured mentoring and handholding support for innovation-driven ideas

These initiatives have helped create a **conducive ecosystem for innovation and entrepreneurship** within the campus.

List of Beneficiaries

The primary beneficiaries include:

- **Students participating in Startup Cell activities**, innovation sessions, and entrepreneurship programs
- **Student Coordinators** appointed for Startup Cell operations

- Students receiving mentoring, exposure visits, and guidance for start-up idea development

Outcome and Impact

- Enhanced entrepreneurial awareness and mindset among students
- Improved exposure to start-up ecosystems and government support schemes
- Strengthened institute–industry–government linkage
- Promotion of innovation-driven learning and self-employment orientation

Overall, the Institute has established a **systematic and documented mechanism** to encourage **innovation, entrepreneurship, incubation, and start-up activities**, aligned with NBA requirements and state start-up policies.

9.6 Governance and Transparency (25)

9.6.1 Governing Body, Administrative Setup, Functions of Various Bodies, Service Rules, Recruitment procedures and Promotion Policies (10)

Institute Marks : 10.00

The Institute has established a robust governance and administrative framework through duly constituted statutory and non-statutory committees in accordance with applicable government regulations, affiliating university statutes, and AICTE/NBA guidelines. These committees ensure transparent decision-making, academic quality, grievance redressal, inclusivity, and institutional accountability.

Statutory and Key Administrative Committees

The following committees are in place and functional:

- **Governing Body**

The apex policy-making body responsible for strategic planning, institutional development, financial oversight, and compliance with statutory norms.

- **Executive Committee**

Responsible for academic planning and monitoring, curriculum implementation, academic regulations, examination reforms, and quality enhancement.

- **Internal Quality Assurance Cell (IQAC)**

Ensures continuous quality improvement in academic and administrative processes through periodic reviews, audits, feedback analysis, and action plans.

- **Grievance Redressal Committee (GRC)**

Addresses grievances related to academic, administrative, and institutional matters of students and staff in a transparent and time-bound manner.

- **Anti-Ragging Committee and Anti-Ragging Squad**

Formed as per UGC/AICTE norms to ensure a ragging-free campus environment, with preventive measures and awareness programs.

- **Internal Complaints Committee (ICC)**

Also known as the Women Harassment Mitigation Committee, constituted as per the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, ensuring a safe and dignified work environment.

- **Disciplinary Committee**

Responsible for maintaining discipline and addressing misconduct issues among students and staff.

Committee Constitution, Approval, and Documentation

- All committees are formally constituted through institute/government orders, duly approved by the competent authority.
- Details of committee members, including Chairperson, internal and external members (where applicable), are documented and notified.
- Meeting records are systematically maintained, including:
 - Meeting notices
 - Agenda
 - Attendance
 - Minutes of meetings
 - Action Taken Reports (ATR)

Meetings and Monitoring

- Committees meet periodically or as required, depending on their functional mandate.
- Decisions and recommendations are implemented through documented action plans, and compliance is reviewed in subsequent meetings.

Service Rules, Policies, and Procedures

All policies are documented, approved by the competent authority, and published/implemented in the respective year of adoption. Updates and amendments are carried out as per regulatory requirements.

Outcome and Impact

The effective functioning of statutory and non-statutory committees has resulted in:

- Transparent and participative governance
- Improved academic and administrative quality
- Safe, inclusive, and grievance-free campus environment
- Compliance with regulatory and accreditation requirements

Overall, the Institute ensures that its governance structure is well-defined, documented, functional, and continuously monitored to support institutional excellence and stakeholder satisfaction.

1. Governing Body

The governing body of Purnea College of Engineering is the Institute Development Society, Purnea College of Engineering, Purnea, registered on 21 August 2024 under Registration No. S000185.

2. Administrative set-up and functions of various bodies

3. Functions of Key Administrative Positions

Table 9.6.1 Summary of administrative position works

Position	Functions
Institute Development Society	◦ Frame directive principles and policies ◦ Amend and approve policies from time to time ◦ Approve budgets
Executive Committee	◦ Implement policies approved by the Society ◦ Review institutional progress and performance ◦ Recommend administrative and financial decisions ◦ Monitor execution of development plans
Principal	◦ Design & define organization structure ◦ Define & delegate responsibilities of various positions in the organization ◦ Ensure periodic monitoring & evaluation, of various processes ◦ Ensure effective purchase procedure ◦ Define quality policy and objectives ◦ Overlook and approve annual budget ◦ Conduct periodic meeting of various Bodies/Committee ◦ Manage accounts and finance ◦ Employee recruitment (Guest) ◦ Overlook Office Administration ◦ Compliance with AICTE & Bihar Engineering University ◦ Student Admission ◦ Resource Generation ◦ Internal and external examination ◦ Library Upgradation
Head of Departments	◦ Plan and execute academic activities of the department ◦ Maintain discipline and culture in the department ◦ Maintain the department neat and clean ◦ Promote strengths of students / faculty / staff ◦ Monitor academic activities of the department ◦ Propose department Budget ◦ Maintain records of departmental activities and Achievements
Bursar	➤ Supervise financial transactions ➤ Assist in budget implementation ➤ Maintain financial discipline
Accountant	➤ Maintain accounts and financial records ➤ Prepare bills, vouchers, and reports ➤ Assist audits and compliance
Professor In-Charge Academic	➤ Coordinate academic schedules ➤ Monitor curriculum implementation ➤ Assist Principal in academic planning
Controller of Examination	➤ Conduct internal/external examinations ➤ Maintain exam confidentiality ➤ Maintain results and records
Assistant Controller of Examination	➤ Assist exam conduct and logistics ➤ Maintain records and documentation
OSD to Principal	➤ Assist Principal in special assignments ➤ Coordinate official communication ➤ Support administrative decisions
Training & Placement Officer	➤ Liaison with industry ➤ Arrange training & campus placements ➤ Maintain placement records

Assistant Training & Placement Officer	➤ Support training programs ➤ Maintain documentation ➤ Assist coordination with recruiters
Librarian	➤ Maintain discipline and resources ➤ Plan expansion & development ➤ Prepare annual budget
Assistant Librarian	➤ Support library operations ➤ Maintain catalogues and issue records
Chief Warden	➤ Overall hostel supervision ➤ Ensure discipline and welfare
Warden	➤ Day-to-day hostel management ➤ Address student issues
Supervisor (Hostel)	➤ Monitor hostel maintenance ➤ Ensure facilities function properly
Caretaker	➤ Maintain hostel property ➤ Support basic upkeep
Professor In-Charge Store	➤ Supervise store management ➤ Approve procurement planning
Store Keeper	➤ Maintain inventory ➤ Record issue/receipt of materials
Non-Teaching Staff (Lab Technician & Attendant)	➤ Maintain laboratory equipment ➤ Assist in practical sessions ➤ Ensure safety and upkeep of labs
Head Clerk	➤ Supervise clerical staff ➤ Maintain office documentation ➤ Coordinate administrative workflow
Senior & Junior Clerks (All Sections)	➤ Maintain records/files ➤ Data entry & correspondence ➤ Assist section heads

4. Define rules, procedures, recruitment and promotional policies, etc...

Rules and Regulation: As per Department of Science Technology and Technical Education (DSTTE), Bihar.

Recruitment Process: As per Department of Science Technology and Technical Education (DSTTE), Bihar.

5. Decentralization in working and grievance redressal mechanism

The following faculty members have been delegated with powers for taking administrative decisions.

Table 9.6.2 List of Faculty on administrative position

SI No.	Name	Designation	Duty Assigned
REGISTRAR SECTION (ACADEMIC + ADMISSION)			
1	Mr. Manoj Kumar Rajak	Assistant Professor (EE)	Registrar
2	Mr. Piyush	Assistant Professor (EE)	Assistant Registrar
3	Mr. Anupam Kr. Jha	Assistant Professor (ECE)	Professor In Charge Academic
HEAD OF DEPARTMENT			
1	Dr. Ajay Kumar	Assistant Professor (EE)	HOD, EE
2	Mr. Saurabh Kumar	Assistant Professor (EE)	HOD, CE
3	Mr. Md. Saquib Akhtar	Assistant Professor (EE)	HOD, ME & Mechatronics

4	Mr. Md. Iftekhar Alam	Assistant Professor (EE)	HOD ECE
5	Mr. Raju Kumar	Assistant Professor (EE)	HOD CSE & CSE-AI
EXAMINATION SECTION			
1	Dr. Praveen Kumar	Assistant Professor (ECE)	COE
2	Dr. Santosh Kumar	Assistant Professor (CE)	Assistant COE
LIBRARY			
1	Mr. Ratnesh Kumar	Assistant Professor (ME)	Professor In Charge
2	Mr. Anupam Kr. Jha	Assistant Professor (ECE)	Assistant Professor In Charge
PURCHASE SECTION			
1	Mr. Saurabh Dwivedi	Assistant Professor (CE)	Purchase Officer
HOSTEL			
1	Dr. Mohit Kumar	Assistant Professor (ECE)	Chief Warden
2	Dr. Md. Shahbaz Akhtar	Assistant Professor (ECE)	Warden (C V Raman Hall of Residence)
3	Dr. Shwetambra	Assistant Professor (AS&H)	Warden (Mother Teresa Hall of Residence)
4	Mr. Ranjan Kumar	Assistant Professor (ECE)	Warden (APJ Abdul Kalam Hall of Residence)
5	Mr. Piyush	Assistant Professor (ECE)	Joint Warden (Boys Hostel)
6	Mr. Abhimanyu Kumar	Assistant Professor (ECE)	Joint Warden (Boys Hostel)
7	Mr. Anupam Kumar Jha	Assistant Professor (ECE)	Joint Warden (Boys Hostel)
8	Mrs. Nishigandha Anupam	Assistant Professor (ECE)	Joint Warden (Girls Hostel)
9	Mrs. Priyanka rani	Assistant Professor (ECE)	Joint Warden (Girls Hostel)
CARETAKING & EMS			
1	Mr. Ratnesh Kumar	Assistant Professor (ME)	Campus In Charge
2	Dr. Manoj Kumar	Assistant Professor (AS&H)	Assistant Campus In Charge
3	Md. Amzad Ali	Assistant Professor (ECE)	Professor In Charge EMS
TRAINING AND PLACEMENT OFFICE			
1	Dr. Manoj Kumar	Principal	Chairman
2	General Manager	Industry Department, Purnea	Member
3	Labour Superintendent	Labour Resources Department, Purnea	Member
4	District Planning Officer	Bihar Government, Purnea	Member
5	Mr. Saurabh Dwivedi	Assistant Professor (CE)	Member Secretary (Training & Placement Officer)
6	Mr. Amit Madhukar	Assistant Professor (CE)	Member (Assistant Training & Placement Officer)
7	Mr. Md. Iftekhar Alam	Assistant Professor (ECE)	Member
8	Mr. Md. Saquib Akhtar	Assistant Professor (ME)	Member
9	Mr. Manoj Kr. Rajak	Assistant Professor (EE)	Member
10	Mr. Raju Kumar	Assistant Professor (CSE)	Member
11	Dr. Manoj Kumar	Assistant Professor (AS&H)	Member
12	Ms. Shalini Kumari	Student Representative	Member
WEB-SITE SECTION			
1	Mr. Raju Kumar	Assistant Professor (CSE)	Professor In charge
ACCOUNT SECTION			
1	Mr. Ratnesh Kumar	Assistant Professor (ME)	Bursar
2	Mr. Saurabh Dwivedi	Assistant Professor (CE)	Professor In charge GEM
PUBLIC INFORMATION CELL			
1	Mr. Saurabh Dwivedi	Assistant Professor (CE)	Public Information Officer
INSTITUTION INDUSTRY CELL			
1	Mr. Saurabh Kumar	Assistant Professor (CE)	Chairman

2	Mr. Md. Iftekhar Alam	Assistant Professor (ECE)	Member
3	Mr. Md. Saquib Akhtar	Assistant Professor (ME)	Member
4	Mr. Manoj Kr. Rajak	Assistant Professor (EE)	Member
5	Mr. Raju Kumar	Assistant Professor (CSE)	Member
6	Dr. Manoj Kumar	Assistant Professor (AS&H)	Member
7	Mr. Amit Madhukar	Assistant Professor (CE)	Member Secretary
INNOVATION CLUB CELL			
1	Dr. Manoj Kumar	Principal	Chairman
2	Mr. Saurabh Kumar	Assistant Professor (CE)	Member
3	Mr. Md. Iftekhar Alam	Assistant Professor (ECE)	Member
4	Dr. Mohit Kumar	Assistant Professor (ECE)	Member
5	Dr. Parimal Sah	Assistant Professor (ECE)	Member
6	Mr. Ahad Noor	Assistant Professor (ME)	Member
7	Mr. Raju Kumar	Assistant Professor (CSE)	Member
8	Mrs. Nishi gandha Anupam	Assistant Professor (EE)	Member
9	Mr. Tabish Shanu	Assistant Professor (EE)	Member Secretary
STARTUP CELL			
1	Dr. Parimal Sah	Assistant Professor (ECE)	Startup Coordinator
ANTI-RAGGING COMMITTEE			
1	Dr. Manoj Kumar	Principal	Chairman
2		District Magistrate Purnea	Member
3		Superintendent of Police Purnea	Member
4	Mr. Anupam Kr. Jha	Dean (Academic)	Member
5	Mr. Manoj Kr. Rajak	Registrar	Member
6	Dr. Mohit kumar	Chief Warden	Member
7	Mr. Raju Kumar	HOD (CSE)	Member
8	Md. Iftekhar Alam	HOD (ECE)	Member
9	Md. Saquib Akhtar	HOD (ME)	Member
10	Dr. Ajay Kumar	HOD (EE)	Member
11	Mr. Saurabh Kumar	HOD (CE)	Member
12	Mr. Ranjan Kumar	Hostel Superintendent (APJ)	Member
13	Dr. Shahbaz Akhtar	Hostel Superintendent (CVR)	Member
14	Dr. Shwetambra	Hostel Superintendent (MTHR)	Member
15	Mr. Rajeev Ranjan	Hindustan Paper	Member
16	Mr. Deepak Kumar	Dainik Jagran	Member
17	Mr. Ravi Kumar	Assistant Professor (CSE)	Member Secretary
NATIONAL BOARD OF ACCREDITATION			
1	Dr. Mohit kumar	Assistant Professor (ECE)	Institute Coordinator
2	Dr. Parimal Sah	Assistant Professor (ECE)	Departmental Coordinator
3	Mr. Ahad Noor	Assistant Professor (ME)	Departmental Coordinator
4	Mr. Amit Madhukar	Assistant Professor (CE)	Departmental Coordinator
5	Mrs. Rahat Yezdani	Assistant Professor (CSE)	Departmental Coordinator
6	Mr. Tabish Shanu	Assistant Professor (EE)	Departmental Coordinator
7	Mr. Amit Ranjan	Assistant Professor (AS&H)	Departmental Coordinator
GRIEVANCE REDRESSAL COMMITTEE			
1	Dr. Manoj Kumar	Principal	Chairman
2	Mr. Piyush	Assistant Professor (EE)	Member
3	Mrs. Payal Priya	Assistant Professor (ME)	Member
4	Mr. Amit Ranjan	Assistant Professor (AS&H)	Member
5	Mrs. Shubhlaxmi	Assistant Professor (CSE)	Member Secretary

SCHEDULED CASTE / SCHEDULED TRIBE COMMITTEE			
1	Dr. Manoj Kumar	Principal	Chairman
2	Mr. Ranjan Kumar	Assistant Professor (ECE)	Member
3	Mr. Ajay Kumar	Assistant Professor (EE)	Member
4	Dr. Uttam Kumar	Assistant Professor (AS&H)	Member
5	Mrs. Priyanka Rani	Assistant Professor (EE)	Member
6	Mrs. Payal Priya	Assistant Professor (ME)	Member
7	Mr. Manoj Kumar Rajak	Assistant Professor (EE)	Member Secretary
INTERNAL COMMITTEE			
1	Dr. Manoj Kumar	Principal	Chairman
2	Mr. Piyush	Assistant Professor (EE)	Member
3	Mrs. Shubhlaxmi	Assistant Professor (CSE)	Member
4	Mr. Ravi Kumar	Assistant Professor (CSE)	Member
5	Dr. Shwetambra	Assistant Professor (AS&H)	Member
6	Mr. Tapan Kumar	Assistant Professor (CSE)	Member
7	Mr. Amit Madhukar	Assistant Professor (CE)	Member
8	Mr. Ranjan Kumar	Assistant Professor (ECE)	Member
9	Mrs. Payal Priya	Assistant Professor (ME)	Member Secretary
INSTITUTE QUALITY ASSURANCE CELL			
1	Dr. Manoj Kumar	Principal	Chairman
2	Mr. Manoj Kumar Rajak	Registrar	Member
3	Mr. Raju Kumar	HOD (CSE)	Member
4	Md. Iftekhar Alam	HOD (ECE)	Member
5	Md. Saquib Akhtar	HOD (ME)	Member
6	Mr. Saurabh Kumar	HOD (CE)	Member
7	Dr. Manoj Kumar	HOD (AS&H)	Member
8	Mr. Uday Kumar	Assistant Professor (ME)	Coordinator

6. Delegation of financial power

- Financial powers are delegated to Principal.
- The heads of the department prepare the budget for each year based on the requirement of lab equipment's, consumables, furniture, books and journals, organization/deputation of conferences, seminars, workshops, guest lecturers, and industrial visits, which in turn is forwarded by the Principal to the management for approval.

9.6.2 Transparency (5)

Institute Marks : 5.00

The Institute ensures transparency, accountability, and stakeholder awareness by systematically documenting and disseminating information related to policies, rules, processes, and delegation of financial and administrative powers through its official website and institutional communication mechanisms.

Dissemination through Institute Website

To ensure easy accessibility, the Institute makes relevant information available on its official website, including:

- Institutional policies, rules, and procedures
- Delegation of financial and administrative powers
- Composition of statutory and non-statutory committees
- Agendas and minutes of meetings of the Governing Body
- Academic calendars, notices, circulars, and important announcements

This online dissemination promotes openness and informed participation by all stakeholders.

Additional Communication Channels

In addition to the website, information is disseminated through:

- Orientation programs for newly admitted students and newly appointed faculty
- Faculty and staff meetings
- Departmental notice boards and circulars
- Emails and official digital communication platforms

Awareness among Stakeholders

The extent of awareness among stakeholders is high, as evidenced by:

- Faculty members actively following institutional policies in academic and administrative functioning
- Students being aware of academic regulations, examination rules, grievance redressal mechanisms, and support systems
- Regular participation of stakeholders in academic councils, committee activities, and feedback processes

Feedback received from faculty, students, and staff indicates adequate awareness and understanding of institutional policies and governance processes.

Outcome and Impact

The systematic dissemination of governance-related information has resulted in:

- Enhanced transparency and trust among stakeholders
- Improved compliance with institutional policies and procedures
- Informed decision-making and participative governance

Overall, the Institute ensures that policies, governance information, and decision-making records are publicly available and widely disseminated, fostering transparency, accountability, and stakeholder engagement in line with NBA requirements.

9.7 Budget Allocation, Utilization, and Public Accounting at Institute Level (12)

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3

CFY : (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY 2024-2025

Total Income 121342541				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
3905000	117437541	0	0	98280239	1305	75310.53

Table 2 - CFYm1 2023-2024

Total Income 121449160				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
2165000	119284160	0	0	114206225	1254	91073.54

Table 3 - CFYm2 2022-2023

Total Income 127470303				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
3402500	124067803	0	0	121644483	1204	101033.62

Table 4 - CFYm3 2021-2022

Total Income 87259240				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
975000	86284240	0	0	80160817	1135	70626.27

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Infrastructure Built-Up	0	0	0	0	0	0	0	0
Library	120000C	120000C	100000C	100000C	100000C	100000C	100000C	100000C
Laboratory equipment	257000C	251000C	168812C	167812C	3823935	3823757	198030C	197629C
Teaching and non-teaching stal	769980C	6588106	772900C	7465017	478062C	465798C	2992117	274962C
Outreach Programs	0	0	0	0	0	0	0	0
R&D	0	0	501880C	501880C	0	0	319700C	319700C
Training, Placement and Indust	720000	19000	433000	490000	680500	21000	195000	18000
SDGs	372000	372000	372000	372000	764000	764000	0	0
Entrepreneurship	226407	226407	483523	483523	151406	151406	0	0
Others, specify	0	0	0	0	0	0	0	0
Total	105216407	92798468	101478523	98795696	88641461	86753790	54116175	51474110

9.8 Program Specific Budget Allocation, Utilization (8)

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3

CFY: (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY 2024-2025

Total Budget 5495000		Actual expenditure (till...): 5495000		Total No. Of Students 185
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
8000000	5495000	5495000	100	29702.70

Table 2 :: CFYm1 2023-2024

Total Budget 23856832		Actual expenditure (till...): 22663990		Total No. Of Students 165
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
24000000	23856832	22663990	95	137357.52

Table 3 :: CFYm2 2022-2023

Total Budget 25658548		Actual expenditure (till...): 24119035		Total No. Of Students 175
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
26000000	25658548	24119035	94	137823.06

Table 4 :: CFYm3 2021-2022

Total Budget 17038425		Actual expenditure (till...): 15845735		Total No. Of Students 175
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
20000000	17038425	15845735	93	90547.06

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Laboratory equipment	5500000	5500000	0	0	6500000	6500000	5800000	5800000
Software	0	0	1000000	1000000	1000000	1000000	0	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty developmen	0	0	0	0	0	0	0	0
R & D	0	0	0	0	0	0	1208000	1208000
Industrial Training, Industry exp	0	0	0	0	0	0	0	0
Miscellaneous Expenses*	0	0	0	0	0	0	0	0
Total	5500000	5500000	1000000	1000000	7500000	7500000	7008000	7008000

9.9 Quality of Learning Resources (Hard/Soft) (5)

The Institute provides **adequate and diversified learning resources** to support curriculum delivery, academic enrichment, research, and self-learning. These resources are continuously augmented to meet program requirements and student needs.

Library and Print Learning Resources

The Central Library houses a **sufficient collection of textbooks, reference books, and titles** relevant to all programs offered by the Institute. Books are procured as per syllabus requirements, student strength, and faculty recommendations.

Library services include:

- Issue/return and reference services
- Reading spaces for individual and group study
- Extended access during examinations and academic activities

E-Resources (Books and Journals)

To support digital and self-paced learning, the Institute provides access to:

- **E-books and e-journals** through library-supported digital platforms
- **Open-access scholarly resources**, research repositories, and academic databases
- **MOOC platforms** such as NPTEL and SWAYAM for course enrichment and certification

These e-resources enable students to access updated knowledge, research publications, and learning materials beyond classroom instruction.

Accessibility of Learning Resources

- Library and e-resources are **accessible to all students and faculty members** during working hours and extended academic schedules.
- Computer labs and campus internet facilities enable students to **access e-resources, online journals, and digital learning platforms**.
- Faculty members guide students in identifying relevant books, journals, and online materials for coursework and projects.

Support for Student Self-Learning

The Institute actively promotes self-learning through:

- **Blended learning practices**, integrating classroom teaching with online content
- **MOOC encouragement and certification support** for advanced and interested learners
- **Project-based learning, seminars, assignments, and presentations** to develop independent learning skills
- **Faculty mentoring**, where students receive guidance for academic improvement, competitive exams, research activities, and skill development
- **Remedial and enrichment sessions** for slow and advanced learners based on performance analysis

Outcome and Impact

These learning resources and self-learning support systems have resulted in:

- Enhanced student engagement and independent learning ability
- Improved academic performance and conceptual understanding
- Greater exposure to contemporary knowledge and research trends

Overall, the Institute ensures **equitable access to learning resources** and a supportive academic environment that fosters **self-learning, lifelong learning, and academic excellence**.

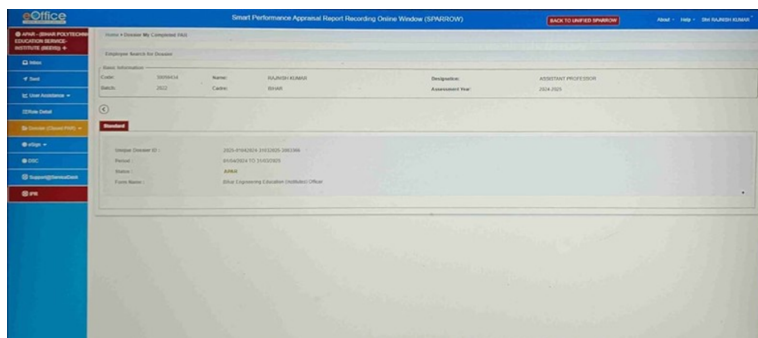
9.10 E-Governance (5)

The Institute has implemented **e-governance systems, sustainable academic practices, and campus-wide computing infrastructure** to enhance transparency, efficiency, accessibility, and quality in academic and administrative processes. These initiatives support effective teaching-learning, research, and professional development for both students and faculty.

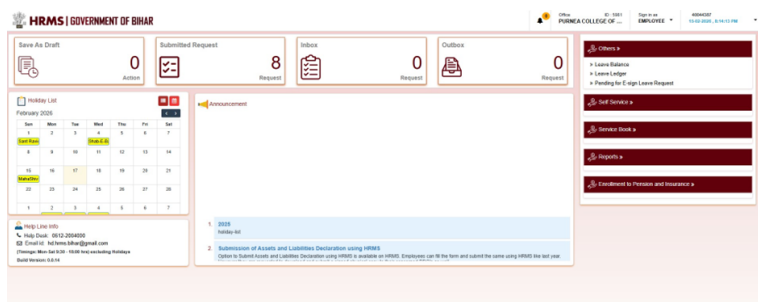
E-Governance Initiatives

The Institute adopts e-governance mechanisms across key functional areas:

- **Academic Administration:** Online management of academic records, course files, lesson plans, attendance, assessment data, and result processing.
- **Faculty Appraisal:** Faculty self-appraisal and performance evaluation through the **SPARROW/e-PAR system**, ensuring transparency and objective assessment.



- **Student Services:** Digital dissemination of notices, academic calendars, timetables, and examination information through institutional online platforms.
- **Administrative Processes:** Online correspondence, record keeping, and documentation, reducing manual intervention and enhancing efficiency.



Sustainable Practices in Academic and Learning Management

To promote sustainability and eco-friendly operations, the Institute follows:

- **Paper-less Academic Processes:** Digital course files, e-content, internal assessment records, and feedback collection.
- **Blended Learning Approach:** Integration of classroom teaching with online resources such as **MOOCs (NPTEL, SWAYAM)** and digital learning materials.
- **Energy and Resource Conservation:** Optimal use of computing resources, energy-efficient equipment, and awareness programs on sustainable practices.

Campus-Wide Computing Resources

The Institute provides adequate and reliable computing facilities to support academic and professional activities:

- **Computer Laboratories:** Well-equipped computer labs with updated hardware and licensed software relevant to various programs.
- **Internet and Network Connectivity:** Campus-wide internet access supporting academic research, online learning, and administrative work.
- **Digital Learning Facilities:** Smart classrooms, multimedia projectors, and audio-visual teaching aids to enhance instructional delivery.
- **Library Digital Resources:** Access to e-books, e-journals, and online academic databases through the central library.

Accessibility and Availability

- Computing and internet facilities are **accessible to students and faculty during working hours** and extended academic sessions.
- Faculty members utilize computing resources for **teaching preparation, research, FDPs, MOOCs, publications, and consultancy work**.

- Students use facilities for **academic learning, projects, innovation activities, competitive exam preparation, and skill development.**

Outcome and Impact

These initiatives have resulted in:

- Improved administrative efficiency and transparency
- Enhanced digital literacy among students and faculty
- Sustainable and eco-friendly academic practices
- Better academic support, research facilitation, and professional growth

Overall, the Institute ensures that **e-governance, sustainability, and computing infrastructure** are effectively integrated and continuously upgraded to support quality education and institutional excellence.

9.11 Initiatives and Implementation of Sustainable Development Goals (SDGs) (10)

The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 under the **2030 Agenda for Sustainable Development**. India is committed to achieving these 17 goals through national policies, state-level action plans, and institutional participation.

Purnea Colleges of Engineering is focused on supporting the Government of India's SDG mission by acting as centers of awareness, innovation, and community engagement.

SDG-wise Activities

SDG No.	SDG Title	Various Activities
SDG 1	No Poverty	Scholarships for students, Student Credit Card
SDG 2	Zero Hunger	Startup Cell, Pahal Program, Skill Development Activities
SDG 3	Good Health and Well-being	Doctor availability, Health Centre, Mental Health Workshops, Yoga, Sports, Gym
SDG 4	Quality Education	Regular classes, Faculty Training, Internships, BIPARD Training, PEHAL, GATE mock tests
SDG 5	Gender Equality	Reservation in admission & recruitment, Grievance Cell, LeadHer program, Sports for female faculty & students
SDG 6	Clean Water and Sanitation	RO water system
SDG 7	Affordable and Clean Energy	Rooftop Solar Panel, PNG
SDG 8	Decent Work and Economic Growth	PEHAL, Startup initiatives, Skill Development Programme
SDG 9	Industry, Innovation and Infrastructure	Centre of Excellence, Patent support, Industrial Visits, Internships, Industry Interaction
SDG 10	Reduced Inequalities	Reservation for female faculties and students
SDG 11	Sustainable Cities and Communities	Rainwater system
SDG 12	Responsible Consumption and Production	Rooftop Solar System
SDG 13	Climate Action	Environmental awareness programs, Workshops, Environmental training, Plantation drives
SDG 14	Life Below Water	NA
SDG 15	Life on Land	Green Campus, Nature programs, Plantation
SDG 16	Peace, Justice and Strong Institutions	Anti-Ragging Committee, Grievance Cell, ICC, Disciplinary Committee
SDG 17	Partnerships for the Goals	MOUs, Blood Donation Camps, Faculty Interaction

9.12 Innovative Educational Initiatives and Implementation (5)

The Institute has adopted several **innovative educational initiatives** to enhance teaching–learning effectiveness, promote student engagement, and align academic processes with outcome-based education (OBE). These initiatives focus on experiential learning, digital integration, student mentoring, and continuous quality improvement.

Innovative Teaching–Learning Practices

- **Outcome-Based Education (OBE) Implementation:**
Course outcomes (COs) are clearly defined, mapped with Program Outcomes (POs) and Program Specific Outcomes (PSOs), and assessed using direct and indirect assessment tools to ensure attainment and continuous improvement.
- **Course File and Lab Manual Standardization:**
Faculty members maintain **structured course files and laboratory manuals** for each subject, including lesson plans, CO-PO mapping, assessment rubrics, question banks, and experiment outcomes, ensuring uniformity and academic rigor.
- **Blended and Digital Learning:**
Faculty members integrate **ICT-enabled teaching tools**, online resources, MOOCs (NPTEL, SWAYAM), and digital content to supplement classroom teaching and support self-paced learning.

Experiential and Student-Centric Learning

- **Project-Based and Problem-Based Learning (PBL):**
Students are encouraged to work on real-world problems through mini-projects, major projects, and laboratory-based problem-solving exercises.
- **Hackathons, Codeathons, and Technical Activities:**
Faculty members actively mentor students in hackathons, codeathons, and innovation-based competitions, promoting creativity, teamwork, and practical skill development.
- **Industry and Skill-Oriented Exposure:**
FDPs, STTPs, expert lectures, and workshops are conducted regularly to expose students to emerging technologies and industry practices.

Faculty Innovation and Development

- **Continuous Faculty Development:**
Faculty participation as **resource persons and participants** in FDPs/STTPs is encouraged, ensuring adoption of modern pedagogical methods and updated technical knowledge.
- **Research and Innovation Promotion:**
Faculty members are motivated to engage in research publications, patents, working models, sponsored projects, and consultancy, which are further integrated into teaching practices.

Mentoring and Academic Support

- **Student Mentoring System:**
Faculty mentors provide academic guidance, career counseling, and support for competitive examinations, internships, and innovation activities.
- **Support for Slow and Advanced Learners:**
Remedial classes, additional tutorial sessions, and enrichment activities are conducted based on student performance analysis.

Implementation and Monitoring

- Academic initiatives are **implemented through departmental action plans**.
- Effectiveness is monitored via **student feedback, CO attainment analysis, internal audits, and academic review meetings**.
- Corrective actions are taken for continuous improvement.

Outcome and Impact

These innovative educational initiatives have resulted in:

- Improved student engagement and learning outcomes
- Enhanced practical and problem-solving skills
- Strengthened research and innovation culture
- Better alignment with NBA accreditation requirements

Overall, the Institute ensures that innovative practices are **systematically implemented, monitored, and refined** to achieve academic excellence and holistic student development.

9.13 Faculty Performance Appraisal and Development System (FPADS) (10)

The Institute has a **structured, transparent, and objective Faculty Performance Appraisal and Development System** to evaluate academic, research, professional, and institutional contributions of faculty members. The system is aligned with government norms and institutional quality assurance mechanisms and emphasizes **continuous professional development**.

Performance Appraisal Mechanism

All faculty members undergo **annual self-appraisal through the SPARROW system under e-PAR** for the **Financial Year 2024–2025**. As part of this process, **Criteria-E: ACR maintained at Institute Level (10 Marks)** is implemented to assess measurable academic and professional activities.

Criteria-E: Institute-Level ACR (10 Marks)

Marks under Criteria-E are awarded based on the following verified activities during the financial year:

Activity Area	Key Components
Teaching & Academic Preparation	Course File (mandatory), Lab Manual (mandatory)
Professional Development	Membership in Professional Societies, MOOC certifications (NPTEL/SWAYAM), participation in FDP/STTP (>2 days)
Faculty Contribution	Resource person in FDP/STTP, Coordinator/Co-Coordinator of FDP/STTP
Student Mentoring	Faculty support as Mentor/Facilitator in Hackathon, Codeathon, etc.
Research & Innovation	Paper publications (conference, peer-reviewed journals, Scopus/SCI/SCIE), patents, working models
Sponsored Research & Consultancy	Sponsored projects and consultancy work exceeding ₹1 lakh

Each activity carries **clearly defined marks**, with **maximum annual caps**, ensuring fairness and uniformity in evaluation.

Verification and Approval Process

- Faculty members submit activity details in **prescribed Annexure formats (1–12)**.
- Submissions are **verified and counter-signed** by:
 - Departmental Academic Coordinator
 - Department NBA Coordinator
 - Head of the Department
- Verified appraisal documents are submitted to the Institute for final record and assessment.

Developmental Orientation

The appraisal system is **development-oriented**, encouraging faculty to:

- Improve teaching quality and documentation
- Engage in continuous learning through FDPs, MOOCs, and professional bodies
- Contribute to research, innovation, consultancy, and sponsored projects
- Actively mentor students in technical and innovation-based activities

Outcome and Impact

The Faculty Performance Appraisal and Development System:

- Ensures **objective and evidence-based evaluation**
- Promotes **academic excellence and research culture**
- Aligns faculty growth with **institutional and NBA quality objectives**
- Strengthens accountability, motivation, and continuous improvement

Overall, the system effectively integrates **performance assessment with faculty development**, contributing to the sustained academic and professional growth of the Institute.

S.No.	Activity	Marks for each activity	Maximum Marks in the Financial year
1)	Course File (Mandatory)	2.5 Marks per subject	5
2)	Lab Manual (Mandatory)	1 Marks per subject	2
3)	Membership in Professional Society	0.5 Marks per society	1
4)	Faculty as resource person in STTPs/ FDP	0.5 Marks per STTPs/ FDP	2
5)	Faculty as participant in STTPs/ FDP > 2 days	0.5 Marks per STTPs/ FDP	1
6)	Faculty with MOOCS certificate (NPTEL, SWAYAM etc.)	0.5 Marks per certificate	2

7)	5 Days FDP/ STTP organized	1 Marks for Coordinator 0.5 Marks for Co-coordinator	2
8)	Faculty support as Mentor/ Facilitator in Hackathon , Codeathon etc.	0.5 Marks per group	2
9)	Paper Publication	Conference, Peer reviewed Journals/ Book Chapter – 0.5 Scopus/ SCI/ SCIE Journals – 1 Marks	2
10)	Development Activities	Patent Granted / Published / Working Model – 1 Marks	2
11)	Sponsored Research Project	Amount > 1 Lakh – 1 Marks	2
12)	Consultancy Work	Amount > 1 Lakh – 1 Marks	1

9.14 Outreach Activities (5)

Institute Marks : 5.00

The Institute is actively engaged in **outreach and community development activities** with the objective of promoting social responsibility, inclusive growth, and holistic student development. These activities are aligned with national priorities and institutional social commitment.

Community Service Initiatives

The Institute regularly undertakes community service activities involving faculty members, staff, and students. Major initiatives include:

- **Pahal Classes for Underprivileged Students:**
Under the *Pahal* initiative, the Institute conducts free academic support classes for **underprivileged students from Class VI to Class XII**. At present, **more than 200 students are enrolled** in these classes. Faculty members and student volunteers actively participate in teaching core subjects, mentoring, and motivating students to continue their education, thereby contributing to educational equity and social upliftment.
- **Tree Plantation Drives:**
The Institute organizes regular **tree plantation and environmental awareness programs** within the campus and nearby areas. These drives aim to instill environmental responsibility among students and contribute to ecological sustainability.
- **Blood Donation Camps:**
Blood donation camps are organized periodically in collaboration with local health authorities and voluntary organizations. Faculty, staff, and students actively participate, promoting awareness about voluntary blood donation and supporting community healthcare needs.

Unnat Bharat Abhiyan (UBA)

In line with the objectives of **Unnat Bharat Abhiyan**, the Institute contributes to rural and community development by encouraging students and faculty to engage with local communities. Activities focus on education support, awareness generation, cleanliness, environmental sustainability, and identification of local needs for inclusive development.

Social Internship and Student Participation

Students are encouraged to participate in **social internships and community-oriented activities** as part of experiential learning. Through involvement in teaching initiatives, environmental campaigns, health awareness programs, and social service activities, students develop leadership qualities, empathy, ethical values, and a strong sense of social responsibility.

Outcome and Impact

These outreach activities have resulted in:

- Improved educational access for underprivileged school students
- Enhanced social awareness and civic responsibility among students
- Positive contribution to environmental protection and public health
- Stronger institute–community linkage

Overall, the Institute remains committed to sustained community engagement and social outreach as an integral component of its institutional mission.

Engineering Graduates will be able to:

PO1: Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3: Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4: Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7: Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

(B) PROGRAM SPECIFIC OUTCOME (PSOs)
Program should specify 2-4 program specific outcomes.

PSO1	Identify, analyze, and solve real-life problems by applying the knowledge in Electrical Engineering.
PSO2	Design and develop electrical systems with the help of automation tools to excel in the field of Electrical engineering.
PSO3	Find solutions to the issues faced by society through engineering and technological innovations while upholding professional ethics and social values.

Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes shall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute

Name : Dr. Manoj Kumar

Designation : Professor-cum-Principal (In-Charge)

Signature :



Seal of The Institution :



Place : Purnea

Date : 19-02-2026 16:39:06