PERI INSTITUTE OF TECHNOLOGY

SELF ASSESSMENT REPORT(TIER - II) FOR Electrical & Electronics Engineering

Part A : Institutional Information

1 Name and Address of the Institution

PERI INSTITUTE OF TECHNOLOGY,
PERI INSTITUTE OF TECHNOLOGY NO 1 MANNIVAKKAM WEST TAMBARAM CHENNAI 600048

2 Type of the Institution:

○ Self-Supported Institute	○ Autonomous
○ Deemed University	◉ Non-Autonomous (Affiliated)
○ University	○ Any Other(Please Specify)
○ Institute of National Importance	

3 Year of establishment of the Institution:

2010

4 Ownership Status:

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

5 Name and Address of Affiliating University

ANNA UNIVERSITY

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

Name of Institutions	Year of Establishment	Programs of Study	Location
PERI Institute of Technolog	2010	B.E. B.Tech. M.E.	Mannivakkam, Chennai
PERI College of Physiother	2024	B.P.T	Mannivakkam, Chennai

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	Program for Duration
Power Electronics & Drives	PG	2014	2020	18	Yes	18	Not eligible for accreditation	--	--		2

Sanctioned Intake for Last Five Years for the Power Electronics & Drives	
Academic Year	**Sanctioned Intake**
2024-25	18
2023-24	18
2022-23	18
2021-22	18
2020-21	9
2019-20	18

Electrical & Electronics Engineering	UG	2010	2021	60	Yes	30	Applying first time	--	--		4

Sanctioned Intake for Last Five Years for the Electrical & Electronics Engineering	
Academic Year	**Sanctioned Intake**
2024-25	30
2023-24	30
2022-23	30
2021-22	30
2020-21	60
2019-20	60

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Computer Science and Engineering
2	Under Graduate	Engineering & Technology	Electrical & Electronics Engineering
3	Under Graduate	Engineering & Technology	Electronics & Communication 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	Deparment Name	Number of faculty members in the Department (UG and PG)											
		2024-25 (CAY)				2023-24 (CAYm1)				2022-23 (CAYm2)			
		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. of Assistant Professors	Total faculty members
1	Computer Science and Engineering (UG&PG)	4	11	30	45	4	10	27	41	4	7	25	36
2	Electronics and Communication Engineering (UG&PG)	3	6	14	23	3	6	15	24	4	6	19	29
3	Electrical and Electronics Engineering (UG&PG)	2	2	8	12	2	3	8	13	2	4	9	15
4	Civil Engineering	1	1	8	10	0	1	8	9	1	2	7	10
5	Mechanical Engineering	1	1	8	10	1	2	14	17	1	2	9	12
6	Computer Technology (AIML, CYS, AIDS, CSBS, IT)	2	4	10	16	1	2	6	9	1	1	2	4
7	First Year (Science & Humanities)	2	7	27	36	3	5	23	31	2	3	14	19

10 Total Number of Engineering Students in Various Departments:

ID	Deparment Name	Number of students in the Department (UG and PG)		
		2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)
1	Computer Science and Engineering (UG&PG)	373	369	355
2	Electronics and Communication Engineering (UG&PG)	140	163	156
3	Electrical and Electronics Engineering (UG&PG)	56	82	89
4	Civil Engineering	22	41	48
5	Mechanical Engineering	53	102	139
6	Computer Technology (AIDS, CSBS, IT)	120	32	0
7	First Year (Science & Humanities)	474	279	242

11 Vision of the Institution:

To be an internationally recognized seat of higher learning in Engineering, Technology and Science in future. It also visualizes being a research incubator for academicians, industrialists and researchers from across the country /world

12 Mission of the Institution:

- It strives to provide quality Technical education at an affordable cost.
- Providing state-of-the art infrastructure facilities to achieve excellence in Teaching-Learning, Research and Development.
- Aligning with leading industries to create competent engineers through internships and placement-focused training.
- Create an environment which is conducive to learn skills which will solve pressing issues along with foundation in moral values and ethics.

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

Head of the Institution	
Name	Dr K A SUNDARARAMAN
Designation	PRINCIPAL
Mobile No.	8925995620
Email ID	principal@periit.com

NBA Coordinator, If Designated

Name	Mr. Anil Kumar
Designation	HOD/ Mechanical Engineering
Mobile No.	8973323396
Email ID	hodmech@peri.ac.in

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	OUTCOME-BASED CURRICULUM	120	120.00
2	OUTCOME-BASED TEACHING LEARNING	120	120.00
3	OUTCOME-BASED ASSESSMENT	120	120.00
4	STUDENTS' PERFORMANCE	120	58.59
5	FACULTY INFORMATION	100	100.00
6	FACULTY CONTRIBUTIONS	120	95.00
7	FACILITIES AND TECHNICAL SUPPORT	100	100.00
8	CONTINUOUS IMPROVEMENT	80	80.00
9	STUDENT SUPPORT AND GOVERNANCE	120	115.00
	Total	**1000**	**909**

Part B : Criteria Summary

1 OUTCOME-BASED CURRICULUM (120) Total Marks 120.00

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)

Institute Marks : 5.00

Vision of the institute	To be an internationally recognized seat of higher learning in Engineering, Technology and Science in future. It also visualizes being a research incubator for academicians, industrialists and researchers from across the country /world
Mission of the institute	• It strives to provide quality Technical education at an affordable cost. • Providing state-of-the art infrastructure facilities to achieve excellence in Teaching-Learning, Research and Development. • Aligning with leading industries to create competent engineers through internships and placement-focused training. • Create an environment which is conducive to learn skills which will solve pressing issues along with foundation in moral values and ethics.
Vision of the Department	To become a front-runner in bringing out competent electrical and electronics engineers, innovators, researchers, and entrepreneurs and thereby contribute value to the knowledge-based economy and society.
Mission of the Department	

Mission No.	Mission Statements
M1	To offer good quality Under-Graduate, Post-Graduate and Doctoral programmes in electrical and electronics engineering.
M2	To provide state-of-the-art resources that contribute to achieve excellence in teaching-learning, research and development activities.
M3	To provide suitable forums to enhance the creative talents of students and faculty members.
M4	To enable students to develop skills to solve complex technological problems of current times and also provide a framework for promoting collaborative and multidisciplinary activities with moral values.

1.1.2 State PEOs of the Program (5)

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Find employment in Core Electrical and Electronics Engineering and service sectors.
PEO2	Get elevated to technical lead position and lead the organization competitively.
PEO3	Enter higher studies leading to post-graduate and research degrees. Become consultant and provide solutions to the practical problems of core organization.
PEO4	Become an entrepreneur and be part of electrical and electronics product and service industries.

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

Institute Marks : 15.00

A. Process of Defining Vision, Mission

- The Department Vision and Mission are formulated through a systematic and participative process involving management, administrators and senior professors of the department.
- Brainstorming sessions are conducted to prepare the draft Vision and Mission, considering the Engineering Graduate Attributes and industry requirements.
- The draft is refined based on feedback from employees, alumni, industry experts and parents. We have Studied the formats & mechanism, which is available in public domain of IITs and NITs.
- Necessary modifications are incorporated based on the review, and the final draft is submitted to the Academic Advisory Committee experts for validation.
- After successful validation, the approved Vision and Mission are given wide publicity throughout the institution to ensure awareness among all stakeholders.
- The Vision and Mission are reviewed once every five years to ensure their continued relevance and alignment with institutional goals and industry requirements.

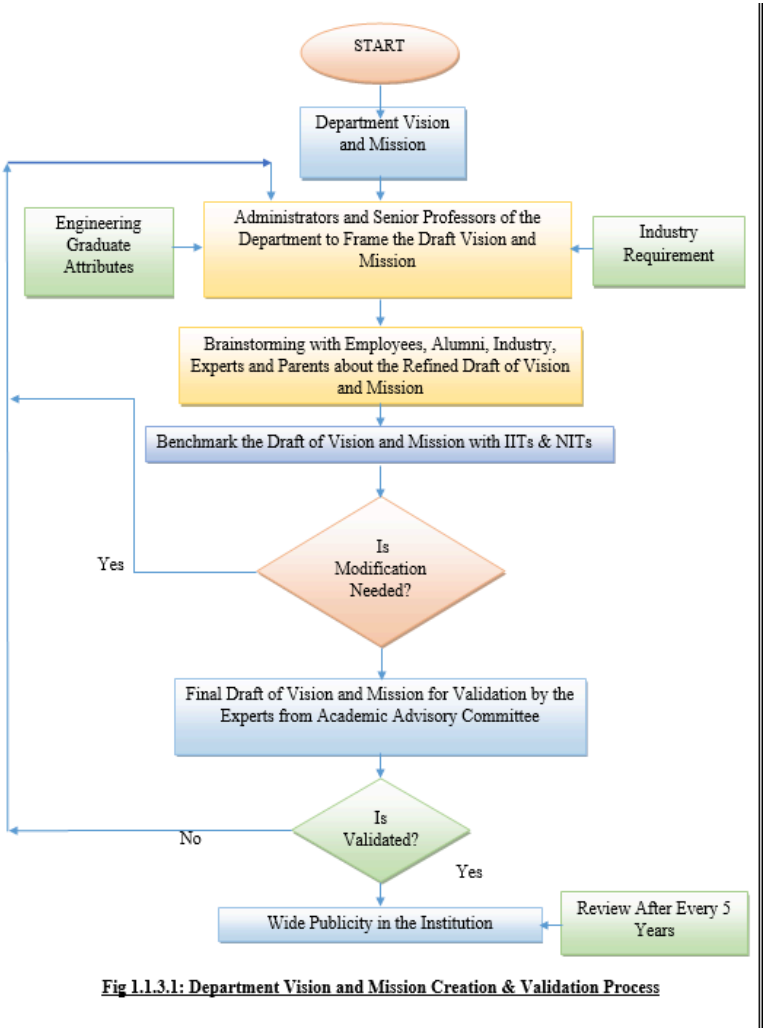


Fig 1.1.3.1: Department Vision and Mission Creation & Validation Process

B. Process of Defining PEOs

- The Program Educational Objectives are formulated using the PEOs described by Anna University through a systematic and participative process involving management, administrators and senior professors of the department.

- Brainstorming sessions are conducted to prepare the draft PEOs, considering the Engineering Graduate Attributes and industry requirements.
- The draft is refined based on feedback from employees, alumni, industry experts and parents. We have Studied the formats & mechanism, which is available in public domain of IITs and NITs.
- Necessary modifications are incorporated based on the review, and the final draft is submitted to the Academic Advisory Committee experts for validation.
- After successful validation, the approved PEOs are given wide publicity throughout the institution to ensure awareness among all stakeholders.
- The PEOs are reviewed once every four years to ensure their continued relevance and alignment with institutional goals and industry requirements.

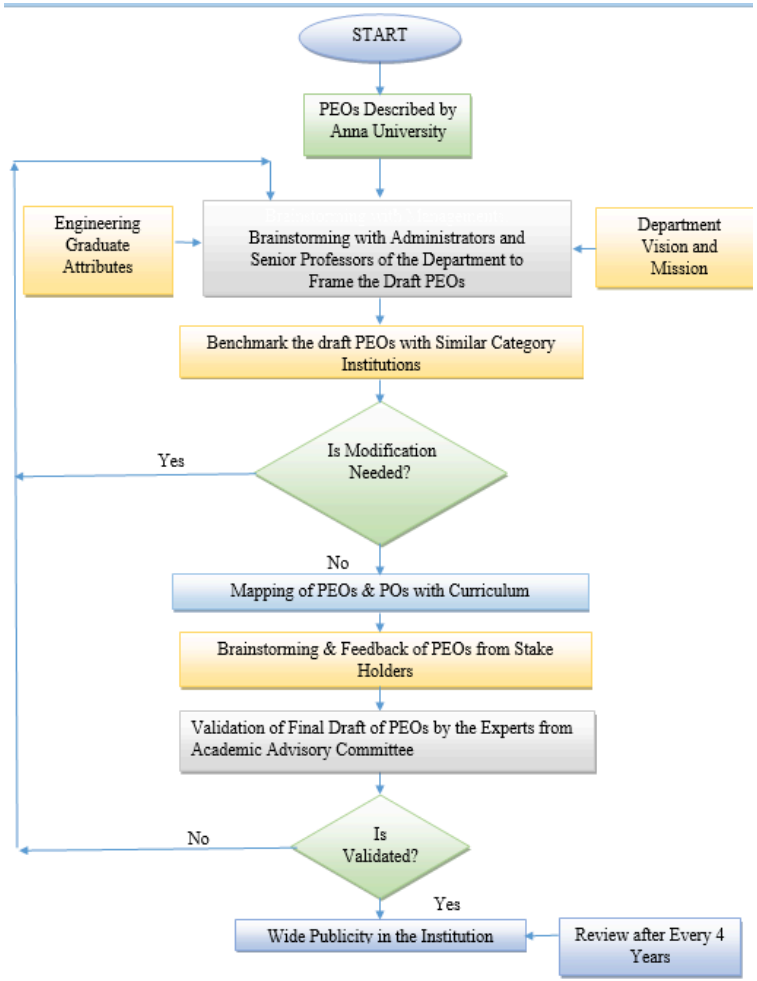


Fig 1.3.1.2: Program Educational Objectives Creation & Validation Process

1.1.4 Dissemination of Vision, Mission and PEOs (5)

Institute Marks : 5.00

1.1.4. Dissemination of Vision, Mission and PEOs

A(i) Vision, Mission and PEOs are adequately published as indicated below

Table 1.1.4.1

S.No	Vision, Mission and PEOs	Published
1.	Institution Website (https://peri.education/periit)	Yes
2.	Institution Prospectus	Yes
3.	Placement Brochure	Yes
4.	Department Magazine	Yes
5.	Department Newsletter	Yes

A(ii). The Vision, Mission and PEOs are disseminated as follows

Table 1.1.4.2

S.No	Vision, Mission and PEOs	Published
1.	Classrooms	Yes
2.	Laboratories	Yes
3.	Staff rooms	Yes
4.	HOD chamber	Yes
5.	Department notice board	Yes
6.	Department Library	Yes
7.	Department Corridor	Yes
8.	Laboratory manuals	Yes
9.	Course File	Yes

B. The awareness of Vision, Mission and PEOs are created among the internal and external stakeholders through:

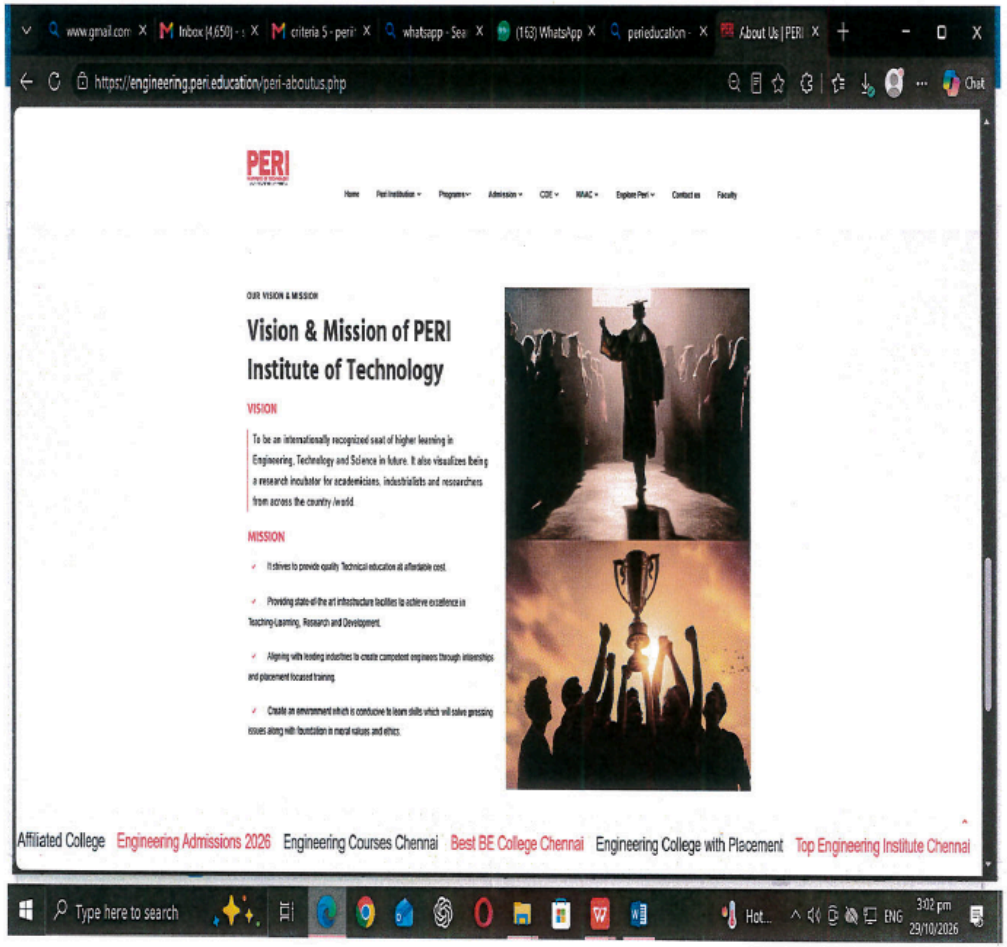
Table 1.1.4.3

S.No	Vision, Mission and PEOs	Published
1.	Induction program for fresher’s	Yes
2.	Semester Induction Program	Yes
3.	Class committee meetings	Yes
4.	Parent teacher meeting	Yes
5.	Placement Conclave	Yes
6.	Alumni meet	Yes

7.	Governing council meeting	Yes

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)



PRINCIPAL

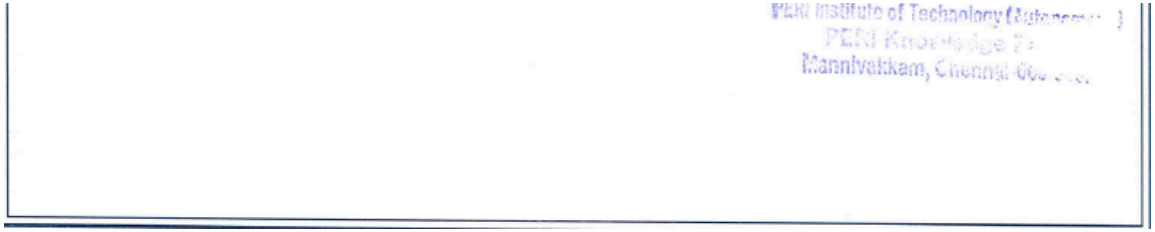
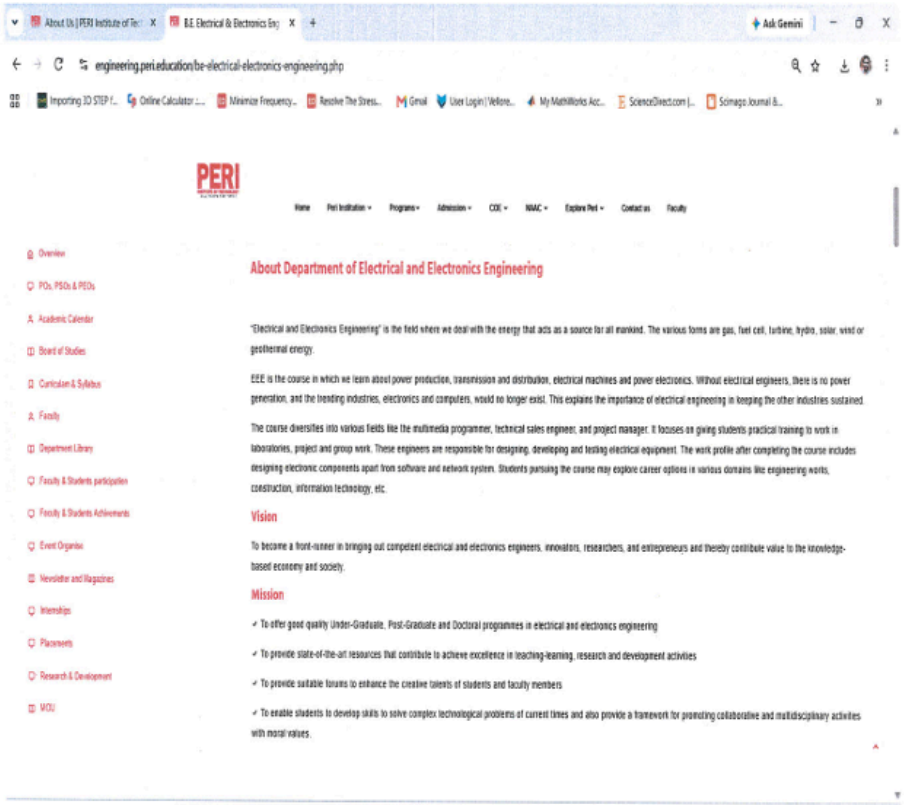


Fig 1.1.4.1 Published on College Website

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)



engineering.peri.education/be-electrical-electronics-engineering.php

PERI

Home | Peri Institution | Programs | Admission | COE | NAAC | Explore Peri | Contact us | Faculty

- Overview
- POs, PSOs & PEOs
- Academic Calendar
- Board of Studies
- Curriculum & Syllabus
- Faculty
- Department Library
- Faculty & Students participation
- Faculty & Students Achievements
- Event Organise
- Newsletter and Magazines
- Internships
- Placements
- Research & Development
- MOU

About Department of Electrical and Electronics Engineering

"Electrical and Electronics Engineering" is the field where we deal with the energy that acts as a source for all mankind. The various forms are gas, fuel cell, turbine, hydro, solar, wind or geothermal energy.

EEE is the course in which we learn about power production, transmission and distribution, electrical machines and power electronics. Without electrical engineers, there is no power generation, and the trending industries, electronics and computers, would no longer exist. This explains the importance of electrical engineering in keeping the other industries sustained.

The course diversifies into various fields like the multimedia programmer, technical sales engineer, and project manager. It focuses on giving students practical training to work in laboratories, project and group work. These engineers are responsible for designing, developing and testing electrical equipment. The work profile after completing the course includes designing electronic components apart from software and network system. Students pursuing the course may explore career options in various domains like engineering works, construction, information technology, etc.

Vision

To become a front-runner in bringing out competent electrical and electronics engineers, innovators, researchers, and entrepreneurs and thereby contribute value to the knowledge-based economy and society.

Mission

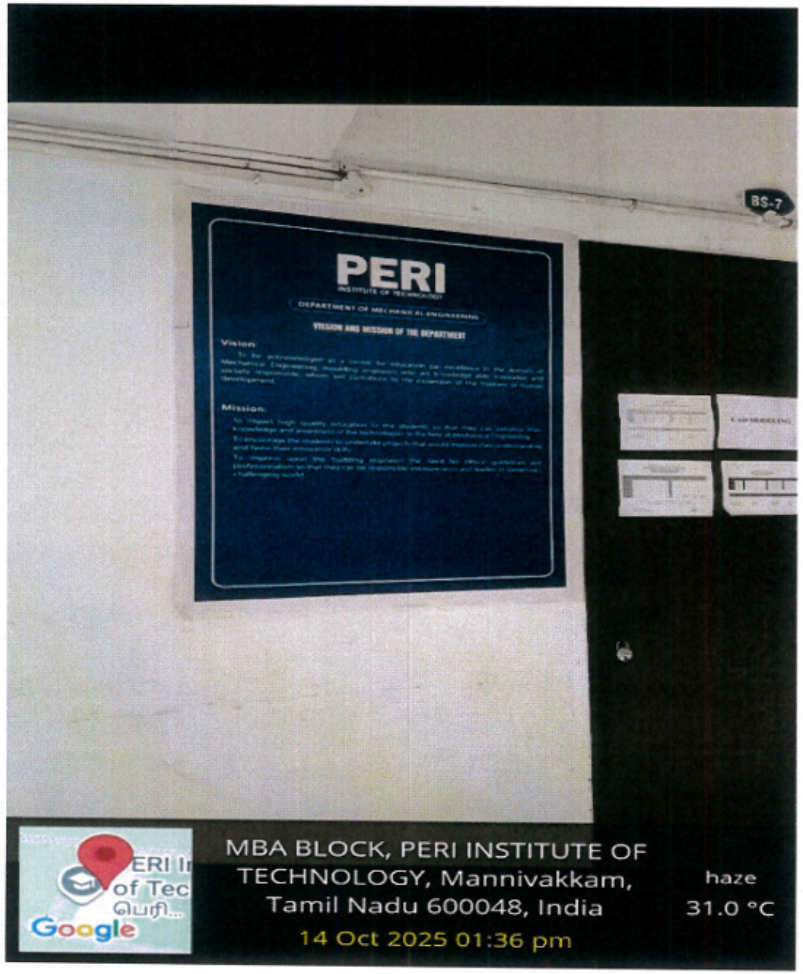
- To offer good quality Under-Graduate, Post-Graduate and Doctoral programmes in electrical and electronics engineering
- To provide state-of-the-art resources that contribute to achieve excellence in teaching-learning, research and development activities
- To provide suitable forums to enhance the creative talents of students and faculty members
- To enable students to develop skills to solve complex technological problems of current times and also provide a framework for promoting collaborative and multidisciplinary activities with moral values.

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 [illegible].

Fig 1.1.4.2 Published on College Website

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)



PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.



Fig 1.1.4.1.a Displayed in Corridor

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)



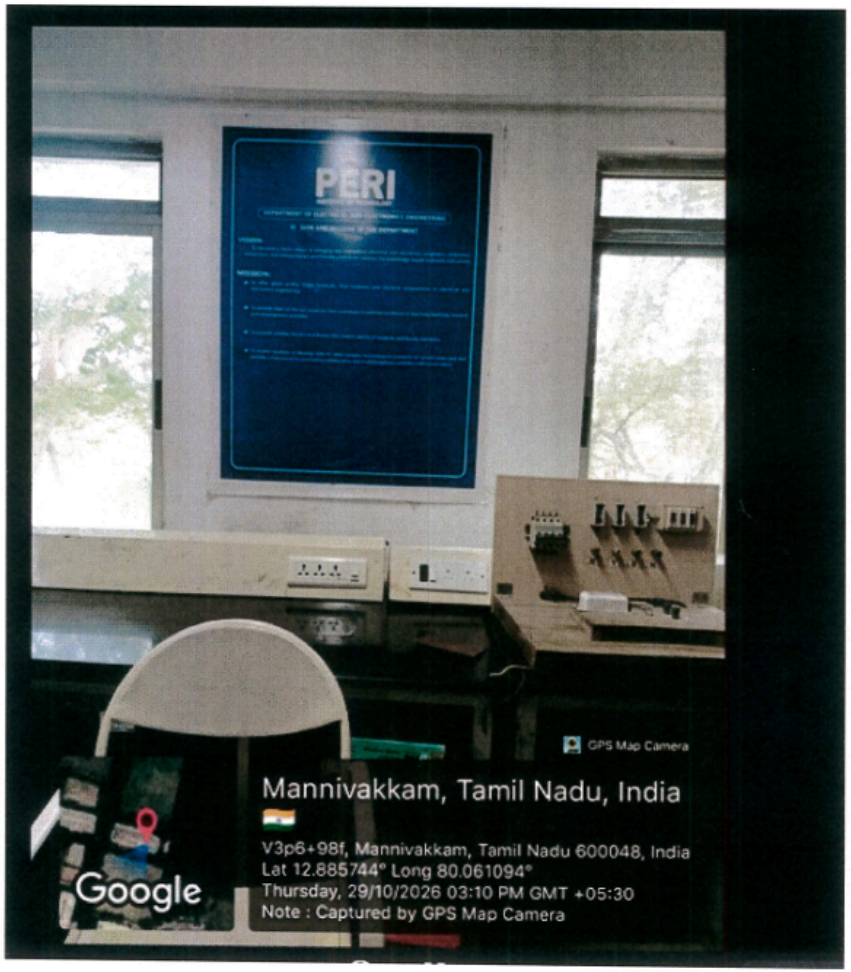
PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park
Mannivakkam, Chennai-600 048



Fig 1.1.4.1.b. Displayed in Corridor

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)



PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Nagar, Part-I
Mannivakkam, Chennai-600 048

Fig 1.1.4.1 c. Display in Laboratory and Class Room

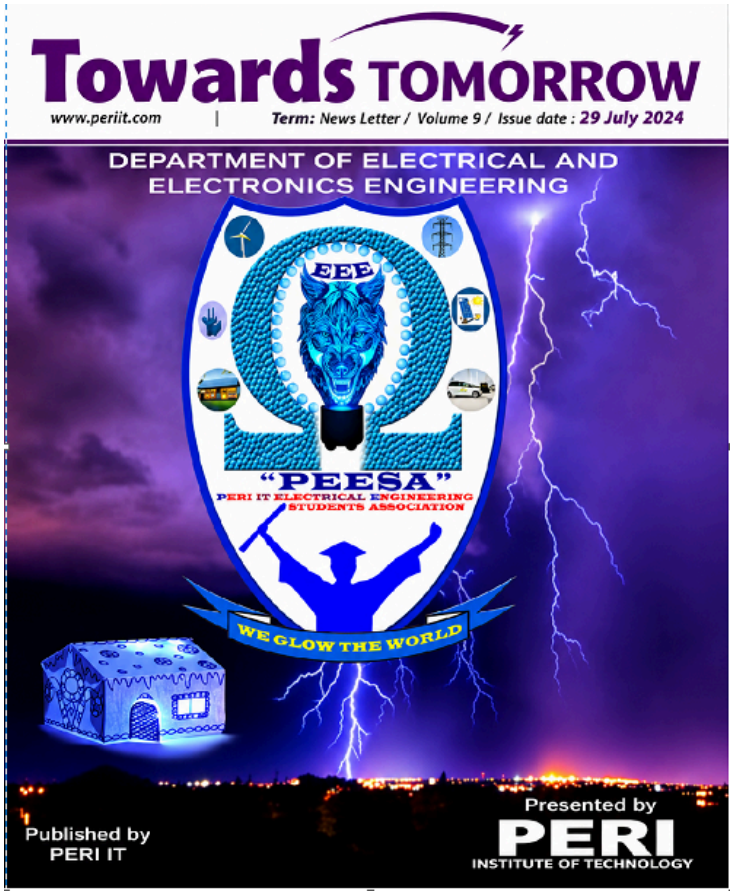


Fig 1.1.4.1.d. EEE News Letter

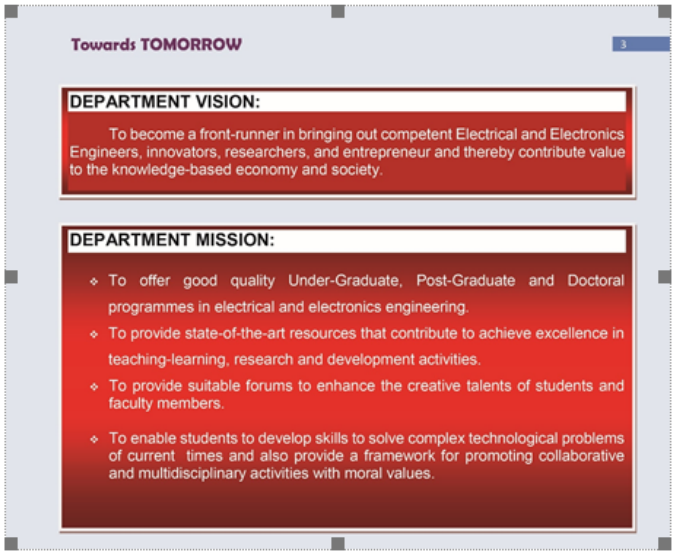


Fig 1.1.4.1.e Published on News Letter

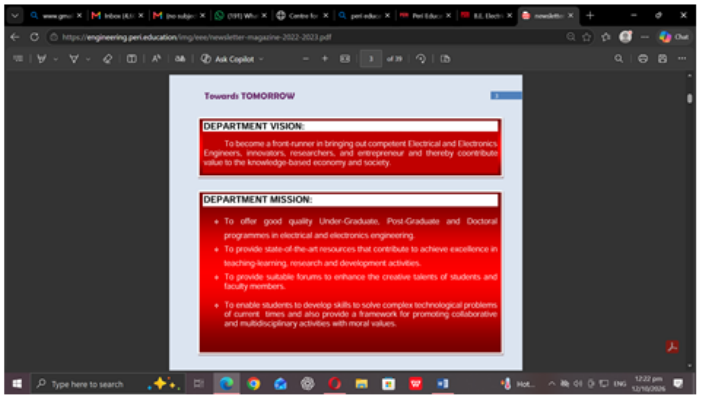


Fig 1.1.4.1.f Publish on News Letter in Website

1.1.5 Mapping of PEOs with Mission (10)

Institute Marks : 10.00

PEO Statements	M1	M2	M3	M4
Find employment in Core Electrical and Electronics Engineering and service sectors.	3	3	2	3
Get elevated to technical lead position and lead the organization competitively.	3	3	3	3
Enter higher studies leading to post-graduate and research degrees. Become consultant and provide solutions to the practical problems of core organization.	3	3	3	3
Become an entrepreneur and be part of electrical and electronics product and service industries.	3	2	3	3

1.2 Curriculum Structure and Features (30)

1.2.1 Program Curriculum Structure (5)

Institute Marks : 5.00

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	IP3151	INDUCTION PROGRAMME	0	0	0	0	0	0.00
2	HS3152	PROFESSIONAL ENGLISH I	45	0	0	45	90	3.00
3	MA3151	MATRICES AND CALCULUS	45	15	0	60	120	4.00
4	PH3151	ENGINEERING PHYSICS	45	0	0	45	90	3.00
5	CY3151	ENGINEERING CHEMISTRY	45	0	0	45	90	3.00
6	GE3151	PROBLEM SOLVING AND PYTHON PROGRAMMING	45	0	0	45	90	3.00
7	GE3152	HERITAGE OF TAMILS	15	0	0	15	30	1.00
8	GE3171	PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY	0	0	60	0	60	2.00
9	BS3171	PHYSICS AND CHEMISTRY LABORATORY	0	0	60	0	60	2.00
10	GE3172	ENGLISH LABORATORY	0	0	30	0	30	1.00
11	HS3252	PROFESSIONAL ENGLISH – II	30	0	0	30	60	2.00
12	MA3251	STATISTICS AND NUMERICAL METHODS	45	15	0	60	120	4.00
13	PH3202	PHYSICS FOR ELECTRICAL ENGINEERING	45	0	0	45	90	3.00
14	BE3255	BASIC CIVIL AND MECHANICAL ENGINEERING	45	0	0	45	90	3.00
15	GE3251	ENGINEERING GRAPHICS	30	0	60	30	120	4.00
16	EE3251	ELECTRIC CIRCUIT ANALYSIS	45	15	0	60	120	4.00
17	NX3251/52/5*3	NCC CREDIT COURSE LEVEL I	0	0	0	0	0	0.00

18	GE3252	TAMILS AND TECHNOLOGY	15	0	0	15	30	1.00
19	GE3271	ENGINEERING PRACTICES LABORATORY	0	0	60	0	60	2.00
20	EE3271	ELECTRIC CIRCUITS LABORATORY	0	0	60	0	60	2.00
21	GE3272	COMMUNICATION LABORATORY	0	0	60	0	60	2.00
22	MA3303	PROBABILITY AND COMPLEX FUNCTIONS	45	15	0	60	120	4.00
23	EE3301	ELECTROMAGNETIC FIELDS	45	15	0	60	120	4.00
24	EE3302	DIGITAL LOGIC CIRCUITS	45	0	0	45	90	3.00
25	EC3301	ELECTRON DEVICES AND CIRCUITS	45	0	0	45	90	3.00
26	EE3303	ELECTRICAL MACHINES I	45	0	0	45	90	3.00
27	CS3353	C PROGRAMMING AND DATA STRUCTURES	45	0	0	45	90	3.00
28	EC3311	ELECTRONIC DEVICES AND CIRCUITS LABORATORY	0	0	45	0	45	1.50
29	EE3311	ELECTRICAL MACHINES LABORATORY I	0	0	45	0	45	1.50
30	CS3362	C PROGRAMMING AND DATA STRUCTURES LABORATORY	0	0	45	0	45	1.50
31	GE3361	PROFESSIONAL DEVELOPMENT	0	0	30	0	30	1.00
32	GE3451	ENVIRONMENTAL SCIENCES AND SSUSTAINABILITY	30	0	0	30	60	2.00
33	EE3401	TRANSMISSION AND DISTRIBUTION	45	0	0	45	90	3.00
34	EE3402	LINEAR INTEGRATED CIRCUITS	45	0	0	45	90	3.00
35	EE3403	MEASUREMENTS AND INSTRUMENTATION	45	0	0	45	90	3.00
36	EE3404	MICROPROCESSOR AND MICROCONTROLLER	45	0	0	45	90	3.00
37	EE3405	ELECTRICAL MACHINES II	45	0	0	45	90	3.00
38	NX3451/52/53	NCC CREDIT COURSE LEVEL 2	0	0	0	0	0	0.00

39	EE3411	ELECTRICAL MACHINES LABORATORY II	0	0	45	0	45	1.50
40	EE3412	LINEAR AND DIGITAL CIRCUITS LABORATORY	0	0	45	0	45	1.50
41	EE3413	MICROPROCESSOR AND MICROCONTROLLER LABORATORY	0	0	45	0	45	1.50
42	EE3501	POWER SYSTEM ANALYSIS	45	0	0	45	90	3.00
43	EE3591	POWER ELECTRONICS	45	0	0	45	90	3.00
44	EE3503	CONTROL SYSTEMS	45	0	0	45	90	3.00
45	EE3007	SMART GRID	45	0	0	45	90	3.00
46	EE3014	POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS	45	0	0	45	90	3.00
47	EE3032	ENERGY STORAGE SYSTEMS	45	0	0	45	90	3.00
48	MX3081	INTRODUCTION TO WOMEN AND GENDER STUDIES	0	0	0	0	0	0.00
49	EE3511	POWER ELECTRONICS LABORATORY	0	0	45	0	45	1.50
50	EE3512	CONTROL AND INSTRUMENTATION LABORATORY	0	0	60	0	60	2.00
51	EE3601	PROTECTION AND SWITCHGEAR	45	0	0	45	90	3.00
52	EE3602	POWER SYSTEM OPERATION AND CONTROL	45	0	0	45	90	3.00
53	OCS352	IOT CONCEPTS AND APPLICATIONS	45	0	0	45	90	3.00
54	EE3033	HYBRID ENERGY TECHNOLOGY	45	0	0	45	90	3.00
55	EE3035	GRID INTEGRATING TECHNIQUES AND CHALLENGES	45	0	0	45	90	3.00
56	EE3025	Electric Vehicle Architecture	45	0	0	45	90	3.00
57	MX3085	WELL-BEING WITH TRADITIONAL PRACTICES-YOGA, AYURVEDA AND SIDDHA	0	0	0	0	0	0.00
58	NX3651/52/5*3	NCC CREDIT COURSE LEVEL III	0	0	0	0	0	0.00

59	EE3611	POWER SYTEM LABORATORY	0	0	45	0	45	1.50
60	EE3701	HIGH VOLTAGE ENGINEERING	45	0	0	45	90	3.00
61	GE3791	HUMAN VALUES AND ETHICS	30	0	0	30	60	2.00
62	GE3752	TOTAL QUALITY MANAGEMENT	45	0	0	45	90	3.00
63	CME365	RENEWABLE ENERGY ECHNOLOGIES	45	0	0	45	90	3.00
64	OCH353	ENERGY TECHNOLOGY	45	0	0	45	90	3.00
65	EE3008	RESTRUCTURED POWER MARKET	45	0	0	45	90	3.00
66	EE3811	PROJECT WORK / INTERNSHIP	0	0	300	0	300	10.00
67	OCS351	Artificial Intelligence and Machine Learning Fundamentals	30	0	30	30	90	3.00
		Total	**1845**	**75**	**1170**	**1920**	**5010**	**167.00**

1.2.2 Components of Program Curriculum (5) Institute Marks : 5.00

Course Components	Curriculum Content (% of total number of credits of the program)	Total number of contact hours	Total number of credits
Basic Sciences	14.97	27.00	25.00
Basic Engineering	8.38	20.00	14.00
Humanities and Social Scie	7.18	12.00	12.00
Program Core	41.37	85.00	69.00
Program Electives	12.57	21.00	21.00
Open Electives	7.18	12.00	12.00
Project(s)	5.98	20.00	10.00
Internships/Seminars	0	0.00	0.00
Any other (Please specify)	2.39	8.00	4.00
Total number of Credits			**167.00**

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) Institute Marks : 10.00

Process Used to Identify the Extent of Curriculum Compliance

The Department of Electronics and Communication Engineering (ECE) follows the curricula prescribed by Anna University under Regulations 2017 (R2017) and 2021 (R2021), as applicable to the respective student batches. The department reviews the curriculum through the following process.

1. Review of the University Curriculum

The department shared the Anna University-prescribed curriculum with industry experts and alumni to obtain feedback on its relevance and adequacy in developing the knowledge, skills, and competencies required to attain the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs).

2. Curriculum–PO/PSO Mapping

The courses were mapped to the relevant POs and PSOs to evaluate the contribution of each course towards outcome attainment. The mapping covered theory courses, laboratory courses, project work, and other relevant academic components.

3. Curriculum Gap Analysis

The department reviewed the feedback from industry experts and alumni, along with the curriculum–PO/PSO mapping, to identify areas where the prescribed curriculum could be supplemented. The review focused on strengthening programme-specific competencies, technical knowledge, practical skills, and industry readiness. The findings provided a basis for identifying curricular gaps and planning appropriate measures to improve PO and PSO attainment.

4. Industry-Oriented and Supplementary Learning Activities

To complement the university-prescribed curriculum and address identified learning needs, the department organized Supplementary Learning Activities such as Value-Added Courses, Guest Lecture, industrial visits, in-plant training, and technical workshops. These activities provided students with exposure to industrial practices, practical experience, and recent technological developments.

5. Assessment of PO and PSO Attainment through Supplementary Learning Activities

The department mapped Supplementary Learning Activities to the relevant POs and PSOs. Their contribution to PO and PSO attainment was assessed based on their objectives, technical content, student participation, and learning outcomes. Student learning was assessed through activity reports, presentations, assignments, participation records, and feedback from industry experts or training supervisors, as applicable. The assessment results were reviewed to determine the extent to which these activities contribute to the development of the targeted competencies and attainment of the mapped POs and PSOs. The feedback and assessment findings were used to improve subsequent activities.

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

Institute Marks : 10.00

Table No.1.2.4.1: Details of events organized to cover content beyond the syllabus.

(CAYm1) 2023-24

S.No	PO/PSO as Gap Identified	Name of The Event	Date (DD/MM/YYYY)of The Event	Resource Person	Organization	Relevance to POs, PSOs	Action
1	Need to understand pow	Role of Power Electroni	30/08/2023	Dr. Manikandan	Muthayammal Engineeri	PO5, PO6, PSO1	Delete
2	Need for deeper unders	Power Enhancement ar	22/09/2023	Dr. K. Saravanan	SRMUNIVERSITY	PO4, PO5, PSO1	Delete
3	Need to develop creativ	Developing a Creative M	26/09/2023	R. Radhakrishnan	CAD Centre	PO8, PO9, PO10, PO11	Delete
4	Need for awareness of e	Opportunities on Future	19/10/2023	Vijay Sarathi	Cloud Campus	PO5, PO9, PO11, PSO3	Delete
5	Need for practical expos	Workshop on Embedde	28/10/2023	Kavin K. S	AB Technologies	PO3, PO5, PSO1, PSO3	Delete
6	Need to strengthen posi	Power of Positive Minds	12/01/2024	Mr. Raghupathy	Karthick Sekar Academy	PO8, PO9, PO10, PO11	Delete
7	Need for exposure to cu	ICEECT 2024	27/01/2024	Dr. Sabitha Ramakrishna	MIT Campus	PO4, PO8, PO9, PO11,	Delete
8	Need to understand ren	Understanding of RES a	27/02/2024	Selvakumar N.	Eagle Wind Tech	PO6, PO10, PO11, PSO	Delete
9	Need for awareness of s	Pathway to Land a Care	05/04/2024	M. Ashok	CSIR	PO4, PO9, PO11, PSO3	Delete

(CAYm2) 2022-23

S.No	PO/PSO as Gap Identified	Name of The Event	Date (DD/MM/YYYY)of The Event	Resource Person	Organization	Relevance to POs, PSOs	Action
1	Need for practical expos	Industrial Automation w	15/10/2022	Jayakumar P.	IOLOGIX Automation So	PO3, PO5, PSO1	Delete
2	Need to improve awarer	Women Wellness Progr	18/10/2022	Dr. R. S. Kiruthika Devi	IMA	PO6, PO7	Delete
3	Limited exposure to rene	Guest Lecture on Rene	20/09/2022	Kavin K. S.	AB Technologies	PO6, PSO1	Delete
4	Need for awareness of c	Career Opportunities as	06/09/2022	Ashok Kumar G.	Freelancer	PO3, PO9, PO10, PO11	Delete
5	Need for exposure to en	Guest Lecture on Artific	02/09/2022	C. Santhiya	Pantech Solutions	PO5, PO11, PSO3	Delete
6	Need for awareness of r	Workshop on Mobile Te	24/08/2022	Dr. R.PALSON KENNEL	PERI IT	PO6, PO8, PO9, PO11	Delete
7	Need for hands-on embe	Hands-on Training on A	12/01/2023	Mr. ELAMVASANTH,	FOREVIEW TECHNOLC	PO5, PSO3	Delete
8	Need for awareness of r	2 Day Workshop On Mc	24/08/2022	Dr. G. Gopiraj and Dr. B.	SHRI HARSHIKA INSTIT	PO5, PO11, PSO3	Delete
9	Limited industrial exposu	Field Visit to AB Techno	26/01/2023	MR. KAVIN	AB Technologies	PO5, PO9, PO11	Delete
10	Need for exposure to rol	Seminar on Applications	07/02/2023	Arun Kumar	Rotech Solutions Pvt. Ltc	PO1, PO3, PO5, PSO1,	Delete
11	Need for practical circuit	Designing a Light-Contr	22/02/2023	Raghavan Iyer S	Live Wire, Tambaram	PO3, PO5, PSO1	Delete
12	Need to strengthen tech	Paper Wars	28/03/2023	Principal	PERI IT	PO9, PO11	Delete
13	Need for extended pract	Workshop on Embedde	26/01/2023	E. Elamvasantham	Foreview Technologies P	PO3, PO5, PSO3	Delete
14	Need to improve awarer	Poster Expo on Sustain	18/05/2023	MR.NAGASUBRAMANI.	PERIIT	PO6, PO9, PO11	Delete
15	Need for practical progra	Add-on Course on Emb	17/01/2023	ARUNKUMAR	AB Technologies	PO5, PSO3	Delete

(CAYm3) 2021-22

S.No	PO/PSO as Gap Identified	Name of The Event	Date (DD/MM/YYYY)of The Event	Resource Person	Organization	Relevance to POs, PSOs	Action
1	Need for practical analys	National Workshop on E	14/03/2022	Mr. V. Gurusami	KRIA Training & Services	PO6, PO7	Delete
2	Learning Styles and Imp	Seminar on Learning St	15/03/2022	Ms. Jayanapriya M	Sutherland Global Servic	PO3, PO5, PO6, PSO1,	Delete
3	Industry Automation	National Seminar on Inc	22/03/2022	Mr. D. A. Anand	IPCS Automation	PO3, PO5, PSO3	Delete
4	Basics of Instrumentatio	National Seminar on Ba	28/03/2022	Ms. S. Vijayalakshmi	Saipeem India Projects L	PO3, PO5, PSO3	Delete
5	PLC Programming and I	Guest Lecture on PLC F	19/04/2022	Mr. P. Aivaraj	Hyundai Motor India Limi	PO3, PO5, PSO3	Delete
6	Alumni Connect '22 – Hi	High Voltage Engineerir	22/04/2022	Mr. G. Vijay	Expert Electrical Enginee	PO3, PO5, PO11, PSO3	Delete
7	Introduction to Variable I	Webinar on Introductior	26/04/2022	Mr. Kirubakaravelan V.	Smart Electric Company,	PO3, PO5, PO4, PSO3	Delete
8	Leveraging Electric Vehi	Guest Lecture on Lever	27/04/2022	Mr. Rajendra Nalluri	Cloudkampus – eLearnin	PO3, PO5, PSO3, PSO2	Delete
9	Workshop on Industrial A	Workshop on Industrial	06/05/2022	Mr. M. Dinesh Kumar	PEAS Automation & Tech	PO3, PO5, PSO3, PSO2	Delete
10	Three-Day Workshop or	3 days' Workshop on D	07/05/2022	Mr. Maris Asir S	CADD Centre Training S	PO3, PO5, PSO3, PSO2	Delete

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

1.3.1 POs and PSOs (5) :

PSO1	Foundation of Electrical Engineering: Ability to understand the principles and working of electrical components, circuits, systems and control that are forming a part of power generation, transmission, distribution, utilization, conservation and energy saving. Students can assess power management, auditing, crisis and energy saving aspects.
PSO2	Foundation of Mathematical Concepts: Ability to apply mathematical methodologies to solve problems related with electrical engineering using appropriate engineering tools and algorithms.
PSO3	Computing and Research Ability: Ability to use knowledge in various domains to identify research gaps and hence to provide solutions which leads to new ideas and innovations.

1.3.2 Mapping between the Courses and POs/PSOs (10) Institute Marks : 10.00

PO:

PO Number	List of Courses
PO1	Professional English - I; Matrices and Calculus; Engineering Physics; Engineering Chemistry; Problem Solving and Python Programming; Problem Solving and Python Programming Laboratory; Physics and Chemistry Laboratory; English Laboratory; Professional English - II; Statistics and Numerical Methods; Physics for Electrical Engineering; Basic Civil and Mechanical Engineering; Engineering Graphics; Electric Circuit Analysis; Engineering Practices Laboratory; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Probability and Complex Functions; Electromagnetic Fields; Digital Logic Circuits; Electron Devices and Circuits; Electrical Machines - I; C Programming and Data Structures; Electrical Machines Laboratory – I; C Programming and Data Structures Laboratory; Environmental Sciences and Sustainability; Transmission and Distribution; Linear Integrated Circuits; Measurements and Instrumentation; Microprocessor and Microcontroller; Electrical Machines - II; Electrical Machines Laboratory - II; Microprocessor and Microcontroller Laboratory; Power System Analysis; Power Electronics; Control Systems; Power Electronics Laboratory; Control and Instrumentation Laboratory; Protection and Switchgear; Power System Operation and Control; Power System Laboratory; High Voltage Engineering; Project Work / Internship.
PO2	Professional English - I; Matrices and Calculus; Engineering Physics; Engineering Chemistry; Problem Solving and Python Programming; Problem Solving and Python Programming Laboratory; Physics and Chemistry Laboratory; English Laboratory; Professional English - II; Statistics and Numerical Methods; Physics for Electrical Engineering; Engineering Graphics; Electric Circuit Analysis; Engineering Practices Laboratory; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Probability and Complex Functions; Electromagnetic Fields; Digital Logic Circuits; Electron Devices and Circuits; Electrical Machines - I; C Programming and Data Structures; Electronic Devices and Circuits Laboratory; Electrical Machines Laboratory – I; C Programming and Data Structures Laboratory; Environmental Sciences and Sustainability; Transmission and Distribution; Linear Integrated Circuits; Measurements and Instrumentation; Microprocessor and Microcontroller; Electrical Machines - II; Electrical Machines Laboratory - II; Linear and Digital Circuits Laboratory; Microprocessor and Microcontroller Laboratory; Power System Analysis; Power Electronics; Control Systems; Power Electronics Laboratory; Control and Instrumentation Laboratory; Protection and Switchgear; Power System Operation and Control; Power System Laboratory; High Voltage Engineering; Project Work / Internship.
PO6	Professional English - I; Engineering Physics; Engineering Chemistry; Physics and Chemistry Laboratory; English Laboratory; Professional English - II; Physics for Electrical Engineering; Engineering Practices Laboratory; Communication Laboratory / Foreign Language; C Programming and Data Structures; C Programming and Data Structures Laboratory; Environmental Sciences and Sustainability; Transmission and Distribution; Measurements and Instrumentation; Protection and Switchgear; Power System Operation and Control; High Voltage Engineering; Project Work / Internship.
PO3	Professional English - I; Matrices and Calculus; Engineering Physics; Engineering Chemistry; Problem Solving and Python Programming; Problem Solving and Python Programming Laboratory; Physics and Chemistry Laboratory; English Laboratory; Professional English - II; Statistics and Numerical Methods; Physics for Electrical Engineering; Engineering Graphics; Electric Circuit Analysis; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Electromagnetic Fields; Digital Logic Circuits; Electron Devices and Circuits; Electrical Machines - I; C Programming and Data Structures; Electronic Devices and Circuits Laboratory; Electrical Machines Laboratory – I; C Programming and Data Structures Laboratory; Environmental Sciences and Sustainability; Transmission and Distribution; Linear Integrated Circuits; Measurements and Instrumentation; Microprocessor and Microcontroller; Electrical Machines - II; Electrical Machines Laboratory - II; Linear and Digital Circuits Laboratory; Microprocessor and Microcontroller Laboratory; Power System Analysis; Power Electronics; Control Systems; Power Electronics Laboratory; Control and Instrumentation Laboratory; Protection and Switchgear; Power System Operation and Control; Power System Laboratory; High Voltage Engineering; Project Work / Internship.

PO4	Professional English - I; Matrices and Calculus; Engineering Physics; Engineering Chemistry; Problem Solving and Python Programming; Problem Solving and Python Programming Laboratory; Physics and Chemistry Laboratory; English Laboratory; Professional English - II; Statistics and Numerical Methods; Electric Circuit Analysis; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Electromagnetic Fields; Digital Logic Circuits; Electron Devices and Circuits; Electrical Machines - I; C Programming and Data Structures; Electronic Devices and Circuits Laboratory; Electrical Machines Laboratory – I; C Programming and Data Structures Laboratory; Environmental Sciences and Sustainability; Transmission and Distribution; Linear Integrated Circuits; Measurements and Instrumentation; Microprocessor and Microcontroller; Electrical Machines - II; Electrical Machines Laboratory - II; Linear and Digital Circuits Laboratory; Microprocessor and Microcontroller Laboratory; Power System Analysis; Power Electronics; Control Systems; Power Electronics Laboratory; Control and Instrumentation Laboratory; Protection and Switchgear; Power System Operation and Control; Power System Laboratory; High Voltage Engineering; Project Work / Internship.
PO5	Professional English - I; Engineering Physics; Problem Solving and Python Programming; Problem Solving and Python Programming Laboratory; Physics and Chemistry Laboratory; English Laboratory; Professional English - II; Statistics and Numerical Methods; Engineering Graphics; Electric Circuit Analysis; Engineering Practices Laboratory; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Digital Logic Circuits; Electron Devices and Circuits; Electrical Machines - I; C Programming and Data Structures; Electronic Devices and Circuits Laboratory; C Programming and Data Structures Laboratory; Linear Integrated Circuits; Measurements and Instrumentation; Electrical Machines - II; Linear and Digital Circuits Laboratory; Power System Analysis; Control Systems; Power Electronics Laboratory; Control and Instrumentation Laboratory; Protection and Switchgear; Power System Laboratory; Project Work / Internship.
PO7	Professional English - I; Engineering Chemistry; Physics and Chemistry Laboratory; English Laboratory; Professional English - II; Basic Civil and Mechanical Engineering; Electric Circuit Analysis; Engineering Practices Laboratory; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Electromagnetic Fields; C Programming and Data Structures; C Programming and Data Structures Laboratory; Environmental Sciences and Sustainability; Power Electronics; Protection and Switchgear; Project Work / Internship, smart gridwork electronics for renewable energy systems, energy systems, hybrid energy technology, grid integrating techniques and challenges, restored power market, renewable energytechnologies,energy technology, total quality management, restricted power market.
PO8	Professional English - I; English Laboratory; Professional English - II; Basic Civil and Mechanical Engineering; Electric Circuit Analysis; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Electromagnetic Fields; Digital Logic Circuits; Electron Devices and Circuits; Electrical Machines - I; Electronic Devices and Circuits Laboratory; Transmission and Distribution; Linear Integrated Circuits; Measurements and Instrumentation; Microprocessor and Microcontroller; Electrical Machines - II; Electrical Machines Laboratory - II; Linear and Digital Circuits Laboratory; Microprocessor and Microcontroller Laboratory; Power Electronics; Control Systems; Power Electronics Laboratory; Control and Instrumentation Laboratory; Protection and Switchgear; Power System Operation and Control; Power System Laboratory; High Voltage Engineering; Project Work / Internship.
PO9	Professional English - I; Matrices and Calculus; English Laboratory; Professional English - II; Statistics and Numerical Methods; Basic Civil and Mechanical Engineering; Electric Circuits Laboratory; Communication Laboratory / Foreign Language; Probability and Complex Functions; C Programming and Data Structures; Electrical Machines Laboratory – I; C Programming and Data Structures Laboratory; Electrical Machines Laboratory - II; Power System Analysis; Protection and Switchgear; Power System Laboratory; High Voltage Engineering; Project Work / Internship.
PO10	Professional English - I; English Laboratory; Professional English - II; Basic Civil and Mechanical Engineering; Engineering Graphics; Communication Laboratory / Foreign Language; C Programming and Data Structures; C Programming and Data Structures Laboratory; Measurements and Instrumentation; Protection and Switchgear; Power System Operation and Control; Power System Laboratory; Project Work / Internship.
PO11	Professional English - I; Matrices and Calculus; Engineering Physics; Problem Solving and Python Programming; Problem Solving and Python Programming Laboratory; English Laboratory; Professional English - II; Statistics and Numerical Methods; Communication Laboratory / Foreign Language; C Programming and Data Structures; Electronic Devices and Circuits Laboratory; C Programming and Data Structures Laboratory; Linear and Digital Circuits Laboratory; Power Electronics; Protection and Switchgear; High Voltage Engineering; Project Work / Internship.

1.4 Course Outcomes and Course Articulation Matrix (30)

1.4.1 Course Outcome (Semester Wise) (15)

Institute Marks : 15.00

No. of Core Courses : 6	**C2 :** 2	**C3 :** 2	**C4 :** 2

Note : Number of Outcomes for a Course is expected to be around 6.

Course Code :	EE3301	Semester :	3

Course Outcome	Statements
EE3301.1	Visualize and explain Gradient, Divergence, and Curl operations on electromagnetic vector fields and identify the electromagnetic sources and their effects
EE3301.2	Compute and analyze electrostatic fields, electric potential, and energy density along with their applications.
EE3301.3	Compute and analyze magneto static fields, magnetic flux density, vector potential along with their applications.
EE3301.4	Explain different methods of EMF generation and Maxwell's equations.
EE3301.5	Explain the concept of electromagnetic waves and characterizing parameters.

Course Code :	EE3302	Semester :	3

Course Outcome	Statements
EE3302.1	Explain various number systems and characteristics of digital logic families.
EE3302.2	Apply K-maps and Quine McCluskey methods to simplify the given Boolean expressions.
EE3302.3	Explain the implementation of combinational circuit such as multiplexers and de multiplexers - code converters, adders, subtractors, Encoders and Decoders.
EE3302.4	Design various synchronous and asynchronous circuits using Flip Flops.
EE3302.5	Explain asynchronous sequential circuits and programmable logic devices

Course Code :	EE3401	Semester :	4

Course Outcome	Statements
EE3401.1	Understand the structure of power system, computation of transmission line parameters for different configurations.
EE3401.2	Model the transmission lines to determine the line performance and to understand the impact of Ferranti effect and corona on line performance.
EE3401.3	Do Mechanical design of transmission lines, grounding and to understand about the insulators in transmission system.
EE3401.4	Design the underground cables and understand the performance analysis of underground cable.
EE3401.5	Understand the modeling, performance analysis and modern trends in distribution system.

Course Code :	EE3402	Semester :	4

Course Outcome	Statements
EE3402.1	Explain monolithic IC fabrication process
EE3402.2	Explain the fabrication of diodes, capacitance, resistance, FETs and PV Cell.
EE3402.3	Analyze the characteristics and basic applications (inverting/non-inverting amplifier, summer, differentiator, integrator, V/I and I/V converter) of Op-Amp
EE3402.4	Explain circuit and applications of op-amp based instrumentation amplifier, log/antilog amplifier, analog multiplier /divider, active filters, comparators, waveform generators, A/D and D/A converters
EE3402.5	Explain Functional blocks, characteristics and applications of Timer, PLL, analog multiplier ICs.

Course Code :	**EE3501**	**Semester :**	**5**

Course Outcome	Statements
EE3501.1	Ability to model the power system under steady state operating condition.
EE3501.2	Ability to carry out power flow analysis using Gauss Siedal and Newton Raphson methods.
EE3501.3	Ability to infer the significance of short circuit studies in designing circuit breakers.
EE3501.4	Ability to analyze the state of the power system for various unsymmetrical faults.
EE3501.5	Ability to analyze the stability of power system using different methods.

Course Code :	**EE3601**	**Semester :**	**6**

Course Outcome	Statements
EE3601.1	Understand and select proper protective scheme and type of earthing.
EE3601.2	Explain the operating principles of various relays.
EE3601.3	Suggest suitable protective scheme for the protection of various power system apparatus.
EE3601.4	Analyze the importance of static relays and numerical relays in power system protection.
EE3601.5	Summarize the merits and demerits and application areas of various circuit breakers.

1.4.2 Course Articulation Matrix (10) :

1 . course name : C2EE3301

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EE3301.1	Visualize ar	3	2	-	-	-	3	-	2	-	-	2
EE3301.2	Compute ai	3	2	1	2	-	1	-	2	-	-	2
EE3301.3	Compute ai	3	2	1	2	-	1	-	2	-	-	2
EE3301.4	Explain diff	3	2	1	2	-	1	-	2	-	-	2
EE3301.5	Explain the	3	2	1	2	-	1	-	2	-	-	2
Average		**3.00**	**2.00**	**0.80**	**1.60**	**0.00**	**1.40**	**0.00**	**2.00**	**0.00**	**0.00**	**2.00**

2 . course name : C2EE3302

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EE3302.1	Explain var	3	3	3	1	3	-	1	-	-	-	1
EE3302.2	Apply K-ma	3	3	3	1	3	-	1	-	-	-	1
EE3302.3	Explain the	3	3	3	1	3	-	1	-	-	-	1
EE3302.4	Design vari	3	3	3	1	3	-	1	-	-	-	1
EE3302.5	Explain asy	3	3	3	1	3	-	1	-	-	-	1
Average		**3.00**	**3.00**	**3.00**	**1.00**	**3.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**

3 . course name : C3EE3401

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EE3401.1	Understand	2	1	-	-	-	-	1	-	-	-	-
EE3401.2	Model the t	3	2	1	1	-	1	2	-	-	-	-
EE3401.3	Do Mechan	3	2	1	1	-	1	2	-	-	-	-
EE3401.4	Design the	3	2	1	1	-	1	2	-	-	-	-
EE3401.5	Understand	3	2	1	1	-	1	2	-	-	-	-
Average		**2.80**	**1.80**	**0.80**	**0.80**	**0.00**	**0.80**	**1.80**	**0.00**	**0.00**	**0.00**	**0.00**

4 . course name : C3EE3402

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EE3402.1	Explain mo	2	2	3	2	2	-	1	-	-	-	1
EE3402.2	Explain the	2	2	3	2	2	-	1	-	-	-	1
EE3402.3	Analyze the	2	2	3	2	2	-	1	-	-	-	1
EE3402.4	Explain circ	2	2	3	2	2	-	1	-	-	-	1
EE3402.5	Explain Fur	2	2	3	2	2	-	1	-	-	-	1
Average		**2.00**	**2.00**	**3.00**	**2.00**	**2.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**

5 . course name : C4EE3501

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EE3501.1	Ability to m	3	2	2	1	1	-	-	1	-	-	-
EE3501.2	Ability to ca	3	3	3	2	1	-	-	1	-	-	-
EE3501.3	Ability to inf	3	3	3	2	1	-	-	1	-	-	1
EE3501.4	Ability to an	3	2	2	2	2	-	-	1	-	-	1
EE3501.5	Ability to an	3	3	2	2	2	-	-	1	-	-	1
Average		**3.00**	**2.60**	**2.40**	**1.80**	**1.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.60**

6 . course name : C4EE3601

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EE3601.1	Understand	3	1	1	2	1	2	1	1	1	1	2
EE3601.2	Explain the	3	1	1	2	1	2	1	1	1	1	2
EE3601.3	Suggest su	3	1	1	2	1	2	1	1	1	1	2
EE3601.4	Analyze the	3	1	1	2	1	2	1	1	1	1	2
EE3601.5	Summarize	3	1	1	2	2	2	1	1	1	1	2
Average		**3.00**	**1.00**	**1.00**	**2.00**	**1.20**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**2.00**

1 . Course Name : EE3301

Course	PSO1	PSO2	PSO3
EE3301.1	-	-	-
EE3301.2	-	-	-
EE3301.3	-	-	-
EE3301.4	-	-	-
EE3301.5	-	-	-
Average	**0.00**	**0.00**	**0.00**

2 . Course Name : EE3302

Course	PSO1	PSO2	PSO3
EE3302.1	3	2	1
EE3302.2	3	2	1
EE3302.3	3	2	1
EE3302.4	3	2	1
EE3302.5	3	2	1
Average	**3.00**	**2.00**	**1.00**

3 . Course Name : EE3401

Course	PSO1	PSO2	PSO3
EE3401.1	3	1	1
EE3401.2	3	2	1
EE3401.3	3	3	1
EE3401.4	3	3	1
EE3401.5	3	3	1
Average	**3.00**	**2.40**	**1.00**

4 . Course Name : EE3402

Course	PSO1	PSO2	PSO3
EE3402.1	3	2	-
EE3402.2	3	2	-
EE3402.3	3	2	-
EE3402.4	3	2	-
EE3402.5	3	2	-
Average	**3.00**	**2.00**	**0.00**

5 . Course Name : EE3501

Course	PSO1	PSO2	PSO3
EE3501.1	1	1	3
EE3501.2	1	1	3
EE3501.3	1	1	3
EE3501.4	1	1	3
EE3501.5	1	1	3
Average	**1.00**	**1.00**	**3.00**

6 . Course Name : EE3601

Course	PSO1	PSO2	PSO3
EE3601.1	3	1	-
EE3601.2	3	1	-
EE3601.3	3	2	-
EE3601.4	3	2	1
EE3601.5	3	1	1
Average	**3.00**	**1.40**	**0.40**

1.5 Program Articulation Matrix (5)

Program Articulation Matrix

:

(10)

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
MA3151	3	3	1	1	0	0	0	0	2	0	2
HS3151	1.6	2.2	1.8	2.2	1.4	3	3	3	1.6	3	3
PH3151	3	3	1.6	1.2	1.8	1	0	0	0	0	1
CY3151	2.8	1.3	1.6	1	0	1.5	1.8	0	0	0	0
CS3151	2	3	3	3	2	0	0	0	0	0	2
GE3151	0	0	0	0	0	0	0	0	0	0	0
CS3152	2	3	3	3	2	0	0	0	0	0	2
BS3171	2.8	1.85	2.1	1	1	.7	.9	0	0	0	0
HS3152	3	3	3	3	1	3	3	3	3	3	3
HS3251	3	3	3	3	2.75	3	3	3	2.2	3	3
MA3251	3	3	1	1	1	0	0	0	2	0	2
PH3201	3	2	1	0	0	1	0	0	0	0	0
BE3251	2	0	0	0.2	0	0	PO7	2	1.2	2	0
GE3251	3	1	2	0	2	0	0	0	0	3	0
EE3251	3	3	3	2.8	2	0	2	1	0	0	0
GE3152	0	0	0	0	0	0	0	0	0	0	0
GE3271	3	2	0	0	1	1	1	0	0	0	0
EE3271	3	3	3	3	3	0	2	1.5	3	0	0
HS3281	2.4	2.8	3	3	1.8	3	3	3	3	3	3
MA3303	3	3	0	0	0	0	0	0	2	0	0
EE3301	3	2	1	2	0	0	1.4	1	0	0	0
EE3302	3	3	3	1	3	0	0	1	0	0	0
EC3301	2	2	3	2	2	0	0	1	0	0	0
EE3303	3	3	1	1	1	0	0	1	0	0	0
CS3353	2	2	1	2	2	1	1	0	1	1	1
EC3311	0	3	2.7	3	3	0	0	1.5	0	0	3
EE3311	3	3	1	1	0	0	0	0	1	0	0
CS3362	2	1	2	2	1	1	0	1	1	1	1

GE3361	0	0	0	0	0	0	0	0	0	0	0
GE3451	2.8	1.8	1	1	0	2.2	2.4	0	0	0	0
EE3401	2.8	1.8	1	1	0	1	0	1.8	0	0	0
EE3402	2	2	3	2	2	0	0	1	0	0	0
EE3403	3	2	3	2	3	2	0	2	0	3	0
EE3404	2	1	2	3	0	0	0	1	0	0	0
EE3405	3	3	1.	2.3	2.6	0	0	1	0	0	0
EE3411	3	3	1	1	0	0	0	1.5	1	0	0
EE3412	3	3	1.6	3	3	0	0	1.5	0	0	3
EE3413	2	1	2	3	0	0	0	1.5	0	0	0
EE3501	3	2.6	2.4	1.8	1.4	0	0	0	1	0	0
EE3591	3	3	3	3	0	0	1.5	1	0	0	2.25
EE3503	3	3	3	3	3	0	0	1	0	0	0
EE3511	3	3	3	3	3	0	0	1.5	0	0	0
EE3512	3	3	3	3	3	0	0	1.5	0	0	0
EE3601	3	1	1	2	1.2	2	1	1	1	1	2
EE3602	2	1.6	1	1	0	1	0	1.6	0	2	0
EE3611	3	3	2	2	3	0	0	2	1	2	0
EE3701	2	2	2.33	1	0	2	0	1	1	0	2
GE3791	0	0	0	0	0	0	3	0	0	0	0
EE3811	3	3	3	3	3	3	3	3	3	3	3

Course Code	PSO1	PSO2	PSO3
BE3251	0	0	0
BS3171	0	0	0
CS3151	3	3	0
CS3152	3	3	0
CS3353	2	2	2
CS3362	2	2	2
CY3151	0	0	0

EC3301	3	0	1
EC3311	0	3	0
EE3251	3	3	3
EE3271	3	3	2
EE3301	3	2	1
EE3302	3	0	1
EE3303	3	3	3
EE3311	2.5	2.6	1.6
EE3401	3	2.4	1
EE3402	3	2	1
EE3403	3	3	3
EE3404	3	1	3
EE3405	3	3	2
EE3411	3	3	1.6
EE3412	2	1	2
EE3413	3	1	3
EE3501	1	1	1.4
EE3503	3	3	3
EE3511	3	3	3
EE3512	3	3	3
EE3591	3	3	3
EE3601	3	1.4	1
EE3602	3	2.2	2.86
EE3611	3	3	3
EE3701	3	2	2
EE3811	3	3	3
GE3151	0	0	0
GE3152	0	0	0
GE3251	2	2	0

GE3271	2	1	1
GE3361	0	0	0
GE3451	0	0	0
GE3791	0	0	0
HS3151	0	0	0
HS3152	0	0	0
HS3251	0	0	0
HS3281	0	0	0
MA3151	0	0	0
MA3251	0	0	0
MA3303	3	0	0
PH3151	0	0	0
PH3201	0	0	0

2 OUTCOME-BASED TEACHING LEARNING (120)

Total Marks 120.00

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

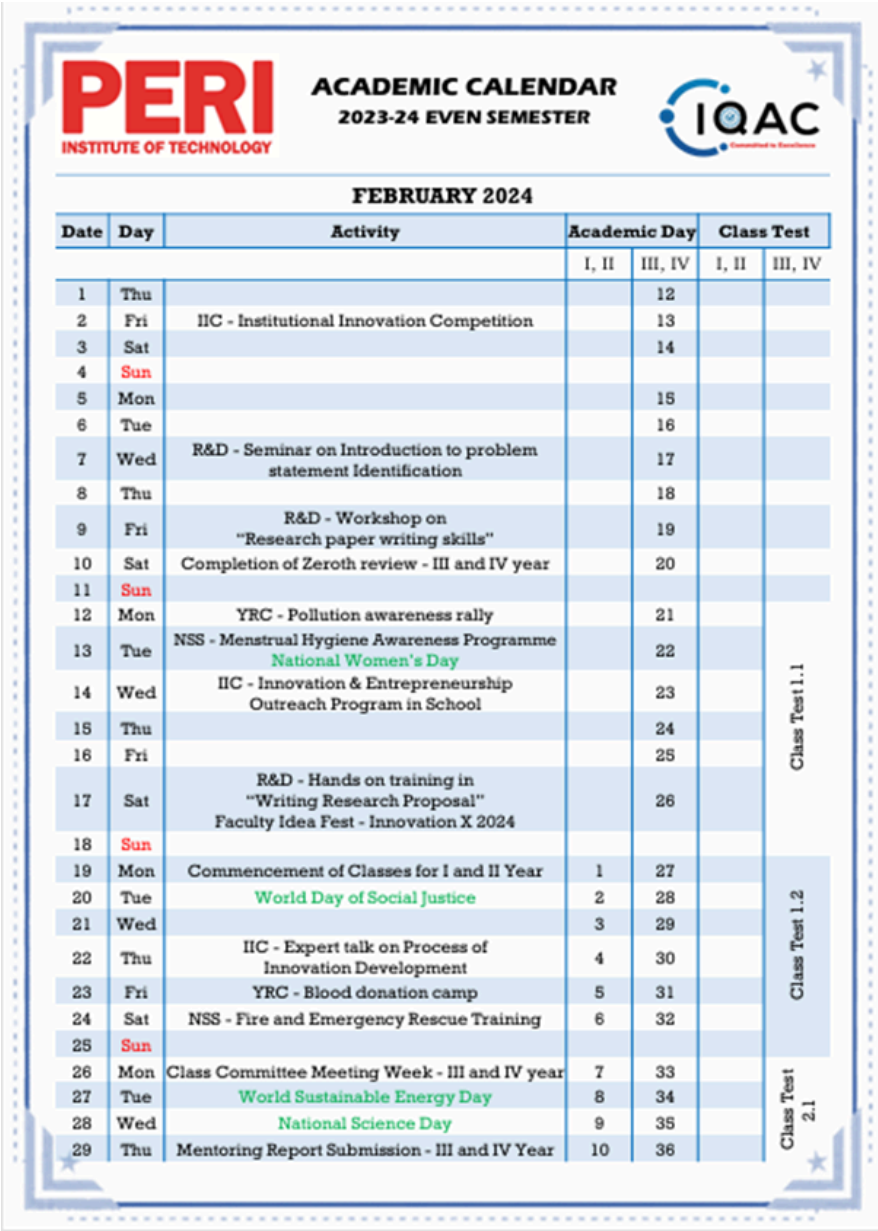
Institute Marks : 20.00

The Department follows a planned approach to ensure the quality of teaching and learning through academic scheduling, appropriate teaching methods, individual academic support, effective classroom engagement and systematic laboratory practice. The process is implemented in accordance with the academic calendar and the applicable regulations of the affiliating University during the assessment period. The department monitors the implementation of planned academic activities and uses available assessment records, course-delivery information and student performance to identify areas requiring further attention.

2.1.A) ADHERENCE TO ACADEMIC CALENDAR

The academic calendar provides the basis for planning and implementing the academic activities of each semester. The institutional academic calendar is prepared with reference to the academic schedule prescribed by the affiliating University and is approved by the competent authorities. Based on this schedule, the department plans its academic activities, including semester commencement, syllabus coverage, Continuous assessment tests, class committee meetings, seminars, workshops, industrial visits and project reviews, as applicable.

Faculty members plan their course delivery in accordance with the prescribed schedule and maintain the relevant course-delivery records. The Head of the Department monitors the progress of academic activities and reviews deviations, wherever they occur, so that necessary adjustments can be made with appropriate approval. The implementation of the academic calendar is supported by the approved calendar, departmental schedules, lesson plans, assessment schedules, meeting minutes and records of completed activities support implementation of academic calendar.



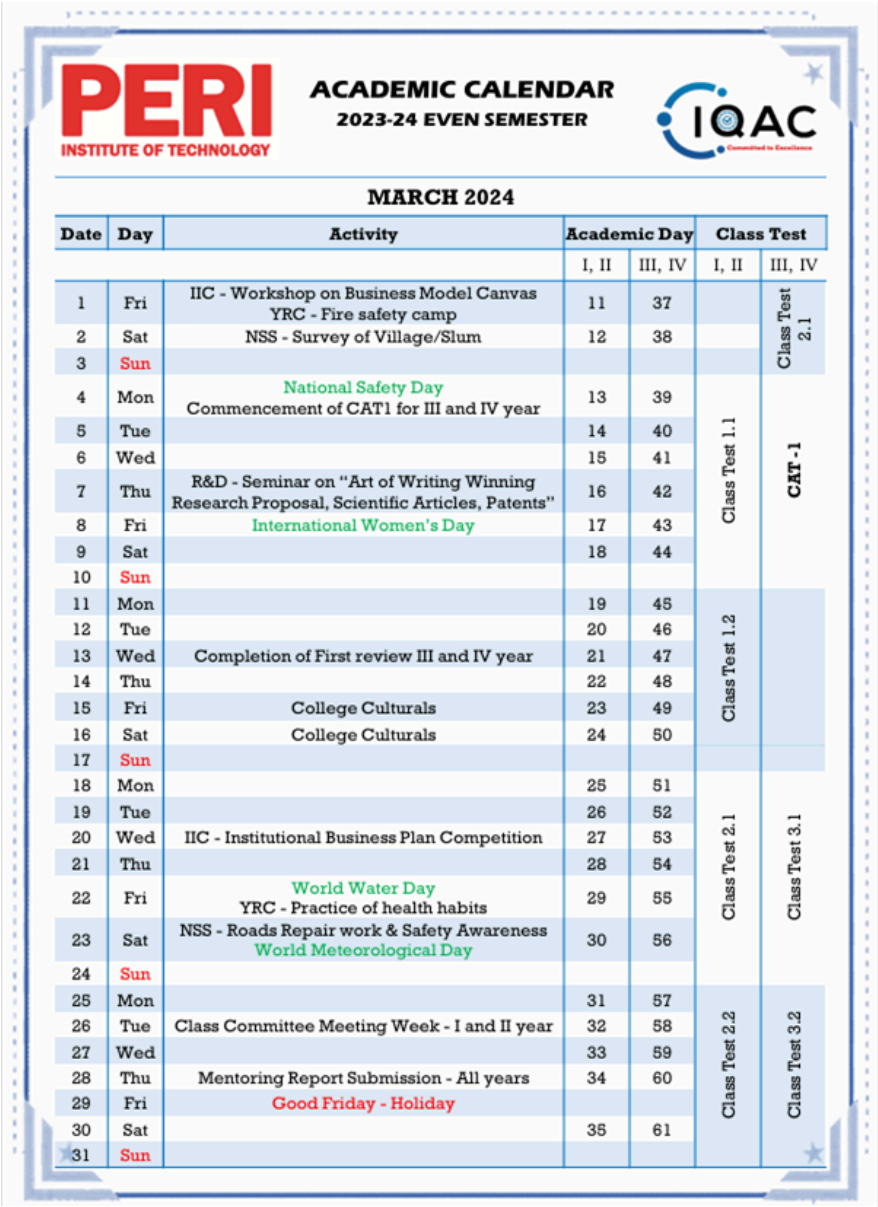
PERI INSTITUTE OF TECHNOLOGY

ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

FEBRUARY 2024

Date	Day	Activity	Academic Day		Class Test	
			I, II	III, IV	I, II	III, IV
1	Thu			12		
2	Fri	IIC - Institutional Innovation Competition		13		
3	Sat			14		
4	Sun					
5	Mon			15		
6	Tue			16		
7	Wed	R&D - Seminar on Introduction to problem statement Identification		17		
8	Thu			18		
9	Fri	R&D - Workshop on "Research paper writing skills"		19		
10	Sat	Completion of Zeroth review - III and IV year		20		
11	Sun					
12	Mon	YRC - Pollution awareness rally		21		
13	Tue	NSS - Menstrual Hygiene Awareness Programme National Women's Day		22		
14	Wed	IIC - Innovation & Entrepreneurship Outreach Program in School		23		Class Test 1.1
15	Thu			24		
16	Fri			25		
17	Sat	R&D - Hands on training in "Writing Research Proposal" Faculty Idea Fest - Innovation X 2024		26		
18	Sun					
19	Mon	Commencement of Classes for I and II Year	1	27		
20	Tue	World Day of Social Justice	2	28		
21	Wed		3	29		Class Test 1.2
22	Thu	IIC - Expert talk on Process of Innovation Development	4	30		
23	Fri	YRC - Blood donation camp	5	31		
24	Sat	NSS - Fire and Emergency Rescue Training	6	32		
25	Sun					
26	Mon	Class Committee Meeting Week - III and IV year	7	33		
27	Tue	World Sustainable Energy Day	8	34		
28	Wed	National Science Day	9	35		Class Test 2.1
29	Thu	Mentoring Report Submission - III and IV Year	10	36		



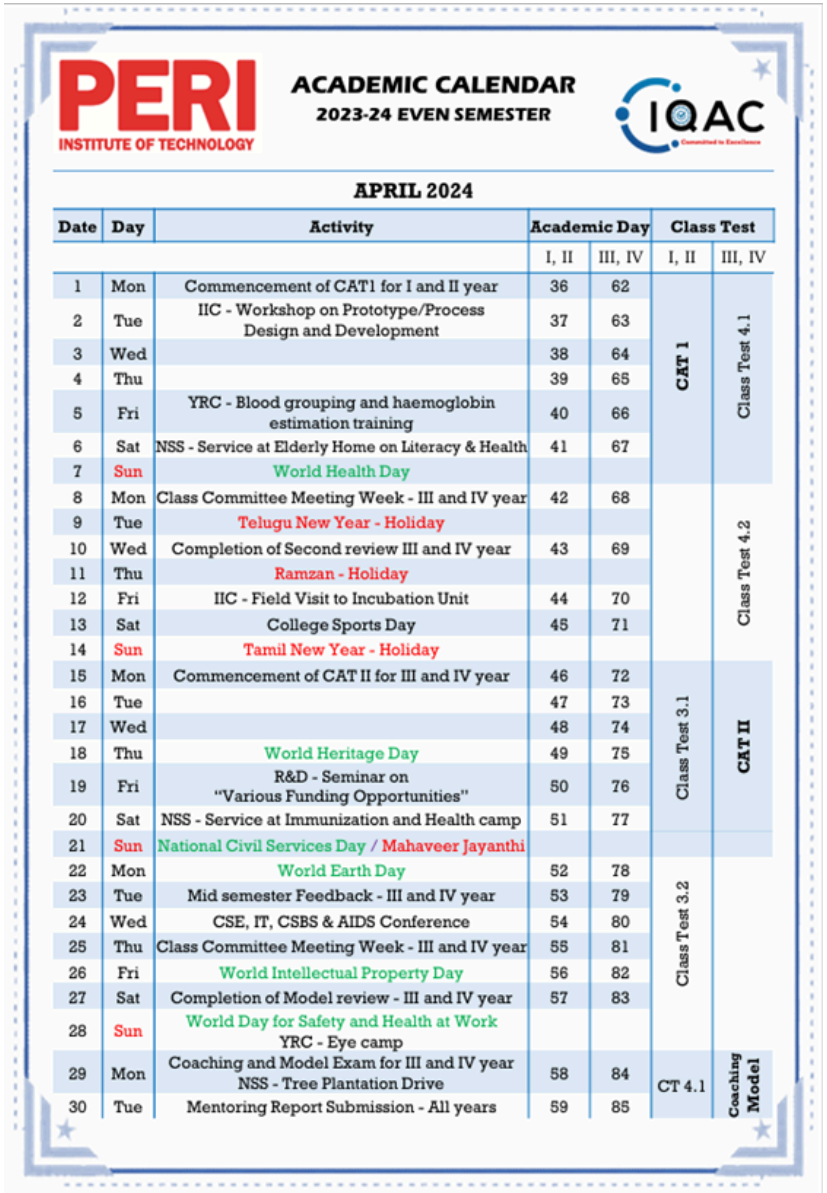
PERI INSTITUTE OF TECHNOLOGY

ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

MARCH 2024

Date	Day	Activity	Academic Day		Class Test	
			I, II	III, IV	I, II	III, IV
1	Fri	IIC - Workshop on Business Model Canvas YRC - Fire safety camp	11	37		Class Test 2.1
2	Sat	NSS - Survey of Village/Slum	12	38		
3	Sun					
4	Mon	National Safety Day Commencement of CAT1 for III and IV year	13	39	Class Test 1.1	CAT -1
5	Tue		14	40		
6	Wed		15	41		
7	Thu	R&D - Seminar on "Art of Writing Winning Research Proposal, Scientific Articles, Patents"	16	42		
8	Fri	International Women's Day	17	43		
9	Sat		18	44		
10	Sun					
11	Mon		19	45	Class Test 1.2	
12	Tue		20	46		
13	Wed	Completion of First review III and IV year	21	47		
14	Thu		22	48		
15	Fri	College Culturals	23	49		
16	Sat	College Culturals	24	50		
17	Sun					
18	Mon		25	51	Class Test 2.1	Class Test 3.1
19	Tue		26	52		
20	Wed	IIC - Institutional Business Plan Competition	27	53		
21	Thu		28	54		
22	Fri	World Water Day YRC - Practice of health habits	29	55		
23	Sat	NSS - Roads Repair work & Safety Awareness World Meteorological Day	30	56		
24	Sun					
25	Mon		31	57	Class Test 2.2	Class Test 3.2
26	Tue	Class Committee Meeting Week - I and II year	32	58		
27	Wed		33	59		
28	Thu	Mentoring Report Submission - All years	34	60		
29	Fri	Good Friday - Holiday				
30	Sat		35	61		
31	Sun					



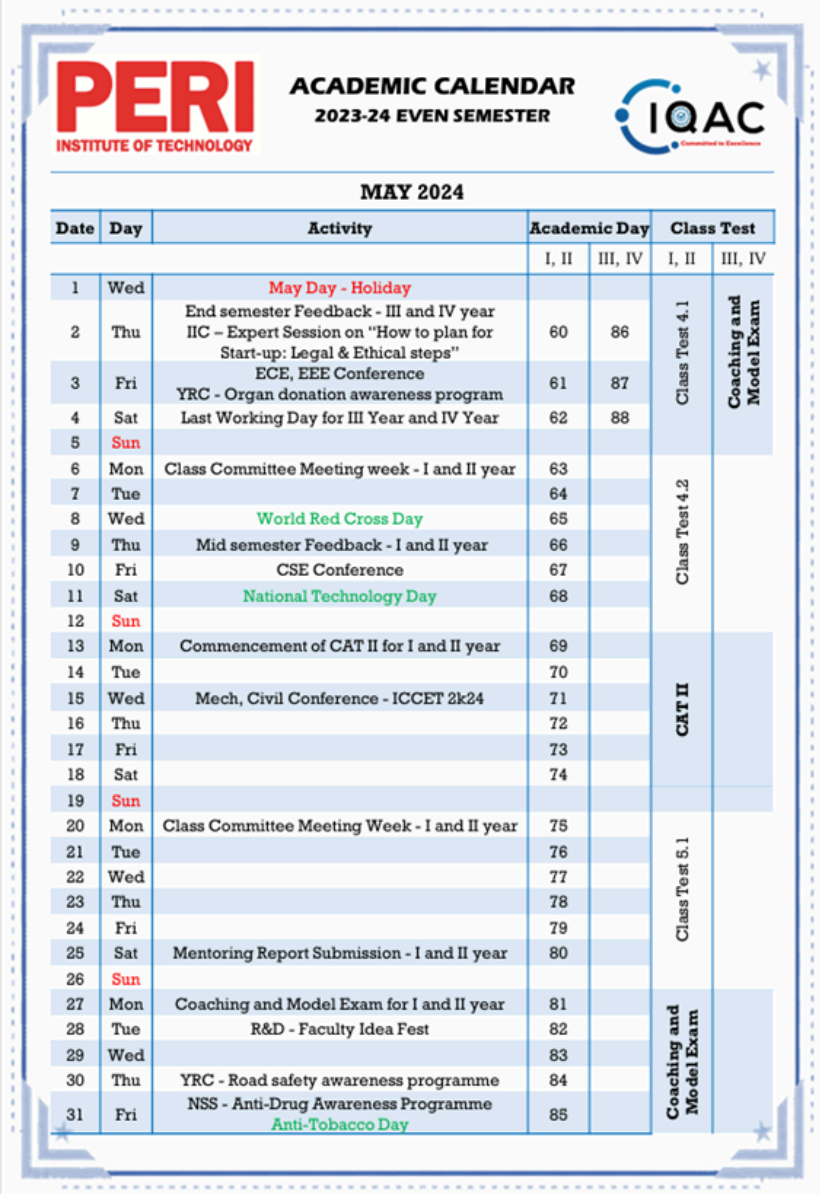
PERI INSTITUTE OF TECHNOLOGY

ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

APRIL 2024

Date	Day	Activity	Academic Day		Class Test	
			I, II	III, IV	I, II	III, IV
1	Mon	Commencement of CAT1 for I and II year	36	62		
2	Tue	IIC - Workshop on Prototype/Process Design and Development	37	63		
3	Wed		38	64		
4	Thu		39	65	CAT 1	Class Test 4.1
5	Fri	YRC - Blood grouping and haemoglobin estimation training	40	66		
6	Sat	NSS - Service at Elderly Home on Literacy & Health	41	67		
7	Sun	World Health Day				
8	Mon	Class Committee Meeting Week - III and IV year	42	68		
9	Tue	Telugu New Year - Holiday				
10	Wed	Completion of Second review III and IV year	43	69		
11	Thu	Ramzan - Holiday				
12	Fri	IIC - Field Visit to Incubation Unit	44	70		Class Test 4.2
13	Sat	College Sports Day	45	71		
14	Sun	Tamil New Year - Holiday				
15	Mon	Commencement of CAT II for III and IV year	46	72		
16	Tue		47	73		
17	Wed		48	74	Class Test 3.1	
18	Thu	World Heritage Day	49	75		CAT II
19	Fri	R&D - Seminar on "Various Funding Opportunities"	50	76		
20	Sat	NSS - Service at Immunization and Health camp	51	77		
21	Sun	National Civil Services Day / Mahaveer Jayanthi				
22	Mon	World Earth Day	52	78		
23	Tue	Mid semester Feedback - III and IV year	53	79		
24	Wed	CSE, IT, CSBS & AIDS Conference	54	80		
25	Thu	Class Committee Meeting Week - III and IV year	55	81		
26	Fri	World Intellectual Property Day	56	82	Class Test 3.2	
27	Sat	Completion of Model review - III and IV year	57	83		
28	Sun	World Day for Safety and Health at Work YRC - Eye camp				
29	Mon	Coaching and Model Exam for III and IV year NSS - Tree Plantation Drive	58	84	CT 4.1	Coaching Model
30	Tue	Mentoring Report Submission - All years	59	85		



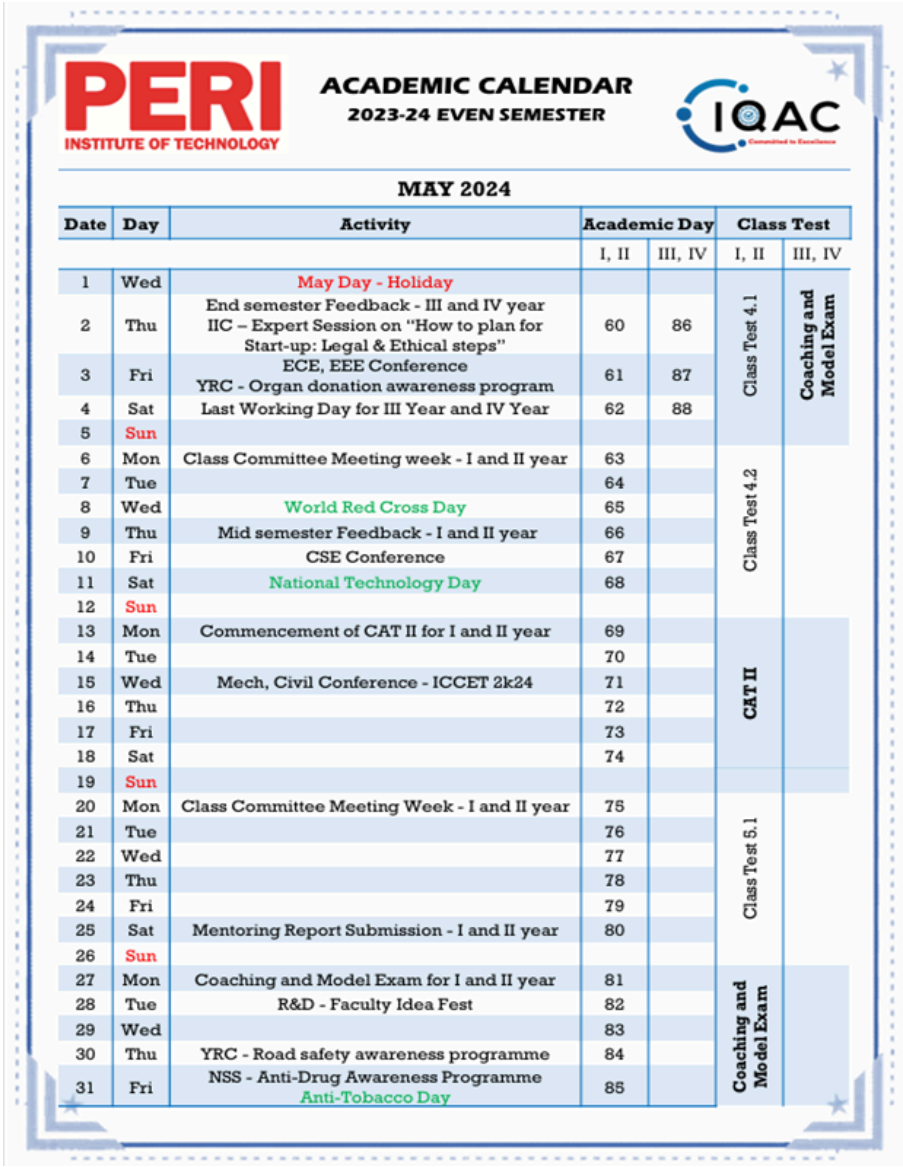
PERI INSTITUTE OF TECHNOLOGY

ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

MAY 2024

Date	Day	Activity	Academic Day		Class Test	
			I, II	III, IV	I, II	III, IV
1	Wed	May Day - Holiday				
2	Thu	End semester Feedback - III and IV year IIC – Expert Session on "How to plan for Start-up: Legal & Ethical steps"	60	86	Class Test 4.1	Coaching and Model Exam
3	Fri	ECE, EEE Conference YRC - Organ donation awareness program	61	87		
4	Sat	Last Working Day for III Year and IV Year	62	88		
5	Sun					
6	Mon	Class Committee Meeting week - I and II year	63			
7	Tue		64			
8	Wed	World Red Cross Day	65		Class Test 4.2	
9	Thu	Mid semester Feedback - I and II year	66			
10	Fri	CSE Conference	67			
11	Sat	National Technology Day	68			
12	Sun					
13	Mon	Commencement of CAT II for I and II year	69			
14	Tue		70			
15	Wed	Mech, Civil Conference - ICCET 2k24	71		CAT II	
16	Thu		72			
17	Fri		73			
18	Sat		74			
19	Sun					
20	Mon	Class Committee Meeting Week - I and II year	75			
21	Tue		76			
22	Wed		77			
23	Thu		78		Class Test 5.1	
24	Fri		79			
25	Sat	Mentoring Report Submission - I and II year	80			
26	Sun					
27	Mon	Coaching and Model Exam for I and II year	81			
28	Tue	R&D - Faculty Idea Fest	82			
29	Wed		83			
30	Thu	YRC - Road safety awareness programme	84		Coaching and Model Exam	
31	Fri	NSS - Anti-Drug Awareness Programme Anti-Tobacco Day	85			



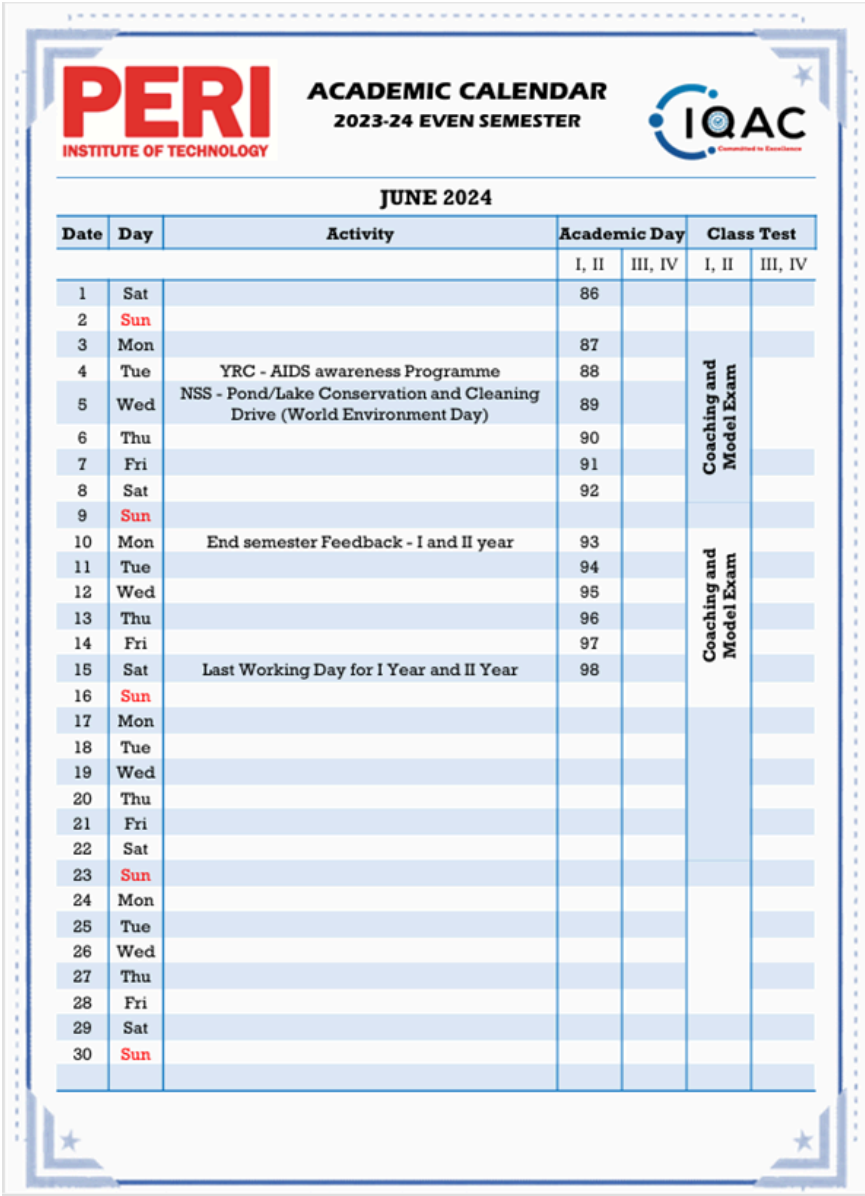
PERI INSTITUTE OF TECHNOLOGY

ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

MAY 2024

Date	Day	Activity	Academic Day		Class Test	
			I, II	III, IV	I, II	III, IV
1	Wed	May Day - Holiday			Class Test 4.1	Coaching and Model Exam
2	Thu	End semester Feedback - III and IV year IIC – Expert Session on "How to plan for Start-up: Legal & Ethical steps"	60	86		
3	Fri	ECE, EEE Conference YRC - Organ donation awareness program	61	87		
4	Sat	Last Working Day for III Year and IV Year	62	88		
5	Sun					
6	Mon	Class Committee Meeting week - I and II year	63		Class Test 4.2	
7	Tue		64			
8	Wed	World Red Cross Day	65			
9	Thu	Mid semester Feedback - I and II year	66			
10	Fri	CSE Conference	67			
11	Sat	National Technology Day	68			
12	Sun					
13	Mon	Commencement of CAT II for I and II year	69		CAT II	
14	Tue		70			
15	Wed	Mech, Civil Conference - ICCET 2k24	71			
16	Thu		72			
17	Fri		73			
18	Sat		74			
19	Sun					
20	Mon	Class Committee Meeting Week - I and II year	75		Class Test 5.1	
21	Tue		76			
22	Wed		77			
23	Thu		78			
24	Fri		79			
25	Sat	Mentoring Report Submission - I and II year	80			
26	Sun					
27	Mon	Coaching and Model Exam for I and II year	81		Coaching and Model Exam	
28	Tue	R&D - Faculty Idea Fest	82			
29	Wed		83			
30	Thu	YRC - Road safety awareness programme	84			
31	Fri	NSS - Anti-Drug Awareness Programme Anti-Tobacco Day	85			



PERI INSTITUTE OF TECHNOLOGY

ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

JUNE 2024

Date	Day	Activity	Academic Day		Class Test	
			I, II	III, IV	I, II	III, IV
1	Sat		86			
2	Sun					
3	Mon		87		Coaching and Model Exam	
4	Tue	YRC - AIDS awareness Programme	88			
5	Wed	NSS - Pond/Lake Conservation and Cleaning Drive (World Environment Day)	89			
6	Thu		90			
7	Fri		91			
8	Sat		92			
9	Sun					
10	Mon	End semester Feedback - I and II year	93		Coaching and Model Exam	
11	Tue		94			
12	Wed		95			
13	Thu		96			
14	Fri		97			
15	Sat	Last Working Day for I Year and II Year	98			
16	Sun					
17	Mon					
18	Tue					
19	Wed					
20	Thu					
21	Fri					
22	Sat					
23	Sun					
24	Mon					
25	Tue					
26	Wed					
27	Thu					
28	Fri					
29	Sat					
30	Sun					

Figure2.1 A : Academic Calendar of the Assessment year 2023-2024 –Even Semester

2.1.B) USE OF VARIOUS INSTRUCTIONAL METHODS AND PEDAGOGICAL INITIATIVES

The Department adopts a variety of instructional methods and pedagogical initiatives to enhance conceptual understanding, student engagement, critical thinking, and the practical application of engineering knowledge. Depending on the course requirements and learning outcomes, faculty members employ teaching approaches such as chalk-and-board instruction, presentations, multimedia resources, video lectures, demonstrations, seminars, case studies, group discussions, quizzes, and interactive classroom activities. Real-world examples and engineering

applications are incorporated into the teaching process to bridge the gap between theoretical concepts and practical implementation.

The Department identifies students requiring additional academic support, as well as students capable of undertaking advanced learning activities, through continuous assessment performance, classroom participation, faculty observations, practical work, and other academic records. Students who experience difficulties in understanding course concepts are provided with suitable academic support through remedial coaching, additional explanations, individual mentoring, practice exercises, and clarification of fundamental concepts.

Students demonstrating higher levels of academic achievement are encouraged to pursue advanced learning opportunities such as independent study, technical projects, advanced assignments, internships, participation in professional events, and skill development programmes. Faculty members continuously monitor the progress of both categories of learners through assessments, assignments, laboratory performance, project work, and classroom participation. Records of learner identification, remedial measures, advanced-learning activities, and subsequent performance are maintained wherever applicable. These initiatives ensure that every student receives appropriate academic support and opportunities for holistic growth.

2.1 B(i) Experiential Learning

The Department promotes experiential learning to enhance students creativity, problem-solving ability, practical knowledge, and professional competency. Students are encouraged to learn through hands-on experiences that complement classroom instruction.

Project-Based Learning:

Students undertake mini projects and major projects from the third year onwards. Through these projects, students develop skills in problem identification, idea generation, solution design, implementation, testing, and evaluation. Faculty mentors guide students throughout the project development process and provide continuous support to achieve the desired learning outcomes.

In addition, the Department facilitates the following experiential learning practices:

- **Internships** are provided to enable students to gain hands-on training and exposure to emerging technologies and industry practices.
- **Industrial Visits** are organized to provide practical exposure to industrial processes, equipment, and professional work environments.
- **Workshops, Seminars, Webinars, and Conferences** at national and international levels encourage students to interact with experts and gain exposure to recent technological developments.
- **Guest Lectures** by eminent academicians, researchers, and industry experts enrich the learning process by sharing practical insights and contemporary trends
- 

- **Figure.2.1 Bi) Field Visit to PERI Power transformers distribution unit , Mannivakkam.**



Figure. 2.1. B ii) Our Student presenting paper in external college

2.1 B (ii) ICT-Enabled Learning

The Department effectively integrates Information and Communication Technology (ICT) tools into the teaching-learning process to enhance student engagement and learning outcomes. In addition to traditional chalk-and-board teaching, faculty members utilize various ICT-enabled resources such as:

- PowerPoint presentations
- Interactive smart boards
- Video lectures and online learning resources
- Online quizzes and assignments
- Virtual laboratory platforms

These ICT tools facilitate interactive learning, improve conceptual understanding, and provide students with access to a wide range of learning resources. Interaction with experts and resource persons through online platforms enables students to gain broader perspectives on academic and professional topics. Virtual laboratories are also utilized, wherever applicable, to support better understanding of concepts and experimental procedures.

2.1 B (iii) Modern Teaching Tools

To enhance the effectiveness of classroom instruction, faculty members employ modern teaching tools and digital learning resources. Audio-visual content , demonstrations, and lectures by eminent academicians are integrated into the teaching process to improve understanding of complex concepts



Figure.2.1 B (iii) Usage of ICT Tool-Smart Board

Students are encouraged to utilize digital learning resources such as NPTEL lectures, simulation-based learning tools, and online assessment platforms. Online quizzes and assignments are regularly conducted to strengthen analytical and problem-solving skills while promoting self-directed learning.

2.1 B (iv) Online Courses and MOOCs

Students are encouraged to enroll in online courses offered through platforms such as NPTEL, SWAYAM, and other recognized learning portals. Eligible students may choose such courses as Professional Electives, Open Electives, or additional certification programmes subject to institutional regulations.

These courses provide opportunities for self-learning, exposure to emerging technologies, and acquisition of interdisciplinary knowledge. Faculty mentors guide students in course selection, learning strategies, and successful completion of the programmes.

2.1 B (v) Collaborative and Participative Learning

The Department promotes collaborative and participative learning practices to develop teamwork, communication, leadership, and interpersonal skills among students. Students actively engage in learning through:

- Group assignments
- Team-based project activities
- Peer learning sessions
- Group discussions
- Technical presentations
- Problem-solving exercises
- Student seminars

ICT-enabled learning platforms are utilized to share course materials, communicate academic requirements, and support collaborative learning activities. Guest lectures, technical workshops, industrial interactions, project-based learning activities, and departmental technical events provide additional opportunities for students to participate actively in the learning process and apply their knowledge in practical contexts.

The implementation of these pedagogical initiatives is documented through course files, lesson plans, attendance records, teaching materials, activity reports, project reports, student submissions, and other relevant records maintained by the Department.



Figure.2.1 B (iv) Faculty explaining with the kit



Figure 2.1 B (v) Collaborative learning - students attending quiz

2.1 C. SUPPORT TO STUDENTS BASED ON THEIR ABILITY

The department identifies students requiring additional academic assistance and students who are able to undertake advanced learning activities through assessment performance, classroom participation, faculty observations, and other available academic records. Students who experience difficulty in understanding course concepts are provided with suitable support, such as additional explanations, remedial sessions, individual guidance, practice exercises, and clarification of fundamental concepts.

Students who demonstrate stronger academic performance are encouraged to extend their learning through advanced assignments, independent study, technical activities, project work and participation in relevant academic programmes. Faculty members provide guidance according to the learning needs of students and review their progress through subsequent assessments, assignments, practical performance and classroom participation. Records of learner identification, remedial activities, advanced-learning opportunities, and follow-up performance are maintained wherever these activities are implemented. The support process aims to address learning difficulties and provide appropriate opportunities for students to strengthen their knowledge and skills.

Slow learner students are supported through remedial classes, foundation courses, personalized mentoring, and peer learning to bridge knowledge gaps and improve understanding. Advanced learners are encouraged by motivating them to maintain high academic performance, involving them in advanced projects, research, and co-curricular activities. Continuous monitoring, counseling, and feedback mechanisms ensure personalized guidance and growth for all students. This creates an inclusive, supportive learning environment that maximizes student potential and overall quality of teaching and learning.

Criteria for identifying slow learners and Corrective Actions

Criteria	Action taken
Students failed in the previous semester	Periodic counselling is given to the students having backlog subjects by mentors.
Student scoring less than 50 marks in Continuous Assessment Tests	Special coaching is provided after the class hour for their betterment

Criteria for identifying Advanced learners and developmental Actions

Methodology	Action taken
Class topper	Students are recognized in the college magazine
Student securing a CGPA of 7.5 and above	Motivating them to attend workshops, conferences, and symposiums Encouraging and guiding them to publish papers in reputed journals

2.1 D. Quality of Classroom Teaching

Classroom teaching is planned with reference to the prescribed syllabus, course outcomes, lesson plans and the academic schedule. Faculty members select teaching methods and learning resources appropriate to the nature of the subject and the expected level of student understanding. Classroom explanations are supported, wherever appropriate, by worked examples, illustrations, demonstrations, real-life applications, questions and discussions to encourage active participation.

Student engagement is promoted through interaction during lectures, clarification of doubts, short assessment activities, assignments and discussions related to the topics taught. Faculty members monitor the progress of syllabus coverage and use assessment performance and classroom observations to identify topics requiring further explanation or practice. The quality of classroom teaching is supported by lesson plans, course materials, assessment records, classroom activity records and other available evidence. The effectiveness of teaching methods should be demonstrated through documented examples of student participation, understanding and performance rather than through general statements alone.

2.1 E. Conduct of Experiments

Laboratory learning provides students with opportunities to apply theoretical concepts, follow experimental procedures, use the prescribed equipment or software, record observations and analyse results. Laboratory sessions are conducted according to the applicable syllabus, laboratory schedule and prescribed experimental requirements. Faculty members and laboratory staff provide the necessary instructions concerning experimental procedures, equipment handling, safety requirements and the preparation of laboratory records, as applicable.

Students are expected to perform the prescribed experiments, record observations systematically, interpret results and prepare laboratory records. Faculty members assess practical work through observation of experimental performance, verification of records, viva voce, practical assessments and other prescribed methods. Wherever applicable, laboratory exercises are supplemented by additional practice, application oriented tasks and exposure to relevant tools or technologies. Laboratory manuals, completed observation records, experiment assessments, practical examination records and available student work provide evidence of the quality of laboratory learning.

Review and Continuous Improvement

The department reviews the implementation of teaching-learning activities using available academic records, including academic calendars, lesson plans, assessment results, remedial-session records, classroom activities and laboratory performance. The review helps identify areas in which additional explanation, practice or changes in teaching methods may be required. The department should document specific examples showing how the findings from assessment or faculty review led to corrective action and how the subsequent performance was examined. This process supports the continuous improvement of classroom instruction, laboratory learning and academic support for students.

2.2 Quality of Student Capstone Project (25)

Institute Marks : 25.00

The department follows a structured process for the identification, allocation, execution, monitoring and evaluation of student capstone or major projects. The project work provides students with an opportunity to apply the knowledge acquired through coursework to engineering problems and application-oriented tasks. The departments project process includes faculty guidance, periodic review, assessment of technical progress and evaluation of the completed work. Project activities are planned in accordance with the applicable University regulations and institutional academic requirements during the assessment period.

2.2 A. Identification of Capstone/Major Project and Allocation of Guides:

The project process begins with the identification of suitable project areas and the selection of topics in accordance with the students academic background, programme requirements and available technical resources. Students identify project problems individually or in teams, as permitted by the applicable regulations. Faculty members provide guidance in refining the problem statement, defining objectives, determining the proposed methodology and identifying the expected outcomes.

Project guides are allocated by the department based on the project area, faculty expertise, workload and availability, following the departments established procedure. The allocated guide supports students in preparing the project proposal, planning the work, identifying the resources required and establishing a schedule for implementation. The project title, team details, guide allocation, objectives and approved proposal are documented through the relevant departmental records.

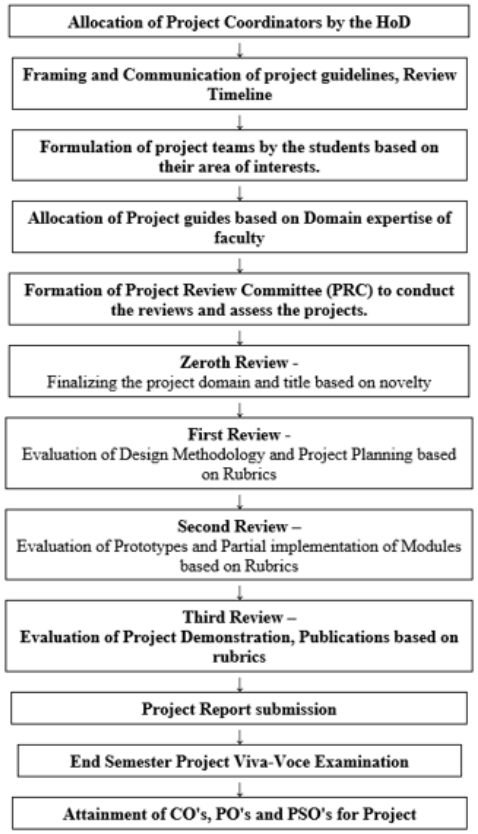


Figure 2.2 a) Flowchart of Student Capstone Project Workflow

2.2 B. Types and Relevance of Projects and Contribution towards PO/PSO Attainment

Student projects may address application-oriented problems, product or prototype development, research-based investigations, design and development activities, or other project categories relevant to the programme. The project topic is examined with reference to its technical relevance, feasibility, expected learning outcomes and relationship to the knowledge and skills prescribed in the curriculum. Wherever appropriate, projects are selected with reference to problems encountered in industry, society, engineering practice or emerging technological areas.

The department examines the relationship between the project objectives and the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The mapping should be supported by a clear explanation of the knowledge, design, investigation, problem-solving, teamwork, communication or other relevant competencies demonstrated through the project. The project proposal and evaluation records should establish the basis for the mapping rather than relying on a general statement that every project contributes equally to all outcomes. The department maintains project titles, classifications, objectives, relevant PO/PSO mappings and supporting justifications in the prescribed records.

2. **C. Continuous Monitoring Process**

Project progress is monitored by the assigned faculty guide and the departmental project review mechanism. Students present their work at scheduled review stages, as prescribed by the applicable project guidelines. The reviews examine the progress achieved against the approved objectives, the adequacy of the proposed methodology, the use of technical resources, difficulties encountered and the plan for the next stage of work.

Faculty guides provide suggestions for resolving technical issues and improving the quality of the work. Review committees, wherever constituted, assess the progress and provide feedback in accordance with the prescribed evaluation procedure. Students are expected to incorporate relevant suggestions and demonstrate progress at subsequent reviews. Project review schedules, attendance, progress presentations, review marks, guide meeting records and feedback or corrective-action records provide evidence of continuous monitoring. The frequency of reviews and the actual review procedure should be reported in accordance with the departments documented practice.

2.2 D. Quality of Completed Projects, Working Models and Prototypes

The completed project is evaluated with reference to the approved objectives, technical soundness, implementation or experimental results, documentation, demonstration and the extent to which the proposed problem has been addressed. Where a working model, prototype, software application, design or experimental setup is developed, its functioning and performance are examined using appropriate criteria. Projects that involve analysis or investigation are evaluated with reference to the methodology, data or evidence used, interpretation of results and conclusions.

The department also considers relevant engineering responsibilities in project selection, design and execution. These include environmental implications, sustainability, safety, ethical considerations, estimated or actual cost, applicable technical standards and the responsible use of data, materials and resources, as relevant to the nature of each project. These considerations should be demonstrated through the project report, design decisions, testing records, cost estimates, risk or safety considerations and other appropriate evidence. The final evaluation considers the quality of the completed work and the extent to which the project demonstrates the intended technical and professional competencies.

Review and Improvement of the Project Process:

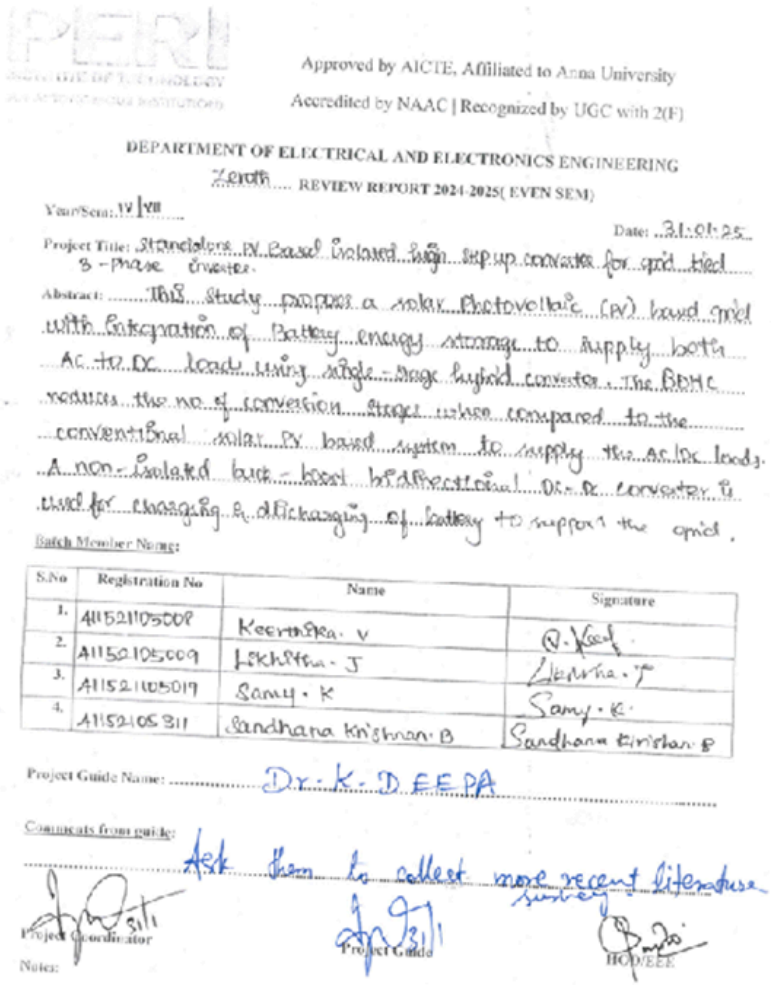
The department reviews the project process through project proposals, guide allocation records, progress reviews, final evaluation results, project reports and demonstrations. The review helps identify recurring difficulties in topic selection, resource availability, implementation, documentation and technical performance. Where review findings lead to changes in guidance, project planning or evaluation, the department documents the action taken and the relevant evidence. Completed projects and their documented PO/PSO relationships provide a basis for examining the contribution of project work to the intended programme outcomes.

Table 2.2 Capstone Projects mapped with POs and PSOs

S.no	Project Title	Type	Factors	POs, PSOs addressed
CAY **Academic Year2024-2025**				
1.	Dandalen Optimizer based reinforcement learning for RBFNN MPPT in grid connected Photovoltaic systems	Application	Sustainability, Environment,	PO1, PO2, PO3, PO5, PO7, PO10.PO11, PSO1, PSO2, PSO3
2.	Enhancing electric vehicles charger efficiency through improved PFC isolated isolated SEPIC Luo converter	Product	Sustainability, Environment,	PO1, PO2, PO3, PO5, PO7, PO10,PO11; PSO1, PSO2

3.	TITO Non isolated Isolated converter for renewable energy application	Product	Sustainability, Environment,	PO1, PO2, PO3, PO4, PO5, PO7,PO8,PO9, ,PO10, PO11; PSO1, PSO2
4.	Standalone PV based Isolated high step up converter for grid tied three phased inverter	Product	Sustainability, Environment,	PO1, PO2, PO3, PO5, PO7 ,PO8,PO9,PO11; PSO1, PSO2
5.	Design of novel hybrid system with solar integrated wind turbine blades	Research& Product	Sustainability, Environment,	PO1, PO2, PO3,PO4, PO5, PO7, PO8,PO9, PO11; PSO1, PSO2, PSO3
6.	High performance onboard charger for Electric Vehicles with Integrated multifunctional capabilities	Product	Sustainability, safety, Environment,	PO1, PO2, PO3, PO5, PO7, PO8,PO9,PO10,PO11; PSO1, PSO2
7.	Standalone solar PV based DC microgrid For EV charging	Product	Sustainability, safety , Environment,	PO1, PO2, PO3, PO5, PO7, PO8,PO9, PO10, PO11; PSO1, PSO2
CAY m1 **Academic Year2023-2024**				
1.	Single Stage Solar PV Fed Brushless DC Motor driven Water Pump	Product	Sustainability, Environment,	PO1, PO2, PO3, PO5, PO7 , PO8, PO9, ,PO10,PO11; PSO1, PSO2
2.	Voltage powered Aqua Debris Eradicator	Product	Sustainability, Environment,	PO1, PO2, PO3, PO5, PO6, PO7, PO8,PO9 ,PO10, PO11; PSO1, PSO3
3.	Transmission Line Inspection by using Hanging Robot	Product	Sustainability, Environment,	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO9, ,PO10, PO11; PSO1, PSO2
4.	Electric Vehicle Charging using Flexible energy sources	Product	Sustainability, safety, Environment,	PO1, PO2, PO3, PO5, PO7, PO8,PO9, PO11; PSO1, PSO2
5.	A Novel Approach with MIMO Control-Based Interleaved Second Order Buck Converter For EV Charging Application	Application	Sustainability, Environment,	PO1, PO2, PO3, PO4, PO5, PO7, PO8,PO9, PO11; PSO1, PSO2

6.	AI Based Wireless data Station for EV	Application	Sustainability, Environment,	PO1, PO2, PO3, PO5, PO6, PO8,PO9, PO11; PSO1, PSO2, PSO3
7.	Last-Mile Voltage Stability Enhancement Using Smart Meters	Product	Sustainability, Environment,	PO1, PO2, PO3, PO5, PO7, PO8,PO9, PO11; PSO1, PSO2
8.	Priority Based EV Charging System	Application	Sustainability, Safety, Environment,	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9,PO11; PSO1



Approved by AICTE, Affiliated to Anna University

Accredited by NAAC | Recognized by UGC with 2(F)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Zeroth REVIEW REPORT 2024-2025(EVEN SEM)

Year/Sem: IV / VII

Date: 31.01.25

Project Title: Stanislaers PV Based Isolated high step up converter for grid tied 3-Phase inverter.

Abstract: This study proposes a solar Photovoltaic (PV) based grid with integration of battery energy storage to supply both AC to DC load using single-stage hybrid converter. The SBHC reduces the no of conversion stages when compared to the conventional solar PV based system to supply the AC/DC loads. A non-isolated buck-boost bidirectional DC-DC converter is used for charging & discharging of battery to support the grid.

Batch Member Name:

S.No	Registration No	Name	Signature
1.	411521105008	Keerthika. V	Q. Keerthika
2.	411521105009	Lakshna. J	Lakshna. J
3.	411521105019	Samy. K	Samy. K.
4.	411521105311	Sandhana krishnan. B	Sandhana krishnan B

Project Guide Name: Dr. K. DEEPA

Comments from guide:

Ask them to collect more recent literature survey

Project Coordinator 31/1

Project Guide 31/1

HOD/EEE

Note:

Will this following document have to attached:

- Reference paper hard copy
- PPT hard copy

Figure 2.2 a) Sample Zeroth Review Report

2.3 Internship/Industrial Training (10)

Institute Marks : 10.00

The department facilitates students' exposure to professional engineering practice through internships and industrial training undertaken in industries, organisations, research establishments and other relevant professional settings. These activities are intended to help students understand the practical application of concepts studied in the curriculum, gain exposure to workplace practices, and develop technical, communication, teamwork and professional skills.

The process includes identifying suitable training opportunities, communicating relevant information to students, facilitating applications and placements wherever applicable, obtaining the necessary approvals, and collecting supporting documents after completion. The department maintains records of students who participated, the organisations in which they undertook training, the training area, duration, and completion status. The nature and extent of these activities are reported on the basis of verifiable departmental records for the assessment period.

2.3 A. Process of Internship for Students

The department follows a documented process for facilitating internships and industrial training. Relevant opportunities are communicated to students, and students are guided in selecting training opportunities that are appropriate to their programme of study and technical interests. Wherever applicable, the department coordinates with the Training and Placement Cell, industry representatives and other relevant organisations to facilitate suitable opportunities.

The department records the organisation's name, training area, duration, student details and completion status. Supporting documents may include permission letters, completion certificates, training reports, and feedback forms.

The department reviews the participation and completion records to ensure that the reported activities are supported by documentary evidence.

2. **B. Mapping of Industrial Training / Internships with POs and PSOs**

The department examines the learning achieved through each internship activity and relates it to the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The mapping is based on the training objectives, work assigned to students, technical activities performed, skills developed and learning documented in the internship report or completion assessment.

The department maintains a mapping statement with a brief justification for the outcomes selected. The mapping is checked against the internship objectives, student reports and available assessment records to ensure that it reflects actual learning rather than a uniform mapping applied to every student. The evidence demonstrates the connection between industrial exposure and the expected programme outcomes.

2. **C. Student Feedback on Internships and Its Analysis**:

Student feedback is collected, wherever available, to evaluate the usefulness and quality of the internship experience. Feedback may address the relevance of the training to the programme, opportunities for practical learning, exposure to current technologies and workplace practices, guidance provided by the organisation, duration and overall learning experience.

The department consolidates the feedback received and analyses the responses to identify strengths, recurring difficulties and areas requiring improvement. The analysis may identify the need for more relevant training opportunities, better coordination with organisations, clearer training objectives, improved student preparation or closer monitoring during the training period.

Where the analysis identifies improvement needs, the department records the actions proposed or taken and reviews their implementation in subsequent activities. Feedback summaries, analysis sheets, meeting minutes and action-taken records are retained as applicable. Claims regarding satisfaction levels, improvements or the effectiveness of actions are included only when supported by the corresponding records.

Review and Continuous Improvement

The department reviews internship and industrial training records periodically to identify participation gaps, assess the relevance of training areas, verify PO/PSO mapping and examine student feedback. The findings are used to improve the identification of training opportunities, student guidance, documentation and coordination with organisations. The department maintains traceability between student participation, training completion, outcome mapping, feedback analysis and the improvement actions recorded during the assessment period.

Table 2.3 a) Student Internship details in various academic years

	Academic Year		
	2024-2025	2023 – 2024	2022-2023
Percentage of students undergone internship in II Year	87.5%	85.18%	84.37%
Percentage of students undergone internship in III Year	73.9%	91.66%	65.78%
Percentage of students undergone internship in IV Year	78.2%	14.28%	58.33%
Average	79.6%	63.70%	69.49%

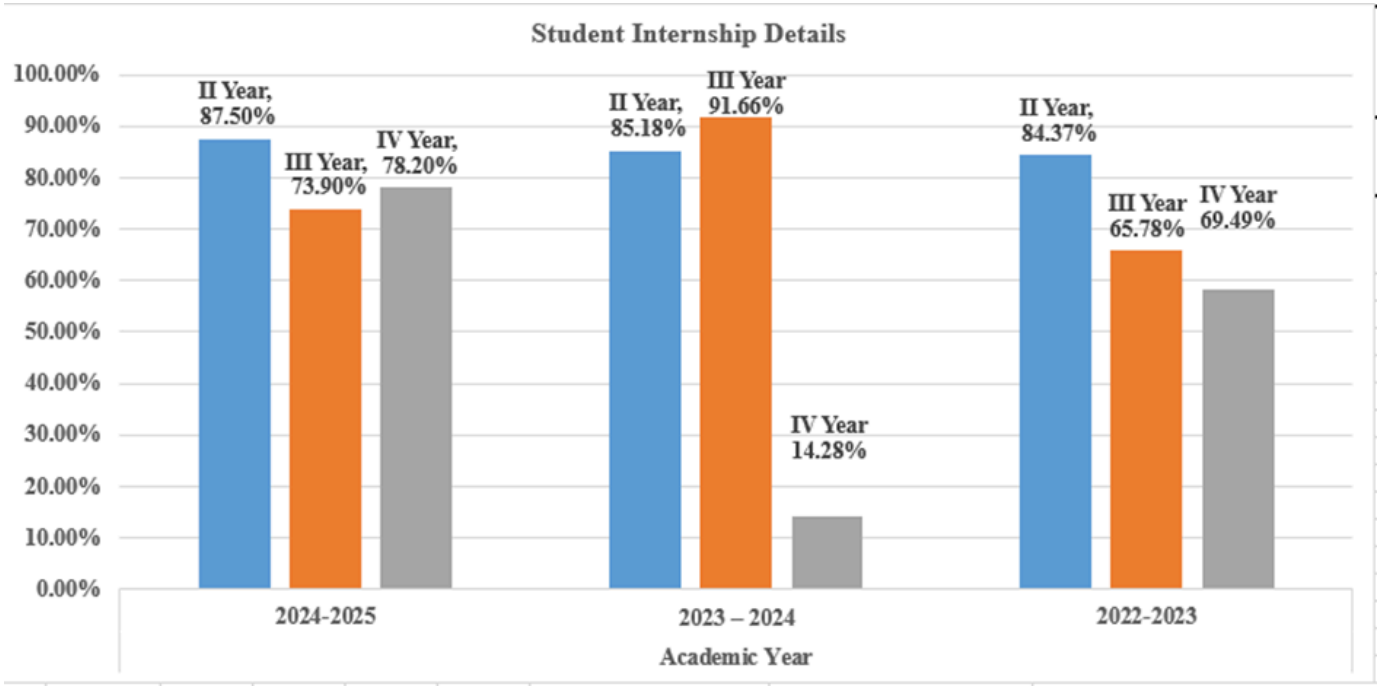


Figure 2.3 a) Student Internship Participation details across each academic year

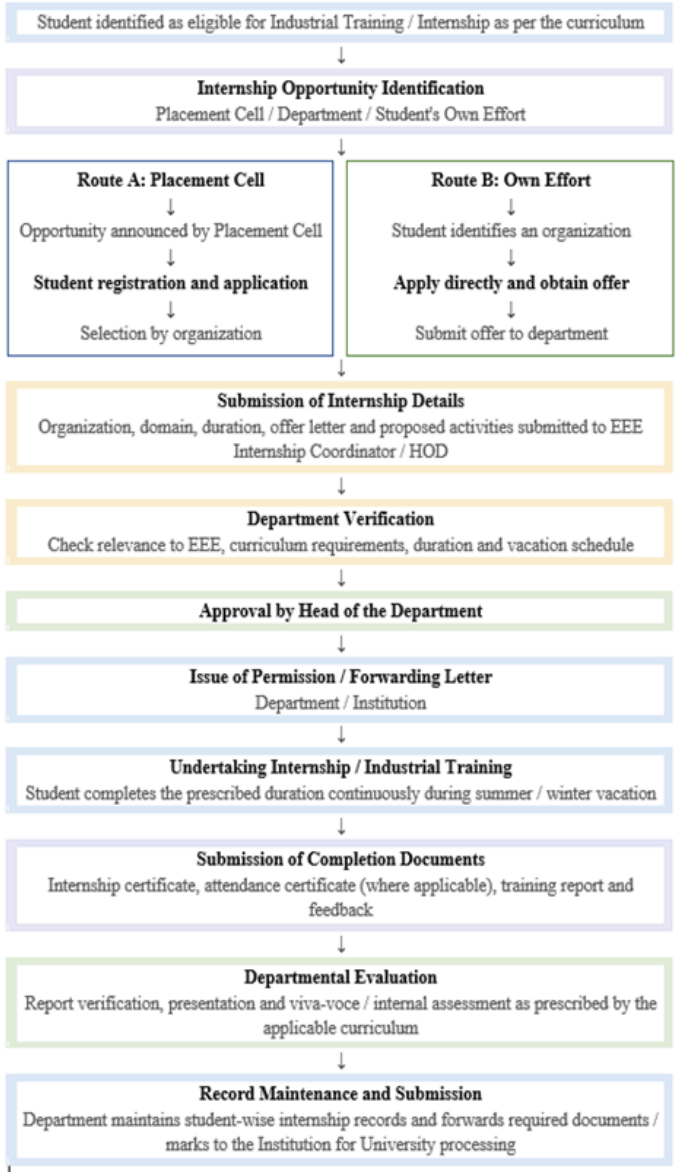


Figure 2.3 b): SOP Flowchart for Internship/Industrial Training

Table 2.3 b) Internship training of students mapped with POs and PSOs

S. No	Name of the student	Company Name	Date	POs/PSOs addressed	Rationale for PO/PSO Mapping
CAY Academic Year 2024-2025					
1.	Aathinarayanan	Madras Fertilizers limited, Chennai	18//11/24 to 7/12/24	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Practical exposure to industrial processes, electrical equipment, maintenance practices, and real-world plant operations in a process industry environment.
2.	Deepika	Kaashiv Infotech, Chennai	20/01/25 to 01/02/25	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Practical exposure to MATLAB for modeling, simulation, and analysis of engineering systems, enhancing problem-solving and technical skills
3.	Dinesh.G	Voltech Manufacturing Company, Kanchipuram	21/07/25 to 28/07/25	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Exposure to electrical equipment manufacturing, production processes,
4.	Mathankumar	Madras Fertilizers limited, Chennai	18//11/24 to 7/12/24	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Practical exposure to industrial processes, electrical equipment, maintenance practices, and real-world plant operations in a process industry environment.
5.	Mohanperumal	Codebind Technologies, Chennai	13/11/24 to 27/11/24	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Practical exposure to microcontrollers, embedded programming, and hardware-software integration
6.	Prakash BP	Approtech R&D Solutions Pvt Ltd, Chennai	09/07/25 to 25/07/25	PO1, PO2, PO3, PO5, PO6, PO11, PSO1	Practical exposure on embedded systems

7.	Raghul	Codebind Technologies, Chennai	13/11/24 to 27/11/24	PO1,PO2, PO3, PO5, PO6, PO11, PSO1	Practical exposure to microcontrollers, embedded programming, and hardware-software integration
8.	Saraswathi	Codebind Technologies, Chennai	13/11/24 to 27/11/24	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Practical exposure to microcontrollers, embedded programming, and hardware-software integration
9.	Sarumathi	Kaashiv Infotech, Chennai	20/01/25 to 01/02/25	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Practical exposure to MATLAB for modeling, simulation, and analysis of engineering systems, enhancing problem-solving and technical skills
10.	Sathya	Kaashiv Infotech, Chennai	20/01/25 to 01/02/25	PO1,PO2, PO3, PO5,PO6, PO11,PSO1	Practical exposure to MATLAB for modeling, simulation, and analysis of engineering systems, enhancing problem-solving and technical skills
11.	Sowmya.M	AB Technologies , Tambaram West, Chennai	11/11/24 To 21/11/24	PO1,PO2, PO3, PO5, PO9, PO11,PSO1	Hands-on experience in applying MATLAB for electrical system modeling, simulation, analysis, and problem-solving
12.	Surya B	Suven Consultants and Technology Pvt Ltd	20/01/25 to 01/02/25	PO1,PO2, PO3, PO5, PO9, PO11,PSO1	Practical knowledge in web page development, styling, and responsive user interface design.
13.	Vijayalakshmi. M	AB Technologies, Tambaram West, Chennai	11/11/24 to 21/11/24	PO1,PO2, PO3,PO5, PO9,PO11, PSO1	Hands-on experience in applying MATLAB for electrical system modeling, simulation, analysis, and problem-solving

14.	Balaji.R	AB Technologies, Tambaram West, Chennai	11/11/24 to 21/11/24	PO1,PO2, PO3,PO5 ,PO9, PO11 , PSO1	Hands-on experience in applying MATLAB for electrical system modeling, simulation, analysis, and problem-solving
15.	Vishnu.J	AB Technologies, Tambaram West,Chennai	11/11/24 To 21/11/24	PO1,PO2, PO3,PO5, PO9, PO11,PSO1	Hands-on experience in applying MATLAB for electrical system modeling, simulation, analysis, and problem-solving
16.	Vishnu R	Suven Consultants and Technology Pvt Ltd	20/01/25 to 01/02/25	PO1,PO2, PO3, PO5, PO9, PO11,PSO1	Practical knowledge in web page development, styling, and responsive user interface design.
17.	Murali.S	Kritilabs Technologies PvtLtd,Chennai	16/08/24 to 16/09/24	PO1,PO2, PO3, PO6, PO11, PSO1	Exposure to automotive component manufacturing, production processes, quality assurance practices, and industrial engineering operations
18.	Saravanan.K	Kritilabs Technologies Pvt Ltd, Chennai	16/08/24 to 16/09/24	PO1,PO2, PO3,PO5, PO11, PSO1, PSO2	Worked on PCB design and testing, applying core electrical knowledge and tools.
19.	Priyanka M	Avalon technologies private Ltd	20/01/25 to 20/02/25	PO1,PO2, PO3,PO5, PO11,PSO1	Participated in Embedded system testing and data analysis using modern tools.
20.	Thivya	Excelencia, Chennai	04/03/25 To 25/04/25	PO1,PO2, PO3,PO5, PO11,PSO1,PSO2	Practical exposure to cloud computing and iot

21.	Ashish	Kritilabs Technologies PvtLtd, Chennai	16/08/24 to 16/09/24	PO1,PO2, PO3,PO5, PO11, PSO1, PSO2	Worked on PCB design and testing, applying core electrical knowledge and tools.
22.	Bubesh.S	Kritilabs Technologies Pvt Ltd, Chennai	16/08/24 to 16/09/24	PO1,PO2, PO3,PO5, PO11, PSO1, PSO2	Worked on PCB design and testing, applying core electrical knowledge and tools. electrical knowledge and tools.
23.	Divya.R	Excelencia, Chennai	04/03/25 to 25/04/25	PO1,PO2, PO3,PO5, PO11,PSO1,PSO2	Practical exposure to cloud computing and iot
24.	Kaviya.M	Avalon technologies private Ltd	20/01/25 to 20/02/25	PO1,PO2, PO3,PO5, PO11,PSO1	Participated in Embedded system testing and data analysis using modern tools.
25.	Keerthika.V	Avalon technologies private Ltd	20/01/25 to 20/02/25	PO1,PO2, PO3,PO5, PO11,PSO1	Participated in Embedded system testing and data analysis using modern tools.
26.	Nikitha	Avalon technologies private Ltd	20/01/25 to 20/02/25	PO1,PO2, PO3,PO5, PO11,PSO1	Participated in Embedded system testing and data analysis using modern tools.
27.	Pothigachalam. U	Kaizen Futuretech, Mumbai (Online)	22/01/25 to 12/01/25	PO1,PO2, PO3,PO5, PO11,PSO1	Practical Simulation to IoT
28.	Sabitha	Avalon technologies private Ltd	20/01/25 to 20/02/25	PO1,PO2, PO3,PO5, PO11,PSO1	Participated in Embedded system testing and data analysis using modern tools.
29.	Samy	Enthu Technology Solutions India Pvt Ltd	22/01/25 to 12/01/25	PO1,PO2, PO3,PO5, PO11,PSO1	Practical exposure to sensor integration, data communication, and smart system development.

30.	Shashidharan	Enthu Technology Solutions India Pvt Ltd	22/01/25 to 12/01/25	PO1,PO2, PO3,PO5, PO11,PSO1	Practical exposure to sensor integration, data communication, and smart system development.
31.	Nisha	Kaizen Futuretech, Mumbai (Online)	22/01/25 to 12/01/25	PO1,PO2, PO3,PO5, PO11,PSO1	Practical Simulation to IoT
32.	Varunraj	Kaizen Futuretech, Mumbai	22/01/25 to 12/01/25	PO1,PO2, PO3,PO5, PO11,PSO1	Practical Simulation to IoT
33.	Vinayagamoorthy	Kaizen Futuretech, Mumbai	22/01/25 to 12/01/25	PO1,PO2, PO3,PO5, PO11,PSO1	Practical Simulation to IoT
34.	Durga.D	Kasa Anlagen, Chennai	08/07/25 to 22/07/25	PO1,PO2, PO3,PO5, PO6, PO11, PSO1	Practical exposure to manufacturing processes, production planning
35.	Pavithra.S	Just Connect Electricals, Chennai	11/07/25 to 09/08/25	PO1,PO2,PO3,PO5,PO11, PSO1	Practical exposure to electrical installation, testing
36.	Bel Bento Rajan	Just Connect Electricals, Chennai	11/07/25 to 09/08/25	PO1, PO2, PO3, PO5, PO11, PSO1	Practical exposure to electrical installation, testing
37.	Reshma.C	Just Connect Electricals, Chennai	09/07/25 to 07/08/25	PO1, PO2, PO3, PO5, PO11, PSO1	Practical exposure to electrical installation, testing
38.	kanimozhi	Kasa Anlagen, Chennai	08/07/25 To 22/07/25	PO1, PO2, PO3, PO5, PO11, PSO1	Practical exposure to manufacturing processes, production planning
39.	Vallaarasu .S	NLC India Limited, Neyveli	14/07/25 to 31/07/25	PO1, PO2, PO3, PO6, PO11, PSO1	Practical exposure to thermal power generation, renewable energy systems, electrical maintenance, and large-scale utility operations.

40.	Vijiyalakshn,i. M	Nokia Solutions and Networks India Pvt Ltd, Kanchipuram	22/07/25 to 03/08/25	PO1,PO2, PO3,PO5, PO11,PSO1	Exposure to Advanced Communication Technologies, Network Infrastructure, Automation, And Industry-Oriented Engineering Practices
41.	Vinitha.S	Nokia Solutions and Networks India Pvt Ltd, Kanchipuram	22/07/25 to 03/08/25	PO1,PO2, PO3,PO5,PO11, PSO1	Exposure to Advanced Communication Technologies, Network Infrastructure, Automation, And Industry-Oriented Engineering Practices
42.	Joyel Roy	Tamilnadu Power Distribution Corporation limited	16/07/25 to 05/08/25	PO1,PO2, PO3,PO6, PO11,PSO1	Knowledge on electrical components and its working of 110/33-11KV substation
CAY m1 **Academic Year 2023-2024**					
1.	AshishJ	Retech Solutions, Tambaram West, Chennai Pvt. Ltd	29/07/24 to 11/08/24	PO1, PO2, PO3, PO5, PO11, PSO1	Assisted in laser system Calibration and teamwork-based troubleshooting.
2.	BubeshS	Retech Solutions, Tambaram West, Chennai Pvt. Ltd	29/07/24 to 11/08/24	PO1, PO2, PO3, PO5, PO11, PSO1	Assisted in laser system calibration and teamwork-based troubleshooting.
3.	DivyaR	H20Shield, Ezhichur	27/07/24 to 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Engaged in water purification system design with sustainability and ethical focus.
4.	KaviyaM	H20Shield, Ezhichur	27/07/24 To 11/08/24	PO1, PO2, PO3, PO5, PO6,PO8, PO11, PSO1	Engaged in water purification system design with sustainability and ethical focus.
5.	KeerthikaV	Let’s Gametech	28.07.24 to 11.08.24	PO1, PO2 , PO3, PO5, PO6, PO8, PO11, PSO1, PSO2	Applied electrical principles in gaming hardware integration and learned emerging tech.

6.	Likhitha J	Pactron India Company	29.07.24 to 11.08.24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.
7.	MuraliS	Retech Solutions Pvt. Ltd, Chennai	29/07/24 to 11/08/24	PO1,PO2, PO3, PO5, PO11, PSO1	Assisted in laser system calibration and teamwork-based troubleshooting.
8.	NikithaN	H20Shield, Ezhichur	27/07/24 To 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Engaged in water purification system design with sustainability and ethical focus.
9.	NishaB	H20Shield, Ezhichur	27/07/24 to 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Engaged in water purification system design with sustainability and ethical focus.
10.	Pothigachalam U	Retech Solutions Pvt. Ltd, Chennai	29/07/24 to 11/08/24	PO1,PO2, PO3,PO5, PO6,PO8, PO11, PSO1	Assisted in laser system calibration and teamwork-based troubleshooting.
11.	Priyanka M	H2Oshield, Ezhichur	27/07/24 To 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Engaged in water Purification system design with sustainability and ethical focus.
12.	Sabitha S	Pactron India Company, Chennai	29/07/24 to 11/08/24	PO1,PO2, PO3,PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.
13.	Samy K	Pactron India Company, Chennai	29/07/24 to 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.
14.	Saravanan K	Pactron India Company, Chennai	29/07/24 To 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.
15.	Shasidharan K	Retech Solutions, Tambaram West, Chennai Pvt. Ltd	29/07/24 to 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Practical exposure to sensor interfacing, embedded systems, smart device connectivity, data acquisition, and IoT-based automation solutions in real-world applications
16.	Sivaraj R	Pactron India Company, Chennai	29/07/24 to 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.

17.	Varunraj G	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Contributed to industrial panel wiring and project coordination.
18.	VinayagaMoorthyM	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Contributed to industrial panel wiring and project coordination.
19.	Kamaraj	Pactron India Company, Chennai	29/07/24 to 11/08/24	PO1, PO2 , PO3, PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.
20.	Sandhanakrishnan B	Pactron India Company, Chennai	29/07/24 to 11/08/24	PO1,PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.
21.	Sethuraman A	Pactron India Company	29/07/24 To 11/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Worked on PCB layout and testing, applying core electrical knowledge and tools.
22.	Prasanth K	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 To 07/0/24	PO1,PO2, PO3, PO6, PO8, PO11, PSO1	Contributed to industrial panel wiring and project coordination.
23.	Aathinarayanan .G	Covai Electricals, Guindy, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance
24.	Deepika .M	Covai Electricals, Guindy, Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance.
25.	Dinesh.G	Covai Electricals, Guindy, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance, aligning with the Electrical Power Distribution and Backup Power Systems

26.	MathanKumarP	Covai Electricals, Guindy, Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance, aligning with the Electrical Power Distribution and Backup Power Systems
27.	Mohanperumal. R	Covai Electricals, Guindy, Chennai	27/07/24 To 07/08/24	PO1,PO2, PO3, PO6, PO8, PO11,PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance, aligning with the Electrical Power Distribution and Backup Power Systems
28.	S.Nithish	Covai Electricals, Guindy, Chennai	27/07/24 To 07/08/24	PO1,PO2, PO3, PO6, PO8, PO11,PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance, aligning with the Electrical Power Distribution and Backup Power Systems
29.	PrakashBP	Covai Electricals, Guindy, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance.
30.	Raghul.B	Covai Electricals, Guindy, Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance, Power Systems
31.	Saranya.N	Covai Electricals, Guindy, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance.
32.	Saraswathi.S	Covai Electricals, Guindy, Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance.

33.	M Sarumathi	Covai Electricals, Guindy, Chennai	27/07/24 to 07/08/24	PO1,PO2, PO3, PO6, PO8, PO11,PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance.
34.	Sathya.K	Covai Electricals, Guindy, Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance.
35.	Sibiraj.S	Covai Electricals, Guindy, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Practical exposure to LT panel distribution systems, electrical power distribution networks, and UPS installation and maintenance.
36.	SowmyaM	Easa Krupa Engineering Private Limited, Thiruvanmiyur, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
37.	Surya.B	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 to 07/08/24	PO1, PO2 , PO3, PO5, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
38.	Thulasikothandan	Easa Krupa Engineering Private Limited, Thiruvanmiyur, Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO5, PO6,PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
39.	M.Vijiyalakshmi	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 to 07/08/24	PO1,PO2, PO3, PO5, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
40.	Vinitha	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
41.	Balaji.R	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 To 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.

42.	Gurumoorthi. D	Easa Krupa Engineering Private Limited, Thiruvanmiyur, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
43.	P.Prasanth	Easa Krupa Engineering Private Limited, Thiruvanmiyur,Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
44.	VishnuJ	Easa Krupa Engineering Private Limited, Thiruvanmiyur, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
45.	VishnuR	Easa Krupa Engineering Private Limited, Thiruvanmiyur, Chennai	27/07/24 to 07/08/24	PO1, PO2, PO3, PO6, PO8, PO11, PSO1, PSO2	Contributed to industrial panel wiring and project coordination.
46.	Gokul.S	Unipres India Pvt Ltd.,Chennai	20/01/24 to 20/02/24	PO1, PO2, PO3, PO8, PO11,PSO1	Workedonautomation And manufacturing systems
47.	Jayanthan	Pactron India Company, Chennai	22/01/24 to 08/02/24	PO1, PO2, PO3, PO5, PO11, PSO1,PSO2	Worked on PCB design and testing, applying core electrical knowledge and tools.
48.	Kingslin	Pactron India Company, Chennai	22/01/24 to 08/02/24	PO1, PO2, PO3, PO5, PO11, PSO1 , PSO2	Worked on PCB design and testing, applying core electrical knowledge and tools.
49.	Velu.P	H2O Shield, Ezhichur	20/01/24 To 20/02/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Engaged in water purification system design with sustainability and ethical focus.
50.	Venkatesh.M	H2O Shield, Ezhichur	20/01/24 to 20/02/24	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Engaged in water purification system design with sustainability and ethical focus.
51.	Likhitha J	Retech Solutions Pvt Ltd, Chennai	20/01/24 to 05/02/24	PO1, PO2, PO3, PO5, PO8, PO11, PSO1	Practical exposure to Python-based application development, programming logic, automation, data handling, and problem-solving techniques

52.	Sandhanakrishnan.B	Retech Solutions Pvt Ltd, Chennai (online)	12/02/24 to 01/03/24	PO1, PO2, PO3, PO5, PO8, PO11, PSO1	Practical exposure to microcontroller programming, embedded hardware design, interfacing techniques, real-time applications,
53.	Prasanth.K	Pactron India Company, Chennai	22/01/24 to 08/02/24	PO1, PO2, PO3, PO5, PO8, PO11, PSO1	Practical exposure to front-end and back-end web development, database management, and integrated application deployment
CAY m2 **Academic Year 2022-2023**					
1.	Varunraj G	AB Technologies, Chennai	14/01/23 to 25/ 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
2.	Thivya S	GGN Spinning Mill(P)-B Unit, Periyakulam.	18/01/23 to 24/01/23	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Exposure to VFD-based speed control in textile industries.
3.	Murali S	Arostar Enterprises (P) Ltd, Chennai	18/01/23 to 01/02/23	PO1, PO2, PO3, PO8, PO11, PSO1	Exposure to production planning, manufacturing operations, metal fabrication processes, quality control
4.	Vinayagamoorthy .M	Arostar Enterprises (P) Ltd, Chennai	18/01/23 to 01/02/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Exposure to production planning, manufacturing operations, metal fabrication processes, quality control
5.	Samy .K	AB Technologies, Chennai	14/01/23 to 25 / 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems

6.	Sivaraj R	AB Technologies, Chennai	14/01/23 to 25 / 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
7.	Ashish J	AB Technologies, Chennai	14/01/23 To 25 /01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
8.	Divya R	AB Technologies, Chennai	14/01/23 to 25 / 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
9.	Pothigachalam. U	AB Technologies, Chennai	14/01/23 To 25 / 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
10.	Nikitha.N	AB Technologies, Chennai	14/01/23 To 25 / 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
11.	Nisha B	AB Technologies, Chennai	14/01/23 To 25 / 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems

12.	Kaviya	AB Technologies, Chennai	14/01/23 to 25 / 01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
13.	Saravanan K	Arostar Enterprises (P) Ltd	18/01/23 to 01/02/23	PO1, PO2, PO3, PO8, PO11, PSO1	Exposure to production planning, manufacturing operations, metal fabrication processes, quality control
14.	Bubesh.S	Arostar Enterprises (P) Ltd	18/01/23 To 01/02/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Exposure to production planning, manufacturing operations, metal fabrication processes, quality control
15.	K.Shasidharan	Livewire, Tambaram, Chennai	23/01/23 To 06/02/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in developing dynamic web applications using Java, including front-end integration, server-side programming, database connectivity, and web technologies
16.	KeerthikaV	Forage(Virtual Internship platform)	14/01/23 to 26/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Tasks in energy power generation
17.	ThirshaM	Lets Gametech, Coimbatore	19/01/23 to 24/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in Java programming, object-oriented software development, application design, and coding practices
18.	C.Pavithra	AB Technologies, Tambaram West, Chennai	14/01/23 to 25/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in embedded system design, microcontroller interfacing, real-time application development, and MATLAB-based modeling and simulation of engineering systems
19.	K.Janarthanan	Unipres India Pvt. Ltd, Chennai	11/01/23 to 30/01/23	PO1, PO2, PO3, PO8, PO11, PSO1	Worked on automation and manufacturing systems

20.	S.Gokul	Polycab India Limited	18/01/23 To 25/01/23	PO1,PO2, PO3, PO8, PO11, PSO1	Exposure to high-voltage cable design, testing, and quality assurance.
21.	S.Jayanthan	SDR Electric company, Guindy, Chennai	01/11/22 To 05/12/22	PO1, PO2, PO3, PO8, PO11,PSO1	Hands-on experience with residential and commercial wiring, panels, and safety systems
22.	P.JancyReena	SDR Electric company Guindy, Chennai	01/11/22 to 05/12/22	PO1,PO2, PO3, PO8,PO11,PSO1	Hands-on experience with residential and commercial wiring, panels, and safety systems
23.	G.Vigneshwaran	Adventure Technology solution (P)Ltd, Tambaram, Chennai	09/01/23 to 27/01/23	PO1,PO2, PO3,PO5 , PO8,PO11,PSO1	Exposure to Microcontroller programming, sensor integration, and PCB design.
24.	M.Thomas Richard	Adventure Technology solution (P)Ltd, Tambaram, Chennai	09/01/23 to 27/01/23	PO1,PO2, PO3, PO5 , PO8,PO11,PSO1	Exposure to Microcontroller programming, sensor integration, andPCB design.
25.	B.Abisheksamuel	Adventure Technology solution (P)Ltd, Tambaram, Chennai	09/01/23 to 27/01/23	PO1,PO2, PO3,PO5 , PO8,PO11,PSO1	Exposure to Microcontroller programming, sensor integration, and PCB design.
26.	M.Kavikumar	Adventure Technology solution(P)Ltd, Tambaram, Chennai	09/01/23 To 27/01/23	PO1, PO2, PO3, PO5 , PO8,PO11,PSO1	Exposure to Microcontroller programming, sensor integration, andPCB design.
27.	P.Harish	Let’s Gametech , Coimbatore	19/01/23 To 24/01/23	PO1, PO2, PO3,PO5 , PO8,PO11,PSO1	Hands-on exposure to robotics concepts, sensor interfacing, microcontroller programming, actuator control

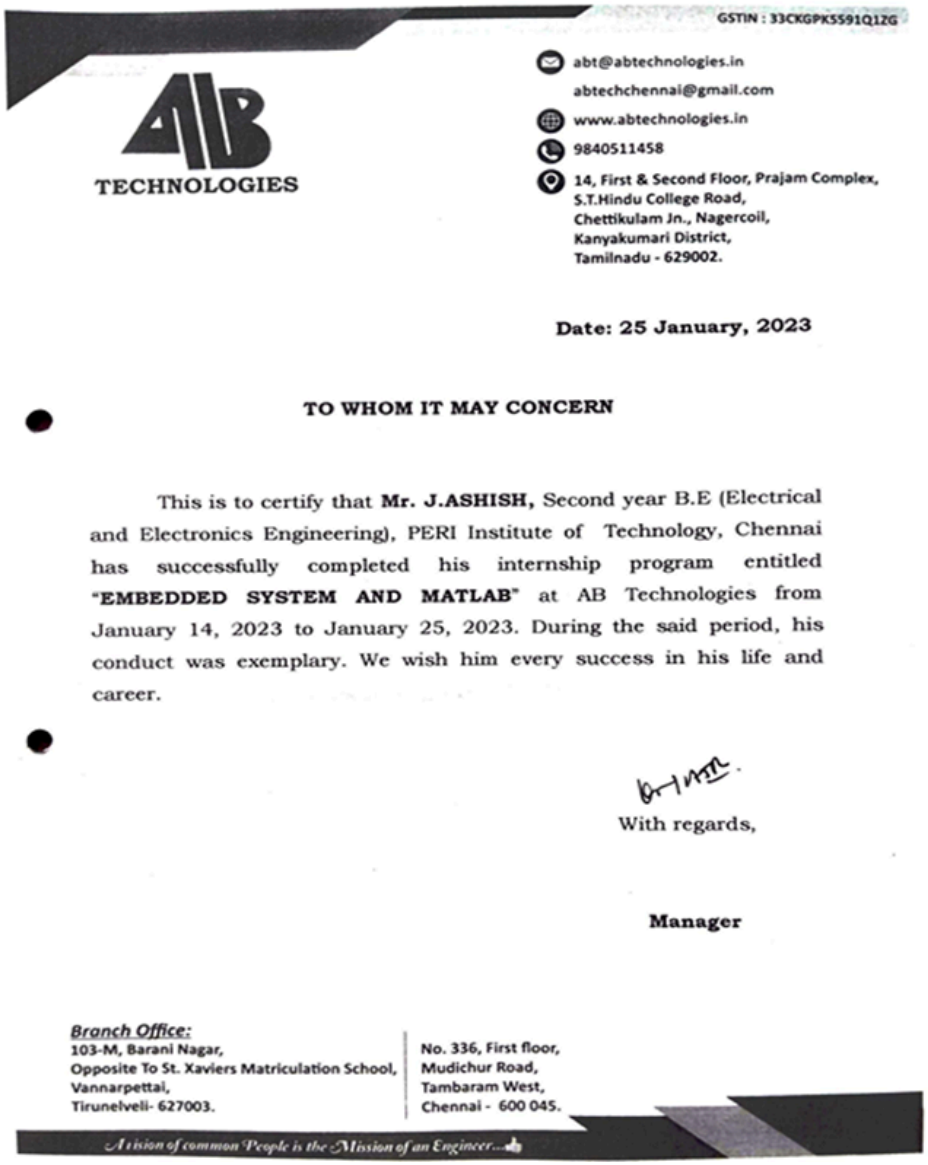
28.	Harish R	Adventure Technology solution (P)Ltd, Tambaram , Chennai	09/01/23 to 27/01/23	PO1 , PO2, PO3, PO5 , PO8,PO11,PSO1	Exposureto Microcontroller programming, sensor integration, andPCB design.
29.	Yuvashree.M	Shiash Info Solutions Private Limited , Chennai	01/03/23 To 31/05/23	PO1, PO2, PO3, PO5 , PO8,PO11,PSO1	Practical exposure to software development, emerging technologies, data processing, and technology-driven engineering solutions
30.	Ramya.S	Polycab India Limited, Kanchipuram	27/07/22 To 12/08/22	PO1, PO2, PO3, PO8, PO11,PSO1	Practical exposure to the manufacturing, testing, quality assurance, and application of electrical cables and power distribution products
31.	Arunachalam R L	Formoplasic Controls, Pvt Ltd, Porur, Chennai	18/01/23 To 08/02/23	PO1, PO2, PO3, PO8, PO11, PSO1	Electrical Switchgear basics, AC and DC Motor Basics, Variable frequency drives operation
32.	C.Archanajenifer	AB Technologies, Tambaram West, Chennai	14/01/23 to 25/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Practical exposure to embedded system design, microcontroller programming, and hardware-software integration
33.	Balaji.S	Mitsuba India Private Limited, Gummidipoondi	20/07/22 to 26/07/22	PO1, PO2, PO3, PO8, PO11, PSO1	Exposure to automotive electrical systems, manufacturing processes, quality control practices, and industrial automation technologies
34.	Balaji.S	AB Technologies, Tambaram West, Chennai	14/01/23 to 25/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Practical exposure to embedded system design, microcontroller programming, and hardware-software integration
35.	Surya.P	Lakdhan Engineering Works, Chromepet, Chennai	11/01/23 to 21/01/23	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Exposure to electrical equipment installation, industrial fabrication processes, machinery operation

36.	Vinothkumar.M	Lakdhan Engineering Works, Chromepet, Chennai	11/01/23 To 21/01/23	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Exposure to electrical equipment installation, industrial fabrication processes, machinery operation
37.	Savitha.R	AB Technologies , Tambaram West, Chennai	14/01/23 to 25/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Practical exposure to embedded system design, microcontroller programming, and hardware-software integration
38.	Durairaj.M	AB Technologies , Tambaram West, Chennai	14/01/23 to 25/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Practical exposure to embedded system design, microcontroller programming, and hardware-software integration
39.	Prakash.V	Lakdhan Engineering Works, Chromepet, Chennai	11/01/23 to 21/01/23	PO1, PO2, PO3, PO8, PO11 , PSO1	Exposure to electrical equipment installation, industrial fabrication processes, machinery operation
40.	Ponnarasi.K	AB Technologies , Tambaram West,Chennai	14/01/23 to 25/01/23	PO1, PO2, PO3,PO5 , PO8,PO11, PSO1	Practical exposure to embedded system design, microcontroller programming, and hardware-software integration
41.	Rajkumar.R	Let’s Gametech , Coimbatore	19/01/23 to 24/01/23	PO1, PO2, PO3, PO5 , PO8, PO11, PSO1	Hands-on exposure to robotics systems, including sensor integration, microcontroller programming, actuator control, and autonomous system development
42.	Yuvashree.M	Let’s Gametech , Coimbatore	19/01/23 to 24/01/23	PO1, PO2, PO3, PO5 , PO8,PO11, PSO1	Hands-on exposure to robotics systems, including sensor integration, microcontroller programming, actuator control, and autonomous system development
43.	S.Nivetha	Let’s Gametech , Coimbatore	19/01/23 to 24/01/23	PO1, PO2, PO3, PO5 , PO8, PO11,PSO1	Hands-on exposure to robotics systems, including sensor integration, microcontroller programming, actuator control

44.	D.Jayanth	Formoplasic Controls, Pvt Ltd, Porur, Chennai	18/01/23 to 08/02/23	PO1, PO2, PO3, PO8, PO11, PSO1	Electrical Switchgear basics,AC and DC Motor Basics, Variable frequency drives operation
45.	Thivya.S	Retech Solutions, TambaramWest, Chennai	03/07/23 to 18/07/23	PO1, PO2, PO3, PO5, PO8, PO11, PSO1	Hands-on experience in Python programming for software development, automation, data processing, and problem-solving applications
46.	Kamaraj.K	S.S Power Solution, Chennai	26/06/23 to 10/07/23	PO1, PO2, PO3, PO5, PO6, PO8, PO11,PSO1	Practical exposure to the repair, maintenance, troubleshooting, and fabrication of electrical equipment and power system components
47.	Bubesh.S	S.S Power Solution, Chennai	26/06/23 to 10/07/23	PO1,PO2 ,PO3,PO5, PO6, PO8,PO11 ,PSO1	Practical exposure to the repair, maintenance, troubleshooting, and fabrication of electrical equipment and power system components
48.	K.Janarthanan	Aptiv Components Pvt Ltd, Kanchipuram	10/07/23 to 01/08/23	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Exposure to product reliability assessment, quality inspection procedures.
49.	Rajkumar.R	Lakshmi Electronics, Trichy	05/07/23 to 20 07/23	PO1,PO2,PO3,PO5, PO6, PO8,PO11, PSO1	Hands-on experience in schematic design, PCB layout development, circuit testing, and electronic hardware implementation
50.	Nitheesh.A	Nestle India Limited, Mysore, Karnataka	26/06/23 to 15/07/23	PO1,PO2, PO3,PO5, PO6, PO8, PO11, PSO1	Practical insights into electrical equipment operation, process automation
51.	Chandru	Nestle India Limited, Mysore, Karnataka	03/0723 to 22/07/23	PO1,PO2 , PO3, PO5, PO6, PO8, PO11 , PSO1	Practical insights into electrical equipment operation, process automation
52.	Thomas Richard.M	Johnson Lifts Private limited, Anna nagar West, Chennai	10/07/23 to 22/07/23	PO1, PO2, PO3, PO6, PO8,PO11, PSO1	Exposure to elevator electrical systems, motor drives, control panels, safety mechanisms, and maintenance practices
53.	AbishekSamuel. M	Johnson Lifts Private limited, Anna nagar West, Chennai	10/07/23 to 22/07/23	PO1, PO2, PO3, PO6, PO8,PO11, PSO1	Exposure to elevator electrical systems, motor drives, control panels, safety mechanisms, and maintenance practices

54.	Kavikumar.M	Polycab India Limited, Kanchipuram	05/07/23 to 01/08/23	PO1, PO2, PO3, PO6, PO8,PO11, PSO1	Exposure to the manufacturing, testing, quality assurance, and application of electrical cables and power distribution products
55.	Poovarasan.A	Polycab India Limited, Kanchipuram	05/07/23 to 19/08/23	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Exposure to the manufacturing, testing, quality assurance, and application of electrical cables and power distribution products
56.	Praveenkumar. A	Nestle India Limited, Mysore, Karnataka	03/07/23 to 22/07/23	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Practical insights into electrical equipment operation, process automation
57.	Harish.R	Polycab India Limited, Kanchipuram	05/07/23 to 22/07/23	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Exposure to the manufacturing, testing, quality assurance, and application of electrical cables and power distribution products
58.	Saravanan.E	Johnson Lifts Private limited, Annanagar West, Chennai	10/07/23 to 22/07/23	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Exposure to elevator electrical systems, motor drives, control panels, safety mechanisms, and maintenance practices
59.	Keerthana.V	Nestle India Limited, Mysore, Karnataka	03/0723 to 22/07/23	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Practical insights into electrical equipment operation, process automation
60.	Arunachalam R.L	Johnson Lifts Private limited, Annanagar West, Chennai	10/07/23 to 22/07/23	PO1, PO2, PO3, PO5, PO6, PO8, PO11, PSO1	Exposure to elevator electrical systems, motor drives, control panels, safety mechanisms, and maintenance practice
61.	Srikanth.G	Polycab India Limited, Kanchipuram	05/07/23 to 01/08/23	PO1, PO2, PO3, PO6, PO8, PO11, PSO1	Exposure to the manufacturing, testing, quality assurance, and application of electrical cables and power distribution products
62.	KaviyaM	AB Technologies, Tambaram West, Chennai	14/01/23 to 25/01/23	PO1, PO2 , PO3, PO5 , PO8, PO11, PSO1	Hands-on experience in Python programming, including scripting, automation, data processing, and application development

63.	Pavithra.C	AB Technologies, Tambaram West,Chennai	14/01/23 to 25/01/23	PO1,PO2, PO3, PO5 , PO8,PO11,PSO1	Practical exposure to embedded system design, microcontroller programming, and hardware-software integration	



GSTIN : 33CKGPK5591Q1ZG

TECHNOLOGIES

abt@abtechnologies.in
abtechchennai@gmail.com
www.abtechnologies.in
9840511458
14, First & Second Floor, Prajam Complex,
S.T.Hindu College Road,
Chettikulam Jn., Nagercoil,
Kanyakumari District,
Tamilnadu - 629002.

Date: 25 January, 2023

TO WHOM IT MAY CONCERN

This is to certify that **Mr. J.ASHISH,** Second year B.E (Electrical and Electronics Engineering), PERI Institute of Technology, Chennai has successfully completed his internship program entitled **"EMBEDDED SYSTEM AND MATLAB"** at AB Technologies from January 14, 2023 to January 25, 2023. During the said period, his conduct was exemplary. We wish him every success in his life and career.

With regards,

Manager

Branch Office:
103-M, Barani Nagar,
Opposite To St. Xaviers Matriculation School,
Vannarpettai,
Tirunelveli- 627003.

No. 336, First floor,
Mudichur Road,
Tambaram West,
Chennai - 600 045.

A vision of common People is the Mission of an Engineer...

Figure 2.3 a) Sample internship for the Academic Year 2022-2023



INT:RE2β-24/8101-8995

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **SHASIDHARAN K** student of **PERI INSTITUTE OF TECHNOLOGY, B.E./EEE** has undergone the Internship Training in our concern entitled **Internet Of Things (IOT)** from 29th July 2024 to 11th August 2024

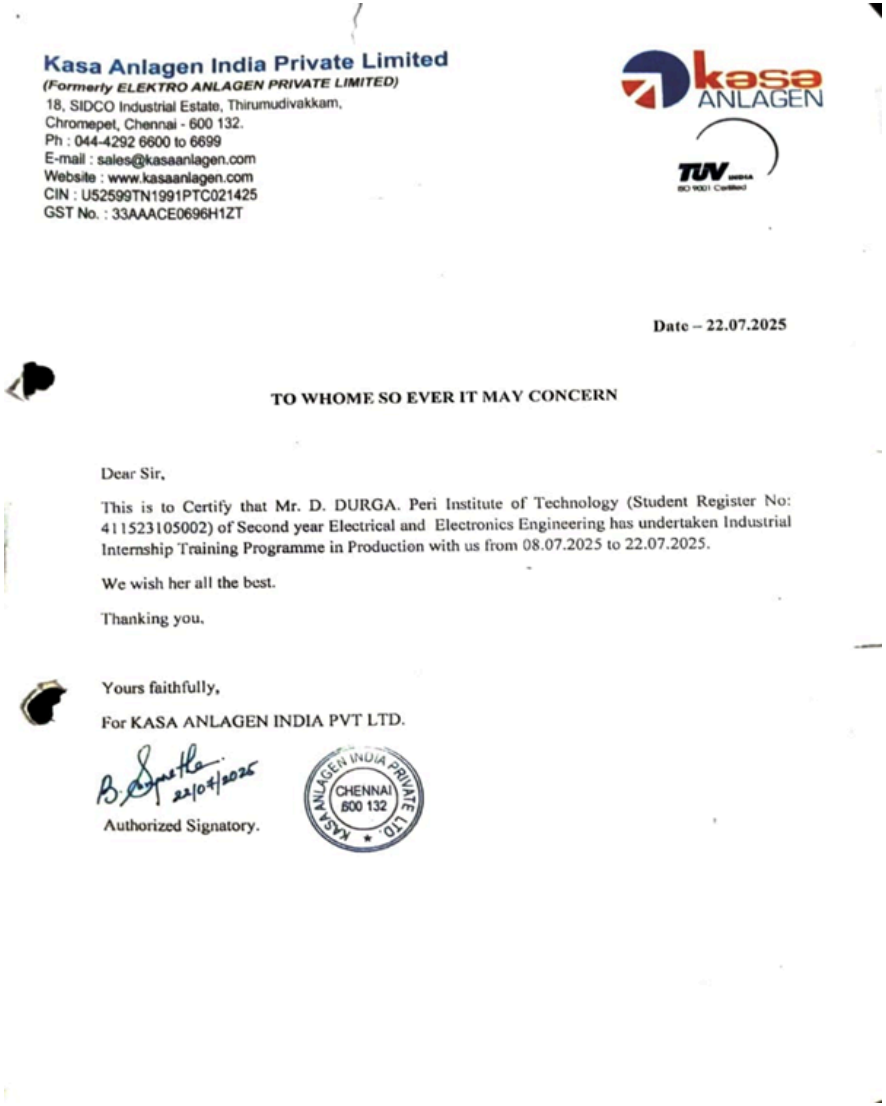
During the above period, the performance was good & we wish great success in all your future endeavours.

For Retech Solutions Pvt. Ltd.,

Authorized Signature



Figure 2.3.b) SampleCertificateofInternship for the year 2023-2024



Kasa Anlagen India Private Limited
(Formerly ELEKTRO ANLAGEN PRIVATE LIMITED)
18, SIDCO Industrial Estate, Thirumudivakkam,
Chromepet, Chennai - 600 132.
Ph : 044-4292 6600 to 6699
E-mail : sales@kasaanlagen.com
Website : www.kasaanlagen.com
CIN : U52599TN1991PTC021425
GST No. : 33AAACE0696H1ZT

kasa ANLAGEN

TUV ISO 9001 Certified

Date – 22.07.2025

TO WHOME SO EVER IT MAV CONCERN

Dear Sir,

This is to Certify that Mr. D. DURGA. Peri Institute of Technology (Student Register No: 411523105002) of Second year Electrical and Electronics Engineering has undertaken Industrial Internship Training Programme in Production with us from 08.07.2025 to 22.07.2025.

We wish her all the best.

Thanking you.

Yours faithfully,

For KASA ANLAGEN INDIA PVT LTD.

22/04/2025

Authorized Signatory.

KASA ANLAGEN INDIA PRIVATE LTD. CHENNAI 600 132

Figure 2.3c)SampleCertificateofInternship for the year 2024-2025

2.4 Seminar and Mini/Micro Projects (10)

Institute Marks : 10.00

The department provides opportunities for students to develop technical knowledge, communication skills, independent learning, problem-solving ability and the capacity to apply engineering concepts through student seminars and mini/micro projects. These activities complement regular classroom and laboratory learning by encouraging students to explore technical topics, investigate practical problems, present their understanding and demonstrate the application of concepts acquired through the curriculum.

The department maintains records of seminars presented by students and mini/micro projects undertaken during the assessment period. The activities are reviewed with reference to their relevance to the programme, the learning demonstrated by students and their contribution to the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The mapping is based on the actual content and outcomes of the activities rather than assigning identical outcomes to every seminar or project.

2. **A. Mapping of Seminars Presented by Students with POs and PSOs:**

Students are provided opportunities to present seminars on topics relevant to their courses, emerging technologies, engineering applications and programme-specific areas. The seminar topics are selected with appropriate faculty guidance and are intended to encourage technical reading, information gathering, critical understanding and effective communication of technical concepts.

The department maintains seminar schedules, student-wise topic lists, presentation materials and evaluation records, wherever applicable. Each seminar is reviewed in relation to its technical content, relevance to the programme and the learning demonstrated by the student. The department prepares a seminar-wise mapping of the relevant POs and PSOs, supported by a brief justification explaining how the topic and presentation contribute to the identified outcomes.

The mapping may address outcomes related to engineering knowledge, analysis, investigation, communication, individual or team work, lifelong learning and programme-specific technical competence, wherever the seminar provides evidence of such contribution. The department retains supporting records such as seminar reports, presentation files, evaluation sheets and outcome-mapping statements for verification.

2.4 B. Mapping of Mini/Micro Projects and Their Contribution to POs and PSOs:

Mini/micro projects provide opportunities for students to apply the concepts and skills acquired through coursework and laboratory activities to defined engineering tasks. Depending on the curriculum and the actual activities undertaken, these projects may involve design, development, implementation, experimentation, simulation, testing or analysis of a technical problem.

The department maintains project titles, student or team details, project objectives, guide details, brief descriptions of the work undertaken and available assessment records. Each project is examined in relation to the programme and the technical learning demonstrated by the students. A project-wise mapping statement identifies the relevant POs and PSOs and provides a justification based on the problem addressed, methods used, tools applied and outcomes achieved.

Supporting evidence may include project proposals, reports, circuit or system diagrams, source code, simulation outputs, experimental observations, working models, photographs, demonstrations and evaluation sheets, depending on the nature of the project. The department verifies that the mapping reflects the actual project work and the contribution demonstrated by the students. The documented mapping and supporting evidence are organised for assessment-year-wise verification.

Review and Improvement

The department reviews the conduct and assessment of seminars and mini/micro projects to identify opportunities for improving topic selection, technical depth, student participation, presentation quality and practical application. Feedback from faculty evaluators and students, where collected, may be used to improve subsequent activities. The department maintains traceability between the activity register, student participation, supporting work, evaluation records and PO/PSO mapping. The extent of implementation and the contribution reported under this metric are based on the available records for the applicable assessment period.

Table 2.4 a) Seminars delivered by students

Sr. No	Register No	Name	Seminar Topic	PO / PSO Mapping
Subject : EE8551 Power Electronics				
1.	411520105001	Arunachalam R L	Advanced Gate Driver and Snubber Techniques for High-Efficiency Power Electronics	PO1, PO9, PSO1
2.	411520105003	Chandru S	Smart IoT-Based Lighting Control and Energy-Efficient Dimming Systems	PO1, PO9, PSO1

Sr. No	Register No	Name	Seminar Topic	PO / PSO Mapping
3.	411520105004	Janarathanan K	Next-Generation Solar PV Systems: Smart Power Conversion and Grid Integration	PO1, PO9, PSO1
4.	411520105005	Jayanth D	Digital Excitation Control Systems for Modern Power Plants and Smart Grids	PO1, PO9, PSO1
5.	411520105006	Keerthana V.	Power Electronics and Energy Management in Electric Mobility Systems	PO1, PO9, PSO1
6.	411520105007	Krishna Kumar R	High-Frequency Power Electronics for Industrial Induction Heating Applications	PO1, PO9, PSO1
7.	411520105008	Nitheesh A.	Intelligent UPS Systems for Reliable and Uninterrupted Power Supply	PO1, PO9, PSO1
8.	411520105009	Pavithra C	Matrix Converters: Compact AC-AC Conversion for Future Power Systems	PO1, PO9, PSO1
9.	411520105010	Poovarasan A	Smart UPS Technologies for Critical Infrastructure and Data Center	PO1, PO9, PSO1
10.	411520105011	Praveen Kumar A	Vehicle-to-Grid (V2G) Technology for Smart Energy Management	PO1, PO9, PSO1
11.	411520105012	Rajkumar R	Wireless Power Transfer for Electric Vehicles	PO1, PO9, PSO1
12.	411520105013	Ramya S.	Power Electronics in Renewable Energy Integration	PO1, PO9, PSO1
13.	411520105014	Saravanan E	Smart Microgrids and Distributed Energy Resources	PO1, PO9, PSO1
14.	411520105016	Srikanth G	Energy Storage Systems for Sustainable Power Networks	PO1, PO9, PSO1
15.	411520105017	Vigneshwaran G	Advanced Battery Management Systems for Electric Vehicles	PO1, PO9, PSO1
16.	411520105018	Yuvashree M	Digital Twin Applications in Electrical Power Systems	PO1, PO9, PSO1
17.	411520105301	Abishek Samuel B	High-Efficiency DC-DC Converters for Green Energy Applications	PO1, PO9, PSO1
18.	411520105307	Gokul S	Role of Power Electronics in Net-Zero Energy Systems	PO1, PO9, PSO1

Sr. No	Register No	Name	Seminar Topic	PO / PSO Mapping
19.	411520105309	Harish P.	Grid-Connected Solar Inverters: Challenges and Innovations	PO1, PO9, PSO1
20.	411520105310	Harish R	Fast Charging Technologies for Electric Vehicles	PO1, PO9, PSO1
21.	411520105312	Jayanthan S	Artificial Intelligence Applications in Power Electronics	PO1, PO9, PSO1
22.	411520105313	Kavi Kumar M	Modern FACTS Controllers for Power Quality Improvement	PO1, PO9, PSO1
23.	411520105314	Kingslin A	Smart Energy Monitoring Using IoT and Cloud Platforms	PO1, PO9, PSO1
24.	411520105319	Nivetha S	SiC and GaN Based Power Electronic Converters	PO1, PO9, PSO1
25.	411520105331	Thirsha M	Future Trends in Power Electronics for Smart Cities	PO1, PO9, PSO1
26.	411520105332	Thomas M	Wide Bandgap Semiconductor Devices in Modern Power Converters	PO1, PO9, PSO1
27.	411520105334	Velu P	Solid-State Transformers: The Future of Power Distribution	PO1, PO9, PSO1
28.	411520105335	Venkatesh M	Resonant and Soft-Switching Converters for High-Efficiency Power Conversion	PO1, PO9, PSO1

MINI PROJECTS:

Table 2.4 b) Mini projects mapped with POs and PSOs

S.no	ProjectTitle	PO/ PSO Mapping
CAY **Academic Year 2024-2025**		
1.	Solar wireless electric vehicle charging system	PO1, PO2, PO3,PO5, PO8, PO9,PO10, PO11, PSO1, PSO2
2.	Wireless wind turbine monitoring using arduino	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2

3.	Enhancing solar street light with motion sensor for Improved efficiency and safety	PO1, PO2, PO3,PO5, PO8, PO9, PO10,PO11, PSO1, PSO2
4.	Solar street light control control system using motionsensor	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
5.	Integration of solar charging infrastructure	PO1, PO2, PO3,PO5, PO8, PO9, PO10,PO11, PSO1, PSO2
6.	IOT based agriculture monitoring system	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
7.	Soleil light energy powered Street	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
8.	Level sensors and transducers	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
CAYm1 Academic Year 2023-2024		
1.	Integrated Bi-Directional Dc-Dc Converter Design for Electric Trolley	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
2.	System Integration of Electric Trolley	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
3.	Battery Management System for Electric Trolley Applications	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
4.	PID Controller Design for Electric Trolley	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
5.	MPPT tracking based PV design for Electric trolley applications	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
6.	Design Of BLDC Motor for Electric Trolley	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
7.	DC To DC Converter in MPPT for Electric Trolley Applications	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
8.	Novel Interleaved Isolated DC-DC Converter for Integration Of PV Modules and Battery System in DC Micro Grid	PO1, PO2, PO3,PO4,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
9.	Neural Network Based Energy Management System in High Gain Landsman Converter for Grid Tied EV Charging Station	PO1, PO2, PO3,PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
10.	A Novel Method of AC/DC Nanogrid for Power Quality Enhancement	PO1, PO2, PO3, PO4, PO5,PO8,PO9, PO10, PO11, PSO1, PSO2
11.	Medicinal Vending Machines at any time with AI Chatbot Integration	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
12.	Single Switch High Step Up Zeta Converter	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2

CAY m2 Academic Year 2022-2023		
1.	Fertilizer Quadcopter using solar	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
2.	1kW sinewave inverter	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
3.	Dual powered emergency travel charger using IC7805	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
4.	Generation of electricity from moving vehicle	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
5.	Based on PWM mobile charger using solar energy	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
6.	Mobile phone detector using LM358	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
7.	Solar based electric vehicle	PO1, PO2, PO3,PO5, PO8,PO9, PO11, PSO1, PSO2
8.	Intelligent vehicle Ignition system	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO10, PO11, PSO1, PSO2
9.	Power efficient mini inverter	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
10.	Automatic plant watering system	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2
11.	Driver Anti sleep project	PO1, PO2, PO3,PO5, PO8,PO9, PO10, PO11, PSO1, PSO2

2.5 Case Studies and Real-Life Examples (10)

Institute Marks : 10.00

The department incorporates case studies and real-life examples into the teaching learning process to help students connect theoretical concepts with practical engineering applications. These approaches enable students to examine actual or realistic situations, identify technical problems, interpret available information, compare possible solutions and understand the relevance of engineering principles in professional practice.

Faculty members use case studies and real-life examples, wherever appropriate to the course content, to encourage analytical thinking, application of knowledge and informed decision-making.

The department documents the case studies and real-life examples used in relevant courses and establishes their contribution to the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The mapping is based on the learning activity, the engineering context presented, the analysis expected from students and the outcomes demonstrated through their responses or assignments.

2.5.1 Use of Case Studies and Real-Life Examples in Teaching

Case studies are used to present students with engineering situations that require interpretation, analysis or evaluation. Real-life examples are used to illustrate how engineering concepts and principles are applied in practical settings. Depending on the subject, these activities may be conducted through classroom discussions, problem-solving exercises, assignments, group activities, presentations, demonstrations or other documented teaching-learning methods.

The department maintains course-wise records identifying the subject, topic, case study or real-life example, learning purpose and mode of implementation. Supporting evidence may include teaching materials, case documents, lesson plans, assignments, student responses, discussion records and assessment sheets, wherever available. These records demonstrate that the examples were integrated into teaching rather than merely listed as supplementary topics.

2.5.2 Mapping with Programme Outcomes and Programme Specific Outcomes:

The department maps each documented case study or real-life example to the relevant POs and PSOs, based on the learning demonstrated by the activity. The justification explains how the activity supports the application of engineering knowledge, problem analysis, investigation, design considerations, communication, professional responsibility or programme-specific technical competence, wherever relevant. The mapping is prepared with reference to the applicable programme outcomes and the course or topic in which the activity was used. The department avoids assigning the same outcomes to every case study without considering its actual content and learning purpose. Supporting evidence is maintained to establish a clear relationship between the teaching activity, student engagement, expected learning and mapped outcomes.

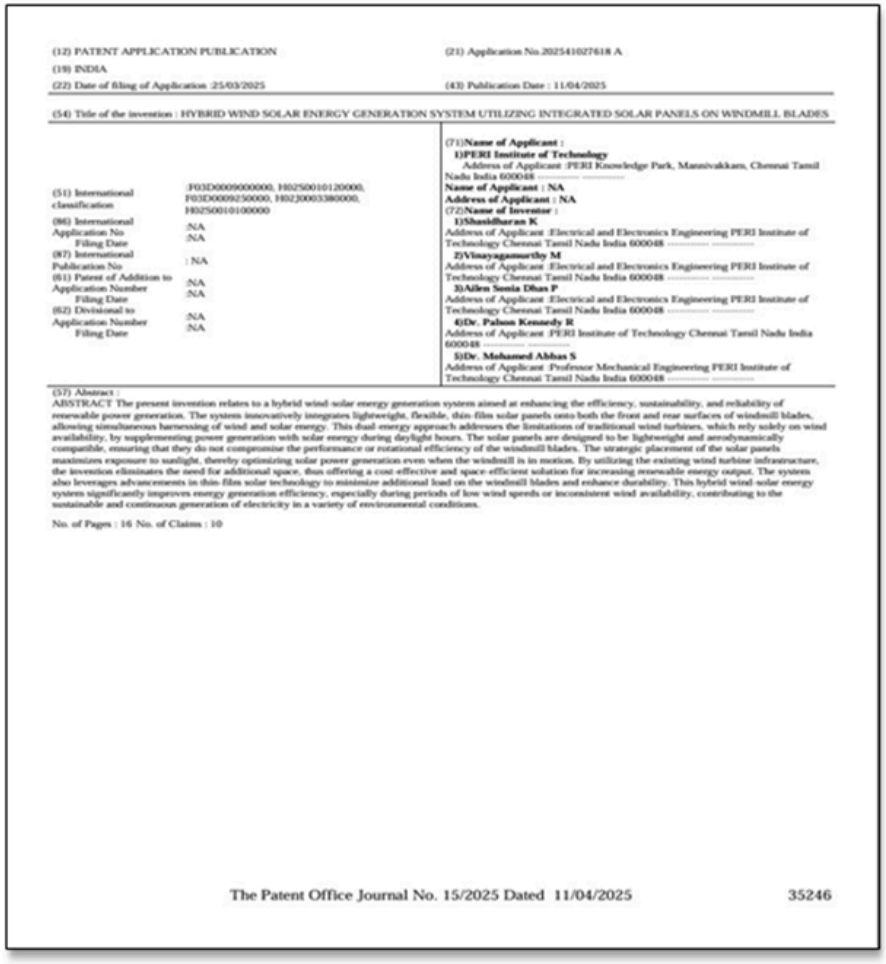
Review and Continuous Improvement

The department reviews the use of case studies and real-life examples to identify opportunities for strengthening practical relevance and student engagement. Faculty observations, student responses, assessment results and feedback, where available, may be used to improve the selection of examples and the way they are integrated into course delivery. The department maintains relevant records of implementation, PO/PSO mapping and improvement actions, wherever documented. The extent of implementation and the contribution reported under this metric are based on the actual activities and supporting evidence available for the applicable assessment period

Table 2.5.a) Patent mapped with POs and PSOs

S.no	Title of the Patent	Type	Factors	POs, PSOs addressed

1.	Design of Novel Hybrid System With Solar Integrated Wind Turbine Blades	Research& Product	Environment: Promotes clean energy and reduces carbon footprint Sustainability: Enhances renewable energy reliability and long-term viability	PO1, PO2, PO3, PO4, PO7: PO8, PO11,PSO 1, PSO2, PSO3



(12) PATENT APPLICATION PUBLICATION
(21) Application No.202541027618 A
(19) INDIA
(22) Date of filing of Application :25/03/2025
(43) Publication Date : 11/04/2025

(54) Title of the invention : HYBRID WIND SOLAR ENERGY GENERATION SYSTEM UTILIZING INTEGRATED SOLAR PANELS ON WINDMILL BLADES

(51) International classification :F03D0009000000, H02S00101200000, F03D0009250000, H02J0003380000, H02S00101000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
1)PERI Institute of Technology
Address of Applicant :PERI Knowledge Park, Mannivakkam, Chennai Tamil Nadu India 600048 ---------- ----------
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Shasidharan K
Address of Applicant :Electrical and Electronics Engineering PERI Institute of Technology Chennai Tamil Nadu India 600048 ---------- ----------
2)Vinayagamurthy M
Address of Applicant :Electrical and Electronics Engineering PERI Institute of Technology Chennai Tamil Nadu India 600048 ---------- ----------
3)Allen Sonia Dhas P
Address of Applicant :Electrical and Electronics Engineering PERI Institute of Technology Chennai Tamil Nadu India 600048 ---------- ----------
4)Dr. Paison Kennedy R
Address of Applicant :PERI Institute of Technology Chennai Tamil Nadu India 600048 ---------- ----------
5)Dr. Mohamed Abbas S
Address of Applicant :Professor Mechanical Engineering PERI Institute of Technology Chennai Tamil Nadu India 600048 ---------- ----------

(57) Abstract :
ABSTRACT The present invention relates to a hybrid wind-solar energy generation system aimed at enhancing the efficiency, sustainability, and reliability of renewable power generation. The system innovatively integrates lightweight, flexible, thin-film solar panels onto both the front and rear surfaces of windmill blades, allowing simultaneous harnessing of wind and solar energy. This dual-energy approach addresses the limitations of traditional wind turbines, which rely solely on wind availability, by supplementing power generation with solar energy during daylight hours. The solar panels are designed to be lightweight and aerodynamically compatible, ensuring that they do not compromise the performance or rotational efficiency of the windmill blades. The strategic placement of the solar panels maximizes exposure to sunlight, thereby optimizing solar power generation even when the windmill is in motion. By utilizing the existing wind turbine infrastructure, the invention eliminates the need for additional space, thus offering a cost effective and space efficient solution for increasing renewable energy output. The system also leverages advancements in thin-film solar technology to minimize additional load on the windmill blades and enhance durability. This hybrid wind-solar energy system significantly improves energy generation efficiency, especially during periods of low wind speeds or inconsistent wind availability, contributing to the sustainable and continuous generation of electricity in a variety of environmental conditions.

No. of Pages : 16 No. of Claims : 10

The Patent Office Journal No. 15/2025 Dated 11/04/2025 35246

Fig2.5.a) Sample Copy Case Studies and Real-Life Examples

Table 2.5 b Real life examples mapped with POs and PSOs

S.no	Date of Visit	Name of the Industry	Subjects mapped	Rationale for the subjects Mapped	PO/PSO Mapping
CAY **Academic Year 2024-2025**					

1.	06/09/24	TNEB, Kancheepuram	EE3303 Electrical Machines-I EE3501 Power Systems Analysis	Students observed practical power distribution, protection, switching and operation of electrical networks.	PO1, PO2, PO7 , PSO1
2.	04/10/24	Doordarshan Kendra, Nungambakkam, Chennai	EC3301- Electron Devices and Circuits	Exposure to broadcasting systems, signal transmission and communication infrastructure.	PO1, PO5, PS01
3.	25/10/24	Wind Energy Exhibition, Chennai Trade Centre	CME365 Renewable Energy Technology, EE3014 Power Electronics for Renewable Energy Systems EE3303 Electrical Machines-I	Understanding of wind power generation technologies and renewable energy integration.	PO1, PO2, PO7, PS01
4.	10/02/25	Garuda Aerospace Pvt. Ltd.	OCS352 IOT Concepts and Applications	Exposure to UAVs, sensors, embedded controllers and automation technologies.	PO1, PO2, PO3, PO5, PS01
5.	09/04/25	Maraimalai Nagar 230/110 kV Substation, Chennai	EE3401 Transmission and Distribution EE3501 Power Systems Analysis	Understanding substation equipment, transformers, protective relays and SCADA applications.	PO1, PO2, PO7, PS01
CAY m1 **Academic Year 2023-2024**					
1.	16/08/23	North Chennai Thermal Power Plantstage-1 and stage-2, Ennore, Chennai	EE3303 Electrical Machines-I	Practical understanding of electrical power generation, plant auxiliaries and grid connectivity.	PO1, PO2, PO7 ,PS01
2.	27/09/23	Sriperumbudur 400 kV Substation	EE3303 Electrical Machines-I EE3601 Protection and Switchgear	Understanding EHV transmission systems, switchyards and substation operation.	PO1, PO2, PO7, PS01
3.	27/10/23	BSNL Meenambakkam	EC3301- Electron Devices and Circuits EE8551 – Microprocessors and Microcontrollers	Exposure to telecommunication networks, switching systems and communication infrastructure.	PO1, PO2, PO7, PS01

4.	16/04/24	TNEB, AriyaPerumbakkam	EE3401 Transmission and Distribution	Exposure to practical power distribution, maintenance and protection practices.	PO1, PO2, PO7, PSO1
CAY m2 **Academic Year 2022-2023**					
1.	17/09/22	Field visit to PERI College - Power transformers distribution unit	EE3303 Electrical Machines-I	Understanding the constructional features of transformers	PO1, PO2, PO3, PO5, PSO1
2.	30/09/22	TANGEDCO, Tambaram	EE3303 Electrical Machines-I	Understanding distribution systems, transformers and feeder management.	PO1, PO2, PO7, PSO1
3.	11/02/23	Shri Vaari Electricals Pvt. Ltd.	EE3301 Electromagnetic Fields EE8015 Electrical Energy Generation Utilisation and Conservation	Understanding manufacturing, testing and maintenance of electrical machines.	PO1, PO2, PO3, PO5, PSO1
4.	08/03/23	NLC India Limited	EE3401 Transmission and Distribution EE3405 Electrical Machines –II EE8006 – Power Quality	Understanding thermal power generation, transmission and energy management.	PO1, PO2, PO7, PSO1
5.	12/05/23	Robonetics Automation Solution	EE8691 Embedded Systems	Exposure to robotics, PLCs, sensors and industrial automation systems.	PO1, PO2, PO3, PO5, PSO1



Figure 2.5 a) Industrial Visit to NLC, Neyveli on 08/03/23



Figure 2.5 b: Industrial visit to TANGEDCO, Tambaram



Figure 2.5 c :Field visit to PERI College - Power transformers distribution unit

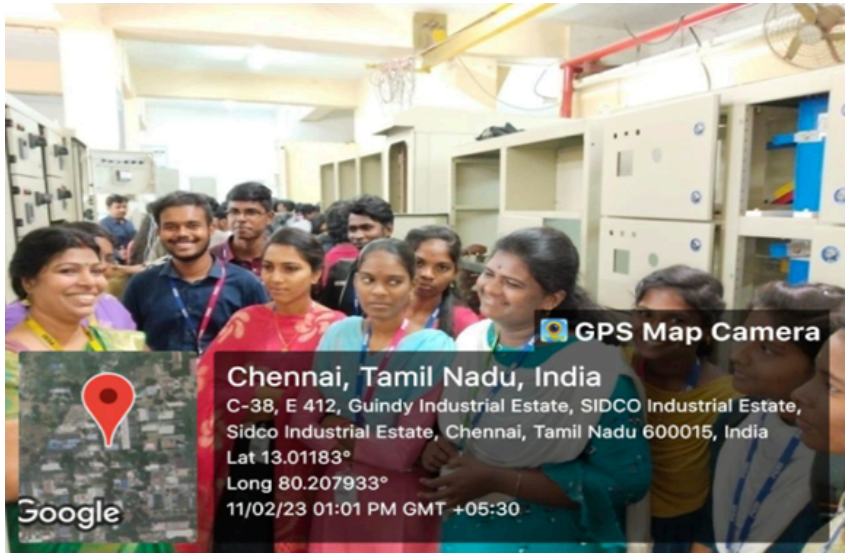


Figure 1.5 d :Industrial visit to Shri Vari Electricals, SIPCOT Industrial estate,Guindy, Chennai



Figure 2.5 e) Industrial visit to Kanchipuram substation on 16/04/24

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

Institute Marks : 10.00

The department encourages students to supplement their regular academic learning through online courses, Massive Open Online Courses (MOOCs), self-learning resources and other structured learning opportunities. These activities enable students to explore subjects beyond classroom delivery, update their knowledge of emerging technologies and develop independent learning skills relevant to their programme.

The department guides students in identifying online courses relevant to their curriculum and technical interests. Students may undertake courses through platforms such as SWAYAM, NPTEL and other recognised MOOC providers. The department maintains records of student registrations, course details, completion status and certificates obtained, wherever applicable. The reported participation and certification figures are based on verifiable records for the applicable assessment period.

2.6.A. Student Registration, Certification and Mapping with POs and PSOs

The department encourages students to enrol in online courses that complement their programme of study and support the development of technical and professional competencies. Faculty members may recommend relevant courses based on subject requirements, emerging technologies and student learning needs.

The department consolidates available student registration and certification details, including the students name, register number, course title, platform, academic year and completion status. Successful completion is verified using authentic certificates or platform records. The department distinguishes students who registered for a course from those who completed it and obtained certification.

The completed courses are mapped to the relevant Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The mapping is based on the course syllabus, learning objectives, topics covered and competencies demonstrated. A brief justification is maintained to explain the relationship between the online course and the selected outcomes. The department retains the supporting course information, certificates and mapping statements for verification.

2.6 B. Scope for Self-Learning, Facilities and Their Use

The department provides opportunities for students to pursue self-learning through recommended online resources, digital learning materials, technical references, library resources and other facilities available to them. Students are encouraged to use these resources to strengthen their understanding of course topics, explore advanced concepts and develop independent learning habits.

The department documents the self-learning opportunities made available to students and the ways in which these resources are used, wherever evidence is available. Supporting records may include recommended course lists, learning-resource links, student participation records, learning assignments, faculty guidance and evidence of access to relevant institutional facilities. The department reviews the relevance and use of self-learning resources and identifies opportunities to improve student participation. Any claims regarding the effectiveness or impact of these activities are supported by available records or documented analysis.

Review and Continuous Improvement

The department reviews student participation in MOOCs and other self-learning activities, certification outcomes and the relevance of completed courses to the programme. The review may identify opportunities to improve course recommendations, student awareness, faculty guidance and access to learning resources. Relevant findings and improvement actions are documented wherever such reviews were conducted. The reported figures, certification status, PO/PSO mapping and use of self-learning facilities are based on the records available for the applicable assessment period.

Table 2.6 a) Students percentage in various academic years

	Academic Year		
	2024-2025	2023 – 2024	2022-2023
Percentage of students received Online Course certificates	77.77%	53.16%	26.82%

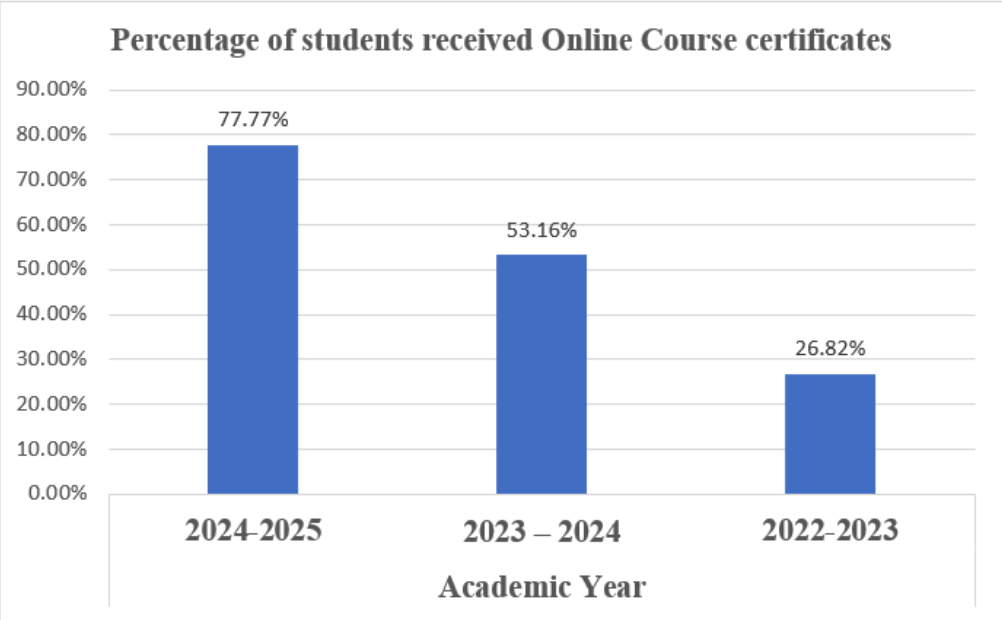


Fig 2.6 a) Percentage of Students received online course certificates in each academic year

Table2.6 b) SWAYAM/NPTEL/MOOC/Self Learning

S.No	Type of online Course	Name of the course	Number of students registered and received	POS, PSOs addressed
CAY Academic Year2024-2025				
1.	NPTEL	Introduction to Industry 4.0 and Industrial IoT	11	PO1, PO5, PO6, PO11 PSO1
2.	NPTEL	Cloud Computing	4	PO1, PO5, PO6, PO11, PSO1

3.	NPTEL	Data analytics with Python	1	PO1, PO2, PO5, PO6, PSO1, PSO2
4.	NPTEL	Introduction to Internet of Things	11	PO1, PO5, PO6, PO11, PSO1
5.	NPTEL	Python for data science	1	PO1,PO5,PO6, PO11, PSO1, PSO2
6.	MOOC- Great Learning	Excel Regression Analysis	1	PO1,PO6, PO11,PSO1, PSO2
7.	MOOC- Great Learning	Introduction to analytics	1	PO1,PO2, PO5,PO6, PSO1
8.	MOOC- Great Learning	Spoken English	1	PO1,PO6, PO9,PO11,PSO1
9.	MOOC- Infosys Springboard	Python fundamentals	9	PO1,PO5,PO6, PO11,PSO1
10.	MOOC- Infosys Springboard	Basics of Python	4	PO1,PO5,PO6, PO11, PSO1
11.	Mathworks	Image Processing Onramp	3	PO1,PO2,PO5, PO6, PO11, PSO1
12.	MOOC-Coursera	Industrial IoT on Google cloud	1	PO1,PO5,PO6, PO11,PSO1
13.	MOOC-edX	Robotics Fundamentals	2	PO1,PO5,PO6, PO11,PSO1
14.	MOOC-edX	Renewable Energy and Solar Power Systems	3	PO1,PO5,PO6, PO11,PSO1
15.	MOOC-edX	Circuits and Electronics	2	PO1, PO2, PO5, PO6, PO11, PSO1
16.	MOOC- Udemy	MATLAB for Electrical Engineers	3	PO1,PO2,PO3,PO5,PO6, PO11, PSO1
17.	MOOC- Udemy	Electrical Machines and Transformers	2	PO1,PO2,PO3,PO5,PO6, PO11, PSO1
18.	MOOC- Udemy	Power Electronics: Converters and Inverters	1	PO1,PO2,PO3,PO5,PO6, PO11,PSO1
CAY m1 **Academic Year2023-2024**				
1.	NPTEL	Introduction to Internet of Things	2	PO1 ,PO5, PO6, PSO1
2.	NPTEL	Sustainable Power Generation	2	PO1,PO2,PO6, PSO1,PSO2

3.	MOOC - Udemy	Python Data Structures & Algorithms + LEETCODE Exercises	1	PO1, PO2, PO5,PSO1,PSO2
4.	MOOC – Infosys Springboard	Basics of Python	8	PO1, PO2, PO5,PSO1, PSO2
5.	MOOC- EduPrep	Python	2	PO1,PO2,PO5, PO11, PSO1, PSO2
6.	MOOC- Great Learning	Data Structures in C	4	PO1,PO2,PO5, PO11, PSO1, PSO2
7.	MOOC- Great Learning	Data Science Foundations	6	PO1, PO2, PO5, PO11,PSO1, PSO2
8.	MOOC- Great Learning	Java Programming	2	PO1, PO2, PO5, PO11,PSO1, PSO2
9.	MOOC- Futurelearn	Digital Electronics Fundamentals	2	PO1,PO2,PO5,PO11,PSO1
10.	MOOC-Coursera	Building Arduino Robots and devices	1	PO1,PO2,PO3, PO5,PO11, PSO1, PSO2
11.	MOOC –Udemy	The Internet of Things (IoT): Trends and the Future	1	PO1,,PO5,PO11,PSO1, PSO2
12.	MOOC – European Open University	C Programming Basics	2	PO1, PO2, PO5, PO11, PSO1, PSO2
13.	MOOC – European Open University	Internet of Things	6	PO1,PO2, PO5, PO11, PSO1, PSO2
14.	ITSonix Solutions	Course on Mobile application development qioz	2	PO1,PO2, PO5, PO11,PSO1, PSO2
15.	NIIT	Python programming and data exploration in Python	1	PO1, PO2, PO5, PO11,PSO1, PSO2
16.	NIIT	Data Analysis and Visualization in Excel and Power BI	1	PO1, PO2, PO5, PO11,PSO1, PSO2
17.	Mathworks	Image Processing Onramp	2	PO1, PO2, PO5,PO6, PO11, PSO1
18.	MOOC- Great Learning	Python Data Structures	1	PO1,PO2,PO5,PO11,PSO1, PSO2
19.	MOOC- Great Learning	Applications of AI	3	PO1,PO2,PO5,PO6 ,PO11, PSO1, PSO2, PSO3
20.	MOOC- Great Learning	Data Structures in C	2	PO1,PO2,PO5,PO11,PSO1, PSO2

21.	MOOC- Great Learning	Data Science Foundations	2	PO1,PO2,PO5,PO11,PSO1, PSO2
22.	MOOC- Great Learning	Python for Machine Learning	5	PO1,PO2, PO5, PO11, PSO1, PSO2
23.	MOOC- Great Learning	Functions in python	4	PO1, PO5, PO11, PSO1, PSO2
CAY m2 **Academic Year 2022-2023**				
1.	NPTEL	Electric Vehicles - Part I	4	PO1, PO2, PO6 ,PO11, PSO1, PSO2
2.	NPTEL	Enhancing Soft skills and Personality	3	PO9,PO11
3.	NPTEL	Fundamentals of Semiconductor Devices	5	PO1, PO2, PO6, PO11,PSO1, PSO2
4.	MOOC- Great Learning	Python List	1	PO1, PO2 ,PO5, PO11, PSO1, PSO2
5.	MOOC- Great Learning	Video editing Basics	1	PO11
6.	MOOC- Great Learning	Software testing tutorial	1	PO1, PO2, PO5, PO11, PSO1, PSO2
7.	MOOC- Great Learning	Front end Development - CSS	1	PO1, PO2, PO5, PO11 , PSO1, PSO2
8.	MOOC- Great Learning	Data Structures in C	1	PO1, PO2, PO5, PO11, PSO1, PSO2
9.	MOOC- Great Learning	Data Science Foundations	1	PO1, PO2, PO5, PO11, PSO1, PSO2
10.	MOOC- Great Learning	Java Programming	1	PO1, PO2, PO5, PO11, PSO1, PSO2
11.	MOOC- Great Learning	Data Structures and Algorithms in Java for Intermediate level	1	PO1, PO2, PO5, PO11, PSO1, PSO2
12.	MOOC- Sololearn	Python Data Structures	1	PO1, PO2, PO5, PO11, PSO1, PSO2
13.	MOOC- Great Learning	Python for Machine Learning	1	PO1, PO2, PO5, PO11, PSO1, PSO2

14.	MOOC- Great Learning	Functions in python	1	PO1, PO5, PO11, PSO1, PSO2
15.	MOOC- Great Learning	Python fundamentals for beginners	2	PO1, PO2, PO5, PO11 , PSO1, PSO2
16.	MOOC- Great Learning	Anaconda Python	4	PO1, PO2, PO5, PO11, PSO1, PSO2
17.	MOOC- Great Learning	MATLAB	3	PO1, PO2, PO5, PO11, PSO1, PSO2
18.	MOOC- AEU	Amplifiers	1	PO1, PO2, PO11, PSO1, PSO2
19.	MOOC- Great Learning	Introduction to Deep Learning	1	PO1, PO2, PO5, PO11, PSO1, PSO2
20.	MOOC- Great Learning	OOPs in Python	1	PO1, PO2, PO5, PO11, PSO1, PSO2
21.	MOOC – Sololearn	Introduction to C	4	PO1, PO2, PO5, PO11, PSO1, PSO2
22.	MOOC – Sololearn	Python Core	1	PO1, PO2, PO5, PO11, PSO1, PSO2
23.	MOOC – Sololearn	Python for Beginners	2	PO1, PO2, PO5, PO11, PSO1, PSO2
24.	MOOC- Great Learning	Python Data Structures	1	PO1, PO2, PO5, PO11, PSO1, PSO2
25.	MOOC- Great Learning	Applications of AI	2	PO1, PO2, PO5, PO6, PO11, PSO1, PSO2, PSO3
26.	MOOC- Great Learning	Python Fundamentals for Beginners	4	PO1, PO2, PO5, PO11, PSO1, PSO2
27.	MOOC- SkillAP and Pantech e Learning	30 days Masterclass on Advanced Python Programming	1	PO1, PO2, PO5, PO11, PSO1, PSO2
28.	MOOC- UiPath	Naan Mudhalvan Robotic Process Automation Foundation Course	1	PO1, PO2, PO5, PO11, PSO1, PSO2





Figure 2.6 a : Sample Online course certificates for CAY 2024-2025

VERIFICATION CODE: 5OCSD2WG

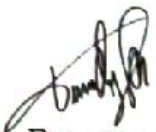
EduPrep

Certificate of Completion

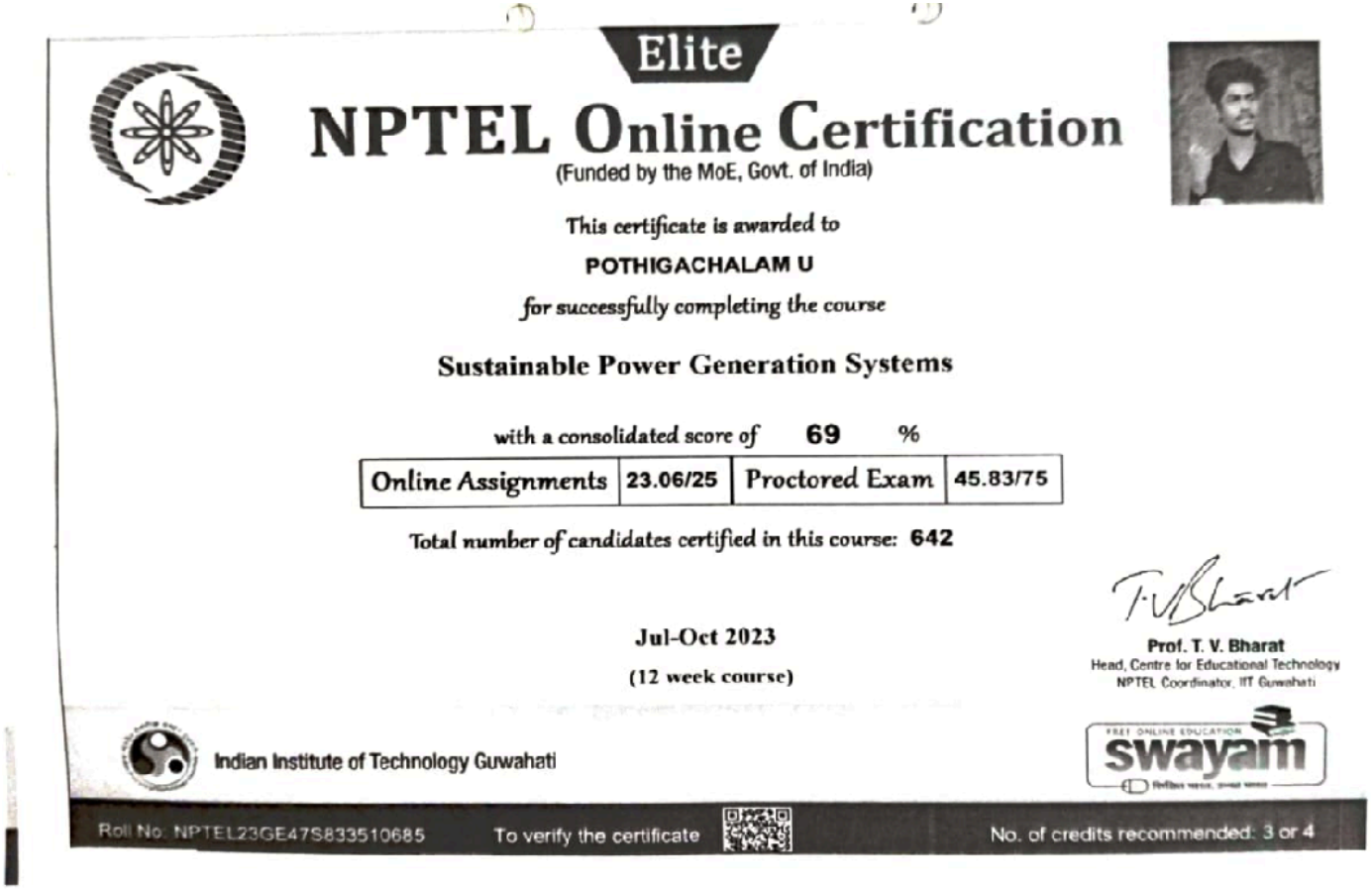
This is to certify that C.Pavithra

has successfully completed the PYTHON course

Issued On: 18th July 2023



Geetha Arora, Program Director



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

POTHIGACHALAM U

for successfully completing the course

Sustainable Power Generation Systems

with a consolidated score of **69** %

Online Assignments	23.06/25	Proctored Exam	45.83/75

Total number of candidates certified in this course: **642**

Jul-Oct 2023

(12 week course)

Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati

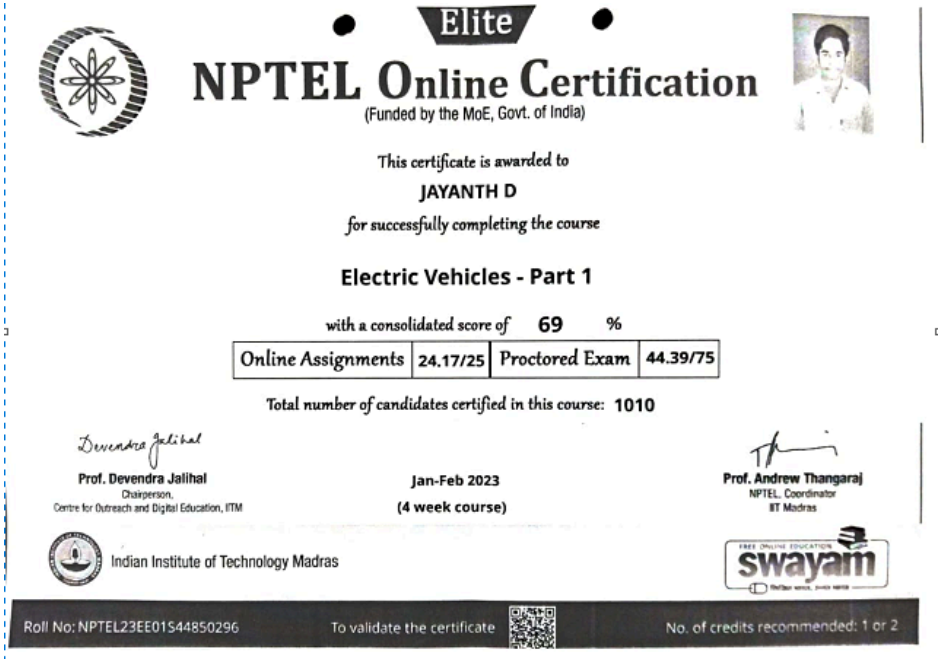
Indian Institute of Technology Guwahati

swayam

Roll No: NPTEL23GE47S833510685 To verify the certificate No. of credits recommended: 3 or 4

Figure 2.6 b : Sample Online course certificates for CAY 2023-2024


Great Learning
CERTIFICATE OF COMPLETION
Presented to
S.Sibiraj
For successfully completing a free online course
Applications of AI
Provided by
Great Learning Academy
(On February 2023)
To verify this certificate visit verify.mygreatlearning.com/YOSFBMAE



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

JAYANTH D

for successfully completing the course

Electric Vehicles - Part 1

with a consolidated score of 69 %

Online Assignments	24.17/25	Proctored Exam	44.39/75

Total number of candidates certified in this course: 1010

Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Jan-Feb 2023
(4 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

swayam

Roll No: NPTEL23EE01S44850296 To validate the certificate No. of credits recommended: 1 or 2

Figure 2.6 c : Sample Online Course Certificate for the CAY 2022-2023

2.7 Solving Complex Engineering Problems Incorporating Sustainability Goals (20)

Institute Marks : 20.00

The department promotes activity-based learning through which students apply engineering knowledge to complex problems and consider relevant sustainability goals while developing possible solutions. Such activities may be undertaken through core courses, project-based learning, problem-based learning, mini projects, integrated design projects, capstone projects, hackathons and other documented academic activities.

The department identifies suitable engineering problems that require students to integrate knowledge from relevant subjects, analyse constraints, evaluate alternatives and propose technically appropriate solutions. Where applicable, students are encouraged to consider environmental impact, resource utilisation, energy efficiency, safety, economic feasibility, social relevance and long-term sustainability. The nature and complexity of each problem are established from the actual requirements of the activity and the work undertaken by students.

The department documents the identified problems, the learning activities through which students address them, the solutions or outputs developed and the Sustainable Development Goals (SDGs) relevant to the problem. The relationship between the engineering problem and the selected SDG is justified with reference to the problem context and the intended contribution of the proposed solution.

2.7.1 Identification of Complex Engineering Problems:

The department identifies engineering problems through relevant courses and student activities that require more than routine application of a single concept. Depending on the discipline, such problems may involve multiple technical considerations, analysis of data, design constraints, selection of appropriate tools, evaluation of alternatives or consideration of practical limitations.

Problem statements, project proposals, course assignments and activity records are maintained to establish the nature of the problem and the technical challenges involved. Student reports, calculations, design documents, simulations, experimental results, models or other outputs provide evidence of the approach adopted and the solution developed. The department includes only those activities for which the complexity and student contribution can be substantiated.

2.7.2 Incorporation of Sustainability Goals

The department identifies the Sustainable Development Goals relevant to each selected engineering problem. The SDG mapping is based on the actual problem addressed and the expected or demonstrated contribution of the solution. Sustainability considerations may include efficient use of resources, energy conservation, environmental protection, waste reduction, safe engineering practice, responsible use of technology or improved access to essential services, wherever relevant.

A problem-wise mapping statement identifies the selected SDG and provides a brief justification explaining the connection between the engineering activity and the sustainability goal. The mapping is supported by the problem statement, design considerations, student analysis and available technical outputs. An SDG is not assigned merely because a project mentions sustainability; the relationship must be supported by the actual work undertaken.

2.7.3 Student Solutions and Supporting Evidence

The department maintains records of student participation and the solutions developed through the identified activities. Evidence may include project reports, design calculations, technical drawings, source code, simulation results, experimental data, prototypes, working models, testing records, presentations and evaluation sheets, as applicable to the activity.

Where feasible and supported by evidence, the department reviews the suitability of the proposed solution in relation to the engineering problem and its sustainability considerations. The documented analysis may address technical feasibility, resource efficiency, environmental implications, safety or other relevant constraints. Claims concerning measurable benefits or impact are reported only when supported by actual results or documented analysis.

Review and Continuous Improvement

The department reviews the identified engineering problems, student outputs and SDG mapping to improve the relevance and depth of activity-based learning. Faculty observations, project evaluations, student feedback and documented outcomes, where available, may be used to refine problem selection and strengthen sustainability considerations in subsequent activities.

The department maintains traceability between the course or activity, problem statement, student work, selected SDG, justification and supporting evidence. The activities reported under this metric are restricted to those undertaken during the applicable assessment period and supported by verifiable departmental records.

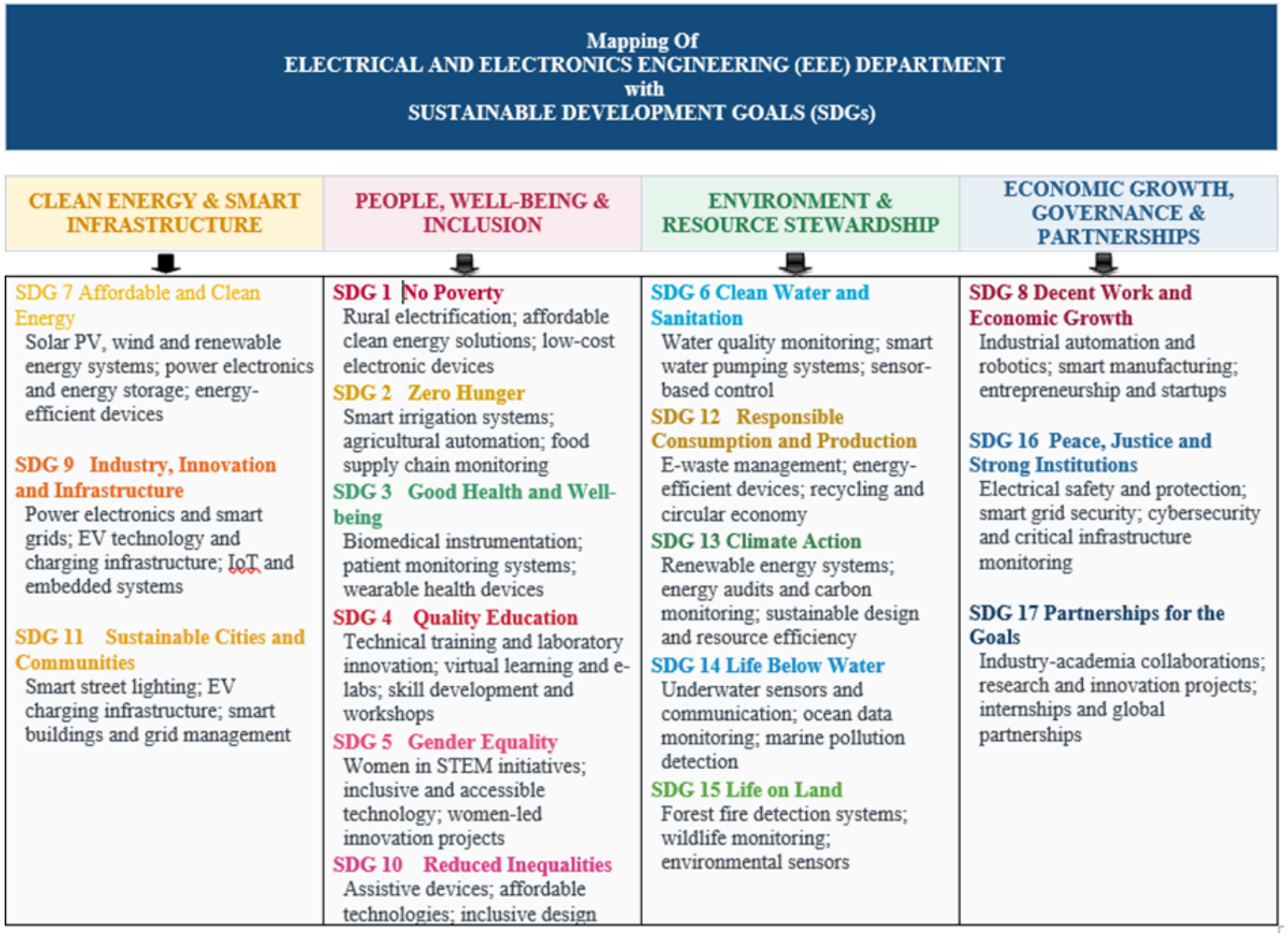


Figure 2.7 UN SDG mapped with Electrical Engineering Department

Table2.7.1: SolvingComplexEngineering Problems through core courses

S.no	Course / Laboratory	Relevant SDGs	Justification
1.	Electric Circuits Laboratory	SDG 9, SDG 12	Promotes foundational understanding of electrical systems, enabling innovation and efficient design.
2.	Electronic Devices and Circuits Laboratory	SDG 9, SDG 12	Supports development of energy- efficient electronics and sustainable circuit design.

3.	Electrical Machines Laboratory – I & II	SDG 7, SDG 9, SDG 12	Focuses on efficient energy conversion an machine design, crucial for clean energy systems.
4.	C Programming and Data Structures Laboratory	SDG 4, SDG 9	Enhances computational thinking and software development for smart systems and automation.
5.	Linear and Digital Circuits Laboratory	SDG 9, SDG 12	Enables design of digital systems used in sustainable technologies like smart grids and IoT.
6.	Microprocessor and Microcontroller Laboratory	SDG 9, SDG 11, SDG 12	Powers embedded systems for smart cities, automation, and energy-efficient solutions.
7.	Power Electronics Laboratory	SDG 7, SDG 9, SDG 13	Drives innovation in renewable energy systems, electric vehicles, and efficient power conversion.
8.	Control and Instrumentation Laboratory	SDG 9, SDG 11, SDG 13	Facilitates automation and control in sustainable infrastructure and climate-responsive systems.
9.	EE3811 Project Work / Internship	SDG 4, SDG 9, SDG 13	Encourages real-world problem solving aligned with sustainability goals through industry and research exposure.

Table2.7.2 Capstone Projects

S.no	ProjectTitle	RelevantSDGs	Sustainability Focus
1.	Dandalen Optimizer based reinforcement learning for RBFNN MPPT in grid connected Photovoltaic systems	SDG7,SDG13	Enhances solar energy efficiency using intelligent control, promoting clean energy and innovation.
2.	Enhancing electric vehicles charger efficiency through improved PFC isolated SEPIC-Luo converter	SDG 7, SDG 9, SDG 13	Improves EV infrastructure and energy conversion, supporting sustainable transport and reduced emissions.
3.	TITO Non isolated converter for renewable energy application	SDG 7, SDG 9	Develops efficient power electronics for renewable integration, fostering innovation in clean energy systems.
4.	Standalone PV based Isolated high step up converter for grid tied three phased inverter	SDG 7, SDG 9, SDG 13	Facilitates high-efficiency solar grid integration, contributing to clean energy access and climate goals.

5.	Design of novel hybrid system with solar integrated wind turbine blades	SDG 7, SDG 9, SDG 13	Combines solar and wind for hybrid renewable generation, advancing sustainable energy innovation.
6.	High performance onboard charger for Electric Vehicles with integrated multifunctional capabilities	SDG 7, SDG 9, SDG 11	Supports smart mobility and urban sustainability through efficient EV charging systems.
7.	Standalone solar PV based DC microgrid for EV charging	SDG 7, SDG 9, SDG 11, SDG 13	Promotes decentralized clean energy for transport, aiding sustainable urban development and climate action.

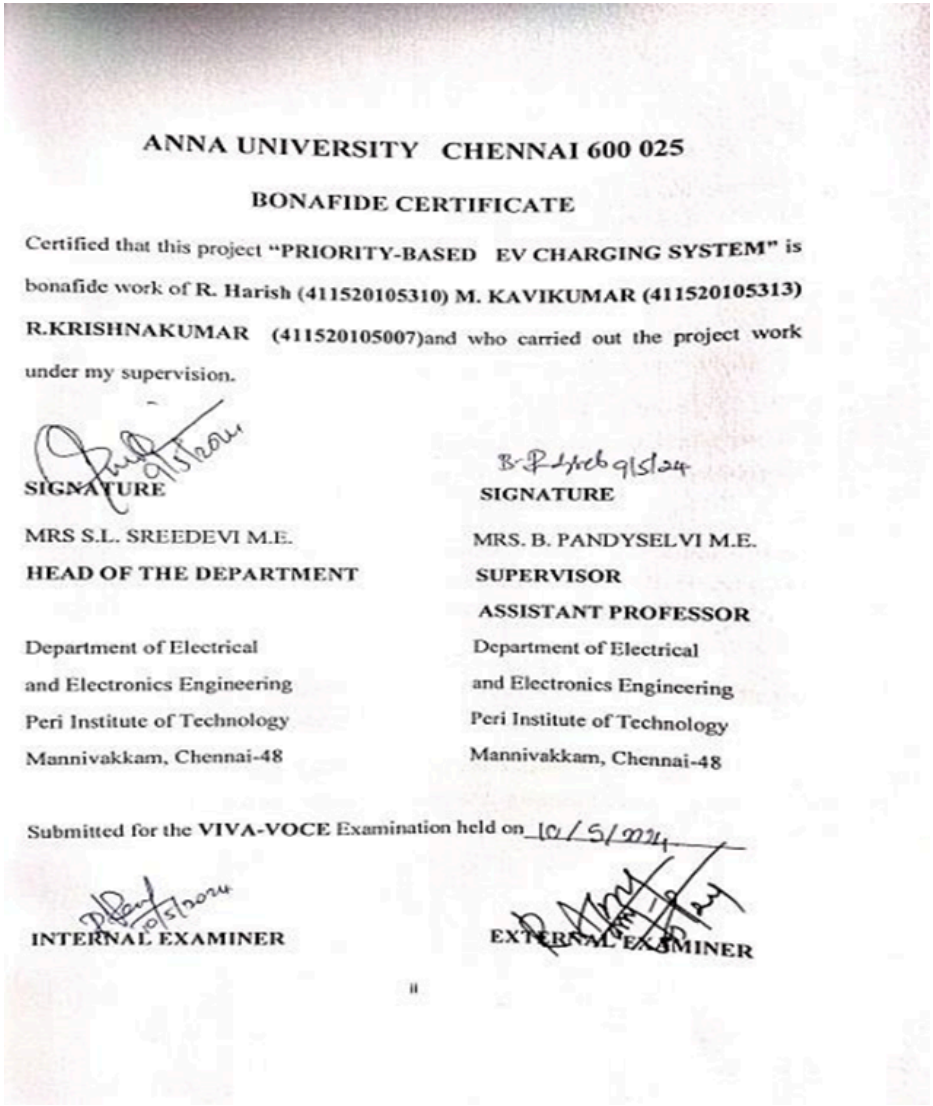
Table 2.7.3 Internal hackathon

S.no	ProblemStatement	RelevantSDGs	Sustainability Focus
1.	Integration of Solar Charging Infrastructure	SDG7,SDG9, SDG13	Promotes clean energy adoption Reduces dependence on fossil fuels. Supports infrastructure for sustainable mobility
2.	Development of a non-electrical apparatus for tracking the suns path to enhance their efficiency.	SDG7,SDG9, SDG12	Enhances solar energy efficiency without added energy consumption Encourages low-tech, sustainable innovation
3.	Electric Machine Noise and Vibration	SDG3,SDG9, SDG11	Boosts renewable energy system performance. Minimizes energy losses and carbon footprint
4.	Efficiency enhancement of power converters in renewable energy systems	SDG9, SDG12, SDG13	Enables energy-efficient transportation. Supports electrification and decarburization of mobility
5.	Revolutionizing Drive Systems with Advanced Semiconductor Tech.	SDG3, SDG6, SDG11, SDG12	Promotes circular economy and hygiene. Reduces environmental and health hazards
6.	Smart Waste Management and Sanitization for a Clean and Green Future	SDG7, SDG9, SDG12	Enhances reliability and longevity of energy systems. Prevents waste and improves system resilience

7.	Detecting and diagnosing faults in power electronic systems	SDG7, SDG9, SDG12	Supports stable and efficient operation of renewable energy systems, minimizing downtime and energy losses
8.	Performance-enhanced Power converter for EVs	SDG7, SDG9, SDG13	Improves energy efficiency in electric vehicles, reducing energy consumption and promoting clean mobility



Figure 2.7a) Internal Hackathon organised on 18/09/2024



ANNA UNIVERSITY CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project "PRIORITY-BASED EV CHARGING SYSTEM" is bonafide work of R. Harish (411520105310) M. KAVIKUMAR (411520105313) R.KRISHNAKUMAR (411520105007)and who carried out the project work under my supervision.

SIGNATURE

MRS S.L. SREEDEVI M.E.
HEAD OF THE DEPARTMENT

Department of Electrical
and Electronics Engineering
Peri Institute of Technology
Mannivakkam, Chennai-48

SIGNATURE

MRS. B. PANDYSELVI M.E.
SUPERVISOR
ASSISTANT PROFESSOR

Department of Electrical
and Electronics Engineering
Peri Institute of Technology
Mannivakkam, Chennai-48

Submitted for the VIVA-VOCE Examination held on 10/5/2024

INTERNAL EXAMINER

EXTERNAL EXAMINER

ii

Figure 2.7 b) A Sample of the project report

2.8 Steps Taken for Enhancing Industry Institute Partnerships (15)

Institute Marks : 15.00

The department undertakes industry–institute interaction activities to strengthen the relevance of engineering education and provide students with exposure to current industrial practices, technologies and professional expectations. These initiatives may include industry participation in the delivery of regular courses, industry-offered training programmes, industry-supported laboratory facilities and other documented collaborative activities.

The department identifies opportunities for engagement with industries relevant to its programme and facilitates interaction between industry professionals, faculty members and students. The activities are documented with details of the industry partner, nature of engagement, duration, student or faculty participation and supporting records. The department reviews the implementation and effectiveness of these initiatives to identify opportunities for strengthening industry collaboration.

2.8.1 Industry Involvement in the Partial Delivery of Regular Courses

The department facilitates industry participation in the delivery of relevant portions of regular courses wherever such arrangements have been implemented. Industry professionals may contribute through specialised lectures, technical sessions, demonstrations, practical instruction or delivery of selected course topics aligned with their professional expertise.

The department maintains records identifying the course, course code, topic or portion delivered, name and designation of the industry professional, organisation, date and duration of the engagement. Supporting evidence may include approved schedules, course delivery plans, session materials, attendance records, feedback and relevant correspondence.

The documented evidence establishes that the industry professional contributed to the delivery of a portion of a regular course. Guest lectures or general industry interactions should be reported accurately and should not be described as partial course delivery unless the records establish the connection with the course content and its implementation.

1. **Industry-Offered Courses and Training**

The department facilitates student participation in courses and training programmes offered or delivered by industries to develop skills relevant to current engineering practice. These programmes may cover specialised technologies, industry tools, technical processes, professional practices or other competencies relevant to the programme.

The department maintains records of the industry partner, programme title, training objectives, dates, duration, participating students and completion status. Supporting evidence may include programme brochures, training schedules, attendance sheets, course materials, certificates and feedback records, as applicable. The department reviews the relevance of these programmes to the curriculum and student learning needs. The reported activities distinguish industry-offered courses and training from ordinary guest lectures, industrial visits or other exposure activities.

2.8.3 Impact Analysis and Actions Taken

The department reviews the effectiveness of industry–institute partnership activities to determine their contribution to teaching-learning quality, practical exposure, technical skill development and curriculum relevance. The review may consider student participation, training completion, feedback, laboratory utilisation, industry observations and other indicators for which reliable records are available. Based on the review, the department identifies strengths, gaps and opportunities for improvement. Actions may include refining training content, identifying additional industry partners, improving laboratory utilisation, strengthening technical sessions or aligning future activities more closely with curriculum requirements. The department maintains the analysis, relevant meeting records, identified actions and available follow-up evidence. Claims of improvement or impact are reported only when supported by actual data or documented observations.

Review and Continuous Improvement

The department periodically reviews its industry–institute engagement activities and identifies opportunities for sustained collaboration. The review considers the implementation of course delivery contributions, industry-offered training, supported laboratory facilities and the documented outcomes of partnership initiatives. The resulting actions are recorded wherever such review has taken place.

The department organises the evidence so that each reported partnership activity can be traced to its industry partner, implementation records, student or faculty participation, evaluation and impact analysis, as applicable.

Table 2.8 a) List of Partnerships with Peri Institute of Technology

Year	S.No	Company Name	Date of MOU
2024-2025	1	PETRICORE TECHNOLOGIES, CHENNAI	07-04-2025
	2	ILLUSTRIOUS INSTITUTEOF GREEN ENVIRONMENT PRIVATE LIMITED	22-10-2024
2023-2024	1	EAGLE WIND TECH	07-02-2024
2022-2023	1	FOREVIEW TECHNOLOGIES PRIVATE LTD	26-04-2023
	2	RETECH SOLUTION PRIVATE LTD.	07-02-2023
	3	SHRI HARISHIKA INSTITUTE OF TECHNICAL AND HEALTH EDUCATION	25-08-2022
2021-2022	1	CADD CENTRE TRAINING SERVICE PVT LTD	06-05-2022
	2	ADHITYAA INFOMEDIA TECNOLOGIES	31-03-2022
	3	IPCS GLOBAL	22-03-2022
	4	KRIA TRAINING AND SERVICES	14-03-2022
2017-2018	1	GAMMA PROCESS HUB INDIA LTD	28-06-2018
	2	RED HAT ACADEMY	14-05-2018
	3	DATALOGICS INDIA PVT LTD	30-06-2017
	4	APT TRAINING RESOURCES	23-06-2017
	5	WAYS OPEN ACADEMY	23-06-2017
	6	SPARKLE SOFT SYSTEMS PRIVATE LIMITED	20-06-2017
	7	SOFT SOLUTIONS 4 U	19-06-2017
	8	VEGA INTELLISOFT	19-06-2017
	9	LITE ACADEMY	16-06-2017
	10	3EDGE SOLUTIONS	16-06-2017
	11	AQUA PURE PLUS PVT LTD	19-05-2017

Table 2.8 b) List of Guest lectures, trainings provided from the MoU signed Companies

S.No	Name of the training programme offered to the students	Name of the company offering training	Duration	Year of study
CAY Academic Year 2024-2025				

1.	Guest Lecture on MEP System Co-ordination and collaboration	Er.Deepak.S, BIM Consultant and Mr.Yukesh.G, MEP Design Engineer, Unique MEP Engineering Academy Private Limited, Chennai	03/09/24	II,III,IV
2.	Six days workshop in Embedded C	Mr.J.Krishnaswamy and Mr. Dilip R&D Engineer, AB Technologies, Tambaram West, Chennai	18/10/24 to 24/10/24	II,III
3.	Guest lecture in scope of core engineering	Mr.R.Mohammed Sherfuddin Chairman of Unique Groups, Industrial Institute of Green Environment and Management, Chennai	13/11/2024	II,III,IV
4.	In-House training on MEP- Electrical Design for a commercial building in Aesthetic Environment	Mr.G.Yukesh,MEP Design Engineer, Unique MEP Engineering Academy Private Limited, Chennai	12/02/25 to 18/02/205	II,III
5.	Seminar on BIM for Electrical Infrastructure Design	Mr.Pavithran P, Managing Director, Petricore Technologies Pvt Ltd, Chennai	26/02/25	II,III
6.	Workshop in Electric Vehicle Charging Infrastructure: Installation and Maintenance	Er.Deepak.S,BIM Consultant and Mr.Yukesh.G, MEP Design Engineer, Industrial Institute of Green Environment and Management, Chennai	09/10/24	II,III,IV
CAY m1 **Academic Year 2023-2024**				
1.	Guest lecture on developing a creative mindset and goal setting	Mr.R.Radhakrishnan, Centre Manager, CADD Centre, Chennai	26/09/23	III,IV

2.	National level seminar on Opportunities and future Embedded system	Mr.R.S Vijay Sarathy,Product Head-Embedded, Cloud kampus, Chennai	19/10/23	III,IV
3.	One week training on Embedded Internet of Things(IoT) for smart sensing Application	Mr.Kavin K.S, Managing Director, AB Technologies, Tambaram West, Chennai,	28/10/23 to 04/11/23	III,IV
4.	Guest Lecture on Understanding of Renewable Energy sources and Importance of Engineerz in the renewable energy Industry	Mr.Selvakumar Neethimani,Director, Eagle wind Tech, Chennai	27/02/24	II,III,IV
CAY m2 Academic Year 2022-2023				
1.	Value Added Course in Electric and Hybrid Vehicles	Mr.Rajendra Nalluri, Technical Head-Automobile and Project Management , CloudKampus- Elearning division of CADD Centre Training Services Private Limited, Chennai	20/08/22 to 15/10/22	III
2.	Value added Course in “Industrial Automation with PLC and SCADA”	Mr.Anand, Territory Technical Head, IPCS Global Automation, Chennai	20/08/2022 to 15/10/22	IV
3.	Workshop on Mobile Technology	Dr.G.Gopirajan, Director, Shri Harshika Institute of Technical and health Education Dr.B.Prabhu , Sr.Technical Eng, Shri Harshika Institute of Technical and health Education,Chennai	24/08/2022 and 25/08/2022	II,III,IV

4.	Hands on Training on Arduino	Mr.E.Elamvasanthan, Hardware Engineer, Foreview Technologies Pvt Ltd, Chennai	12/04/23	II,III,IV
5.	5 days Workshop in Embedded C	Mr.E.Elamvasanthan, Hardware Engineer, Foreview Technologies Pvt Ltd, Chennai	26/04/23 to 02/05/23	II,III,IV
6.	Seminar on Applications of Robotics in Electrical Field	Mr.E.Arunkumar,Vice President, Retech Solutions,Chennai	07/02/23	II,III,IV
7.	Guest lecture on Renewable Energy	Mr.Kavin K.S, Managing Director, AB Technologies, Chennai	20/09/22	II,III,IV
8.	Electric Vehicle Power Train Design with MATLAB	Mr.D.Durairaj, CloudKampus, CADD Centre, Chennai	10/11/23	III

3 OUTCOME-BASED ASSESSMENT (120)

Total Marks 120.00

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

Institute Marks : 10.00

3.1.1. Process for Setting and Evaluating Internal Question Papers

The Examination Cell conducts three centralised assessments for theory courses under Anna University Regulation 2017 (R2017): Continuous Assessment Test 1 (CAT-1), Continuous Assessment Test 2 (CAT-2), and the Model Examination , each carrying 100 marks. R2017 applies to the 2019–2023 and 2020–2024 batches. The assessment schedule is published in the academic calendar at the beginning of each semester.

CAT-1 covers the first 2.5 units, addressing CO1, CO2, and CO3, while CAT-2 covers the remaining 2.5 units, addressing CO3, CO4, and CO5. The Model Examination covers all five units and all five COs.

The course-handling faculty member or course coordinator prepares two sets of question papers and corresponding answer keys for each course. Questions are designed with appropriate cognitive levels based on Bloom's Taxonomy and mapped to the relevant Course Outcomes (COs). The Head of the Department reviews the question papers, followed by verification by IQAC, before submission to the Examination Cell. The Examination Cell randomly selects one set for each assessment.

3.1.2. Quality of Questions and CO–PO/PSO Mapping

Question papers are designed to assess students' knowledge, understanding, application, analytical ability, and problem-solving skills, as appropriate to the course. Each question is mapped to the relevant CO to ensure alignment between assessment and intended learning outcomes. The COs are mapped to the Program Outcomes (POs) and Program Specific Outcomes (PSOs), enabling the department to analyse the contribution of course-level learning towards program-level outcome attainment.

3.1.3. Assessment Coverage and Evaluation

The three assessments provide progressive syllabus coverage: CAT-1 assesses the first 2.5 units, CAT-2 assesses the remaining 2.5 units, and the Model Examination assesses the complete syllabus. Answer scripts are evaluated using the corresponding answer keys to promote consistency and fairness.

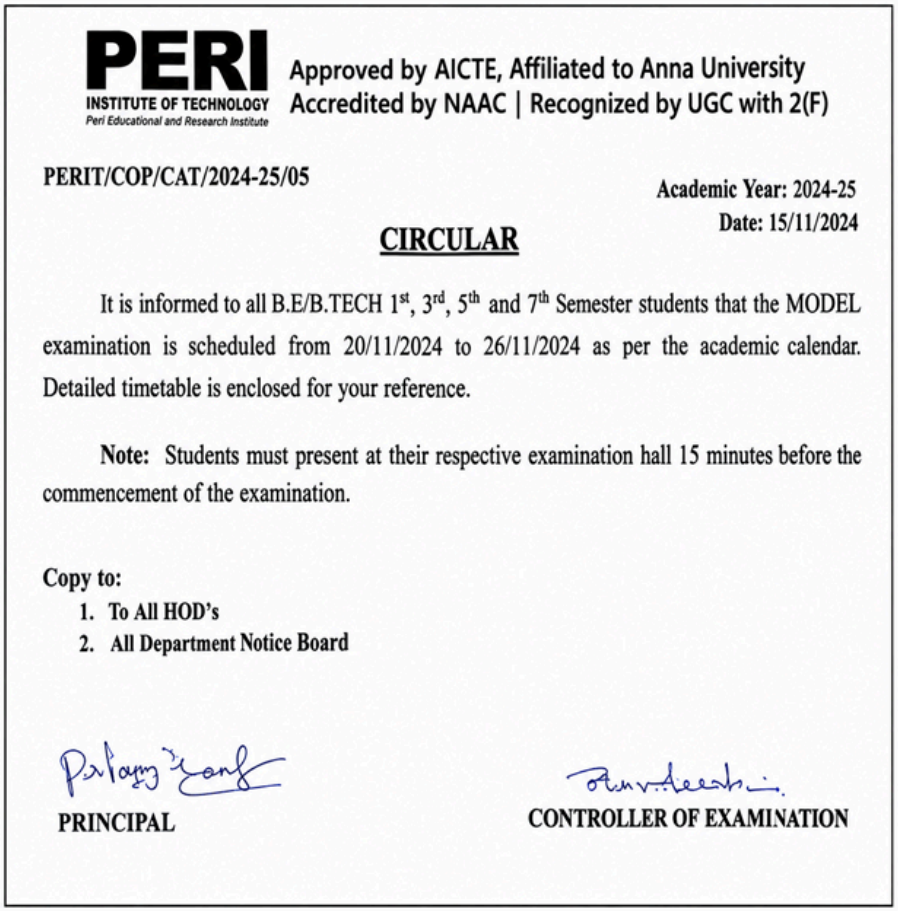
3.1.4. Post-Evaluation Feedback and Performance Improvement

Evaluated answer scripts are returned to students or discussed with them. Faculty members explain the correct answers, communicate marks and errors, and provide feedback to help students identify learning gaps and improve their performance.

3.1.5. Calculation of Internal Assessment Marks

For R-2017, Each of the three assessments carries equal weightage. The marks obtained in CAT-1, CAT-2, and the Model Examination are aggregated out of 300 and proportionately converted to 20 marks, rounded to the nearest integer. The resulting score constitutes the internal assessment mark for the course.

For R-2021, Two assessments CAT-1 and CAT-2 are conducted and total mark is converted to 60 along with assignment mark for 40. The total 100 mark is converted to total internal marks of 40.



PERI INSTITUTE OF TECHNOLOGY
Peri Educational and Research Institute

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

PERIT/COP/CAT/2024-25/05

Academic Year: 2024-25
Date: 15/11/2024

CIRCULAR

It is informed to all B.E/B.TECH 1st, 3rd, 5th and 7th Semester students that the MODEL examination is scheduled from 20/11/2024 to 26/11/2024 as per the academic calendar. Detailed timetable is enclosed for your reference.

Note: Students must present at their respective examination hall 15 minutes before the commencement of the examination.

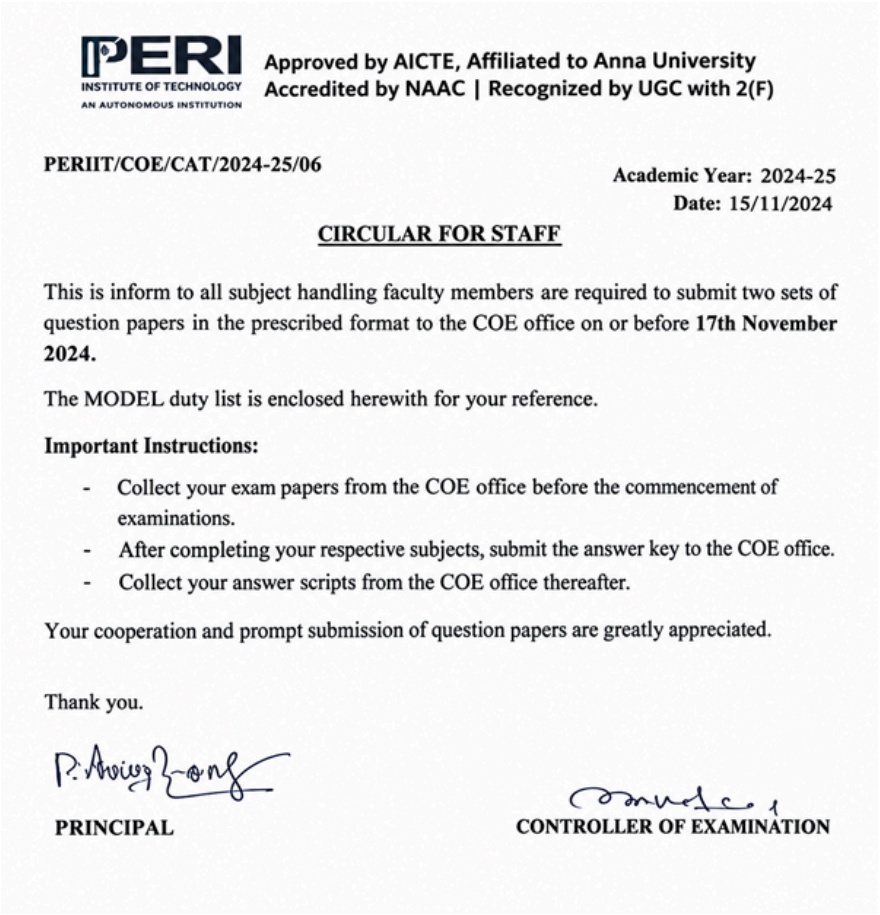
Copy to:

1. To All HOD's
2. All Department Notice Board

PRINCIPAL

CONTROLLER OF EXAMINATION

Fig 3.1.1 Sample Circular for Students



PERI INSTITUTE OF TECHNOLOGY
AN AUTONOMOUS INSTITUTION

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

PERIIT/COE/CAT/2024-25/06

Academic Year: 2024-25
Date: 15/11/2024

CIRCULAR FOR STAFF

This is inform to all subject handling faculty members are required to submit two sets of question papers in the prescribed format to the COE office on or before **17th November 2024.**

The MODEL duty list is enclosed herewith for your reference.

Important Instructions:

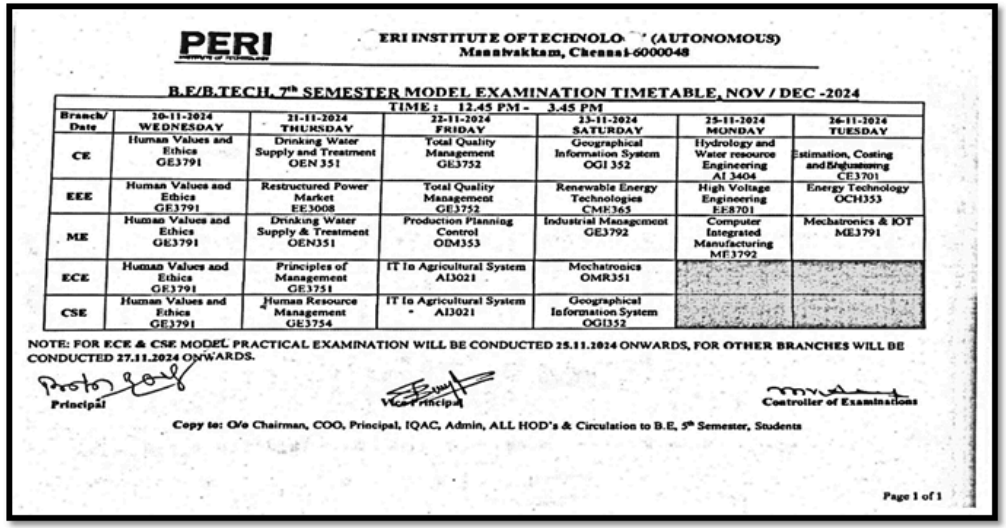
- Collect your exam papers from the COE office before the commencement of examinations.
- After completing your respective subjects, submit the answer key to the COE office.
- Collect your answer scripts from the COE office thereafter.

Your cooperation and prompt submission of question papers are greatly appreciated.

Thank you.

PRINCIPAL **CONTROLLER OF EXAMINATION**

Fig 3.1.2 Sample Circular for Staffs to conduct model exam



PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
Mannivakkam, Chennai-600048

B.E/B.TECH. 7th SEMESTER MODEL EXAMINATION TIMETABLE, NOV / DEC -2024

TIME : 12.45 PM - 3.45 PM

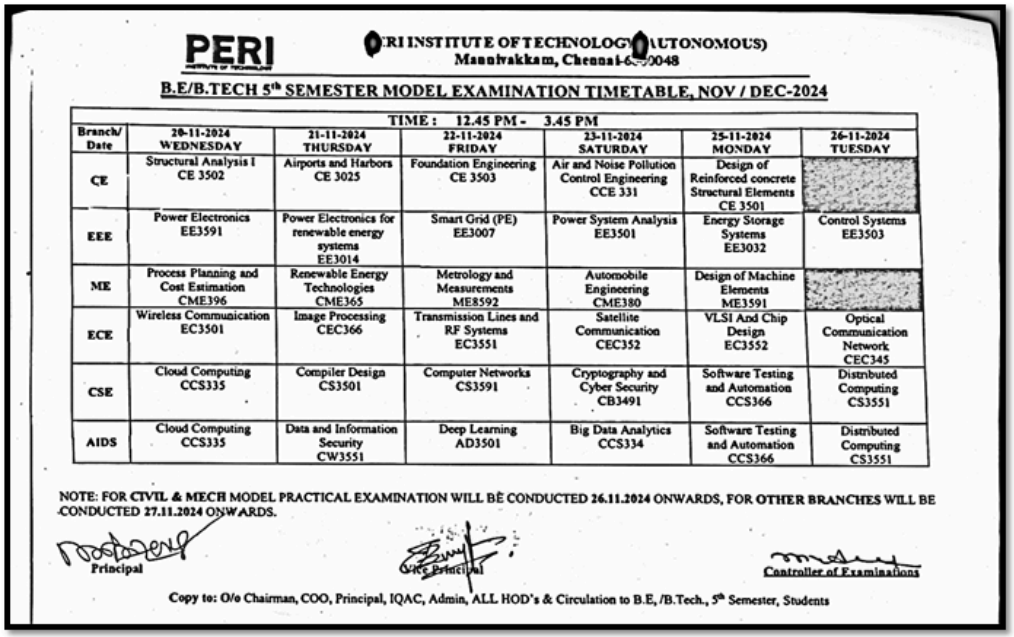
Branch/ Date	20-11-2024 WEDNESDAY	21-11-2024 THURSDAY	22-11-2024 FRIDAY	23-11-2024 SATURDAY	25-11-2024 MONDAY	26-11-2024 TUESDAY
CE	Human Values and Ethics GE3791	Drinking Water Supply and Treatment OEN 351	Total Quality Management GE3752	Geographical Information System OGI 352	Hydrology and Water resource Engineering AI 3404	Estimation, Costing and Engineering CE3701
EEE	Human Values and Ethics GE3791	Restructured Power Market EE3008	Total Quality Management GE3752	Renewable Energy Technologies CME365	High Voltage Engineering EE8701	Energy Technology OCH353
ME	Human Values and Ethics GE3791	Drinking Water Supply & Treatment OEN351	Production Planning Control OIM353	Industrial Management GE3792	Computer Integrated Manufacturing ME3792	Mechatronics & IOT ME3791
ECE	Human Values and Ethics GE3791	Principles of Management GE3751	IT In Agricultural System AI3021	Mechatronics OMR351		
CSE	Human Values and Ethics GE3791	Human Resource Management GE3754	IT In Agricultural System AI3021	Geographical Information System OGI352		

NOTE: FOR ECE & CSE MODEL PRACTICAL EXAMINATION WILL BE CONDUCTED 25.11.2024 ONWARDS, FOR OTHER BRANCHES WILL BE CONDUCTED 27.11.2024 ONWARDS.

Principal Vice Principal Controller of Examinations

Copy to: O/o Chairman, COO, Principal, IQAC, Admin, ALL HOD's & Circulation to B.E, 5th Semester, Students

Page 1 of 1



PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
Mannivakkam, Chennai-600048

B.E/B.TECH 5th SEMESTER MODEL EXAMINATION TIMETABLE, NOV / DEC-2024

TIME : 12.45 PM - 3.45 PM

Branch/ Date	20-11-2024 WEDNESDAY	21-11-2024 THURSDAY	22-11-2024 FRIDAY	23-11-2024 SATURDAY	25-11-2024 MONDAY	26-11-2024 TUESDAY
CE	Structural Analysis I CE 3502	Airports and Harbors CE 3025	Foundation Engineering CE 3503	Air and Noise Pollution Control Engineering CCE 331	Design of Reinforced concrete Structural Elements CE 3501	
EEE	Power Electronics EE3591	Power Electronics for renewable energy systems EE3014	Smart Grid (PE) EE3007	Power System Analysis EE3501	Energy Storage Systems EE3032	Control Systems EE3503
ME	Process Planning and Cost Estimation CME396	Renewable Energy Technologies CME365	Metrology and Measurements ME8592	Automobile Engineering CME380	Design of Machine Elements ME3591	
ECE	Wireless Communication EC3501	Image Processing CEC366	Transmission Lines and RF Systems EC3551	Satellite Communication CEC352	VLSI And Chip Design EC3552	Optical Communication Network CEC345
CSE	Cloud Computing CCS335	Compiler Design CS3501	Computer Networks CS3591	Cryptography and Cyber Security CB3491	Software Testing and Automation CCS366	Distributed Computing CS3551
AIDS	Cloud Computing CCS335	Data and Information Security CW3551	Deep Learning AD3501	Big Data Analytics CCS334	Software Testing and Automation CCS366	Distributed Computing CS3551

NOTE: FOR CIVIL & MECH MODEL PRACTICAL EXAMINATION WILL BE CONDUCTED 26.11.2024 ONWARDS, FOR OTHER BRANCHES WILL BE CONDUCTED 27.11.2024 ONWARDS.

Principal Vice Principal Controller of Examinations

Copy to: O/o Chairman, COO, Principal, IQAC, Admin, ALL HOD's & Circulation to B.E, /B.Tech., 5th Semester, Students



PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
Mannivakkam, Chennai-60.[illegible]048

B.E/B.TECH, 3rd SEMESTER MODEL EXAMINATION TIMETABLE, NOV / DEC -2024

TIME : 12.45 PM - 3.45 PM

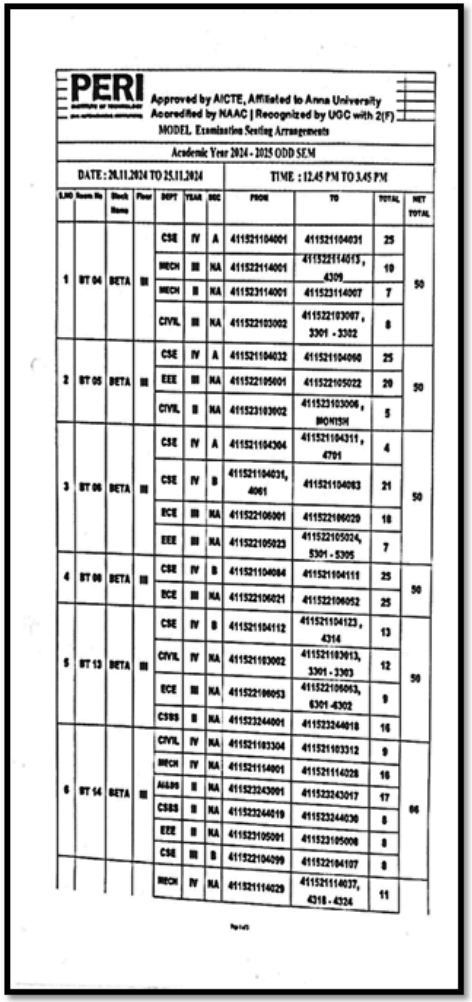
Branch/ Date	20-11-2024 WEDNESDAY	21-11-2024 THURSDAY	22-11-2024 FRIDAY	23-11-2024 SATURDAY	25-11-2024 MONDAY	26-11-2024 TUESDAY
CE	Transforms and Partial Differential Equations MA 3351	Surveying and Leveling CE 3351	Water Supply and Wastewater Engineering CE 3303	Fluid Mechanics CE 3301	Construction Materials and Technology CE 3302	Engineering Mechanics ME 3351
EEE	Probability and Complex Functions MA3303	Electromagnetic Fields EE3301	Electrical Machines I EE3303	Electron Devices and Circuits EC3301	Digital Logic Circuits EE3302	C Programming and Data structures CS3353
ME	Transforms and Partial Differential Equations MA3351	Manufacturing Processes ME3393	Engineering Materials and Metallurgy ME3392	Engineering Thermodynamics ME3391	Fluid Mechanics and Machinery CE3391	Engineering Mechanics ME3351
ECE	Random Processes and Linear Algebra MA3355	Control System EC3351	Digital System Design EC3352	Electronic Devices and Circuits EC3353	Signals and Systems EC3354	C Programming and Data Structures CS3353
CSE	Discrete Mathematics MA3354	Digital System Design and Computer Organization CS3351	Object Oriented Programming CS3391	Data Structures CS3301	Foundations of Data Science CS3352	
AIDS	Discrete Mathematics MA3354	Digital System Design and Computer Organization CS3351	Database Design and Management AD3391	Design and Analysis of Algorithms AD3351	Data Exploration and Visualization AD3301	Artificial Intelligence AL3391
IT	Discrete Mathematics MA3354	Digital System Design and Computer Organization CS3351	Object Oriented Programming CS3391	Data Structures and Algorithms CD3291	Foundations of Data Science CS3352	
CSBS	Discrete Mathematics MA3354	Digital System Design and Computer Organization CS3351	Object Oriented Programming CS3391	Design and Analysis of Algorithms AD3351	Fundamentals of Economics CW3301	Fundamentals of Data Science and Analytics AD3491

NOTE: FOR CSE &IT MODEL PRACTICAL EXAMINATION WILL BE CONDUCTED 26.11.2024 ONWARDS, FOR OTHER BRANCHES WILL BE CONDUCTED 27.11.2024 ONWARDS.

Principal Vice Principal Controller of Examinations

Copy to: O/o Chairman, COO, Principal, IQAC, Admin, ALL HOD's & Circulation to B.E./ B.Tech 3rd Semester, Students.

Fig 3.1.3 Sample Model exam Timetable for 7th,5 th and 3rd sem students



PERI INSTITUTE OF TECHNOLOGY

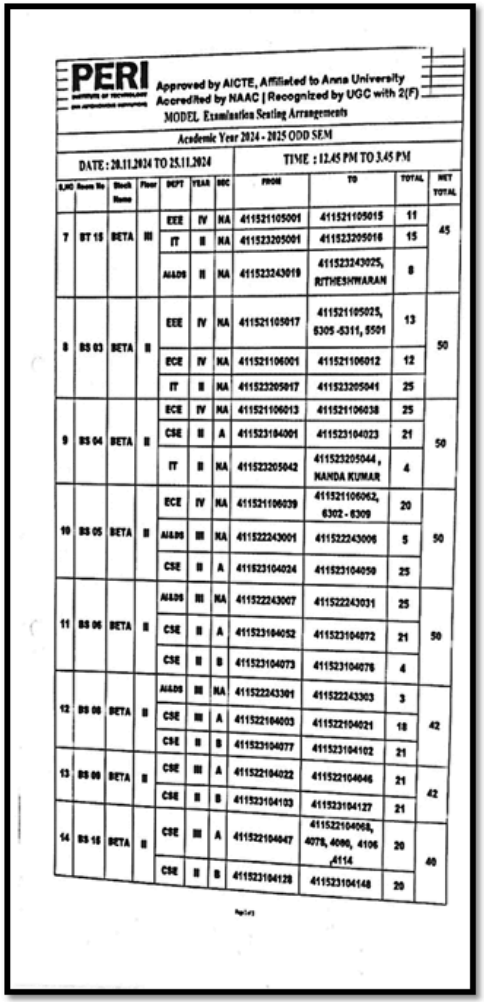
Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

MODEL Examination Seating Arrangements

Academic Year 2024 - 2025 ODD SEM

DATE : 20.11.2024 TO 25.11.2024 — TIME : 12.45 PM TO 3.45 PM

S.NO	Room No	Block Name	Floor	DEPT	YEAR	SEC	FROM	TO	TOTAL	NET TOTAL
1	BT 04	BETA	III	CSE	IV	A	411521104001	411521104031	25	50
				MECH	III	NA	411522114001	411522114015 , 4309	19	
				MECH	II	NA	411523114001	411523114007	7	
				CIVIL	III	NA	411522103002	411522103007 , 3301 - 3302	8	
2	BT 05	BETA	III	CSE	IV	A	411521104032	411521104056	25	50
				EEE	III	NA	411522105001	411522105022	20	
				CIVIL	II	NA	411523103002	411523103006 , BHUVISH	5	
3	BT 06	BETA	III	CSE	IV	A	411521104304	411521104311 , 4701	4	50
				CSE	IV	B	411521104031, 4061	411521104063	21	
				ECE	III	NA	411522106001	411522106029	18	
				EEE	III	NA	411522105023	411522105024, 5301 - 5305	7	
4	BT 08	BETA	III	CSE	IV	B	411521104064	411521104111	25	50
				ECE	III	NA	411522106021	411522106052	25	
5	BT 13	BETA	III	CSE	IV	B	411521104112	411521104123 , 4314	13	50
				CIVIL	IV	NA	411521103002	411521103013, 3301 - 3303	12	
				ECE	III	NA	411522106053	411522106063, 6301-6302	9	
				CSBS	II	NA	411523244001	411523244018	16	
6	BT 14	BETA	III	CIVIL	IV	NA	411521103304	411521103312	9	96
				MECH	IV	NA	411521114001	411521114028	16	
				AI&DS	II	NA	411523243001	411523243017	17	
				CSBS	II	NA	411523244019	411523244036	8	
				EEE	II	NA	411523105001	411523105008	8	
				CSE	III	B	411522104099	411522104107	8	
				MECH	IV	NA	411521114029	411521114037, 4318 - 4324	11	



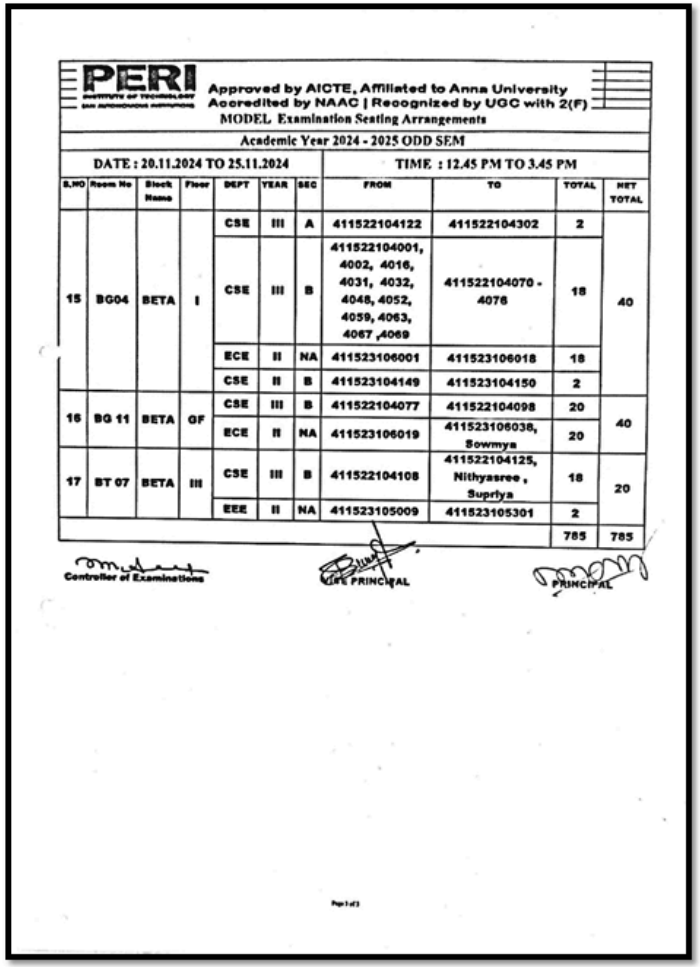
PERI INSTITUTE OF TECHNOLOGY — Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

MODEL Examination Seating Arrangements

Academic Year 2024 - 2025 ODD SEM

DATE : 20.11.2024 TO 25.11.2024 — TIME : 12.45 PM TO 3.45 PM

S.NO	Room No	Block Name	Floor	DEPT	YEAR	SEC	FROM	TO	TOTAL	NET TOTAL
7	BT 15	BETA	III	EEE	IV	NA	411521105001	411521105015	11	45
				IT	II	NA	411523205001	411523205016	15	
				AI&DS	II	NA	411523243019	411523243025, RITHESHWARAN	8	
8	BS 03	BETA	II	EEE	IV	NA	411521105017	411521105025, 5305 -5311, 5501	13	50
				ECE	IV	NA	411521106001	411521106012	12	
				IT	II	NA	411523205017	411523205041	25	
9	BS 04	BETA	II	ECE	IV	NA	411521106013	411521106038	25	50
				CSE	II	A	411523104001	411523104023	21	
				IT	II	NA	411523205042	411523205044 , NANDA KUMAR	4	
10	BS 05	BETA	II	ECE	IV	NA	411521106039	411521106062, 6302 - 6309	20	50
				AI&DS	III	NA	411522243001	411522243006	5	
				CSE	II	A	411523104024	411523104059	25	
11	BS 06	BETA	II	AI&DS	III	NA	411522243007	411522243031	25	50
				CSE	II	A	411523104052	411523104072	21	
				CSE	II	B	411523104073	411523104076	4	
12	BS 08	BETA	II	AI&DS	III	NA	411522243301	411522243303	3	42
				CSE	III	A	411522104003	411522104021	18	
				CSE	II	B	411523104077	411523104102	21	
13	BS 09	BETA	II	CSE	III	A	411522104022	411522104046	21	42
				CSE	II	B	411523104103	411523104127	21	
14	BS 10	BETA	II	CSE	III	A	411522104047	411522104068, 4078, 4090, 4106 ,4114	20	40
				CSE	II	B	411523104128	411523104148	20	



PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

MODEL Examination Seating Arrangements

Academic Year 2024 - 2025 ODD SEM

DATE : 20.11.2024 TO 25.11.2024 TIME : 12.45 PM TO 3.45 PM

S.NO	Room No	Block Name	Floor	DEPT	YEAR	SEC	FROM	TO	TOTAL	NET TOTAL
15	BG04	BETA	I	CSE	III	A	411522104122	411522104302	2	40
				CSE	III	B	411522104001, 4002, 4016, 4031, 4032, 4048, 4052, 4059, 4063, 4067 ,4069	411522104070 - 4076	18	
				ECE	II	NA	411523106001	411523106018	18	
				CSE	II	B	411523104149	411523104150	2	
16	BG 11	BETA	GF	CSE	III	B	411522104077	411522104098	20	40
				ECE	II	NA	411523106019	411523106038, Sowmya	20	
17	BT 07	BETA	III	CSE	III	B	411522104108	411522104125, Nithyasree , Supriya	18	20
				EEE	II	NA	411523105009	411523105301	2	
									785	785

Controller of Examinations VICE PRINCIPAL PRINCIPAL

Page 1 of 3

Fig 3.1.4. Sample Model exam Seating arrangement for students

PERI INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

MODEL Examination Duty List

Academic Year 2024 - 2025 ODD SEM

DATE : 20.11.2024 TO 26.11.2024 | TIME : 12.45 PM TO 3.45 PM

S.No	Name of the Faculty	Designation	DEPT	20.11.24	21.11.24	22.11.24	23.11.24	25.11.24	26.11.24
1	Ms.P. Aileen Sonia	AP	EEE	Y		Y		Y	
2	Ms P.Priyadharshini	AP	EEE		Y	Y	Y		Y
3	Dr K. Deepa	AP	EEE	Y		Y	Y		Y
4	Dr. N. Thangam	AP	CIVIL	Y	Y		Y		
5	Mr. G. Naga Subramanian	AP	CIVIL		Y	Y		Y	Y
6	Mr.K.Santhosh Kumaar	AP	CIVIL	Y		Y	Y	Y	
7	Dr. G. Nallathambi	PROFESSOR	ECE	Y		Y			
8	Mrs. S. Shobana	AP	ECE		Y	Y	Y		
9	Mrs. S. Mahalakshmi	AP	ECE	Y		Y	Y	Y	
10	Mrs. A. Mahalakshmi	AP	ECE	Y		Y	Y	Y	
11	Mrs. M. Vicknaswari	AP	ECE	Y		Y		Y	
12	Ms. D. Vidhya	AP	CSE		Y	Y	Y		
13	Ms. C. Kalaiarasi	AP	CSE		Y		Y	Y	Y
14	Dr. S. Anu Priya	AP	CSE	Y		Y		Y	
15	Ms. V. Vidhya	AP	CSE	Y	Y		Y	Y	
16	Ms. N. Premavathy	AP	CSE	Y		Y	Y		
17	Ms. K. Nirmal Gowri	AP	CSE	Y	Y		Y		Y
18	Mr. S. Abhirayan	AP	CSE		Y		Y	Y	Y
19	Mr. S. Dorairangan	AP	CSE	Y		Y			Y
20	Ms. M. Janaki	AP	CSE	Y			Y	Y	Y
21	Ms. R. Kruthika	AP	CSE		Y	Y		Y	
22	Mr. V. Senthil Kumar	AP	CSE	Y	Y			Y	Y
23	Ms. N. Venkata Vijayalakshmi	AP	CSE	Y		Y	Y		
24	Ms Saranya	AP	CSE		Y	Y	Y		Y
25	Mr. V. Soundararaan	AP	MECH		Y		Y	Y	Y
26	Mr. P. Prabhakaran	AP	MECH	Y	Y			Y	Y
27	Mr. O. Vaithyanathan	AP	MECH	Y	Y		Y	Y	
28	Dr. N. Tamiloli	Professor	MECH		Y			Y	
29	Mrs. Nivedha	AP	S & H		Y	Y		Y	Y

Controller of Examinations | VICE PRINCIPAL | PRINCIPAL

Fig3.1.5 Staff Duty list for Model exam

PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
Mannivakkam, Chennai-6000048

INVIGILATOR ATTENDANCE SHEET

AY:2024-25

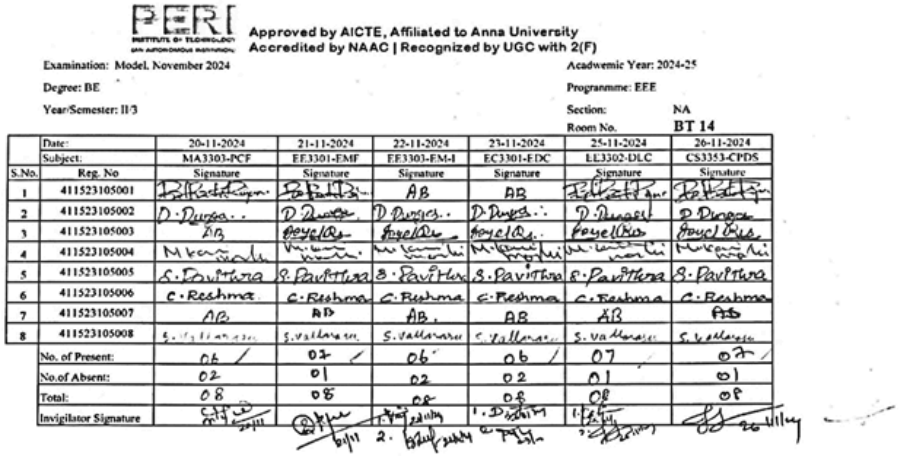
EXAMINATION: B.E/B. TECH 3rd , 5th and 7th Semester CAT-I, September 2024

Date of Examination:27.09.2024

S. No.	Name	Department	Room No.	Time	Signature
1	Ms.P. Aileen Sonia	EEE	BS 04	8:45	
2	Ms.P.Priyadharshini	EEE	BS 04	9:45	
3	Mr.K.Santhosh Kumaar	CIVIL	BT 05	8.45	
4	Dr. G. Nallathambi	ECE	BS 05	9.30	
5	Mrs. S. Shobana	ECE	BT 06	8.45	
6	Mrs. S. Mahalakshmi	ECE	BS 06	8.45	
7	Mrs. A. Mahalakshmi	ECE	BS 08 04	9.35	
8	Mrs. M. Vickneswari	ECE	BS 05	9.30	
9	Ms. C. Kalaiarasi	CSE	BS 09	8.45	
10	Ms. N. Premavathy	CSE	BT 06	8:50	
11	Mr. S. Duraimurugan	CSE	BT 08	8.45	
12	Ms. R. Kruthika	CSE	BS 15	8.49	
13	Ms. N. Venkata Vijayalakshmi	CSE	BS 06	8.45	
14	Dr. N. Tamiloli	MECH	BT 08		
15	Mr. V. Sounthararasu	MECH	BT 05	9.30	

PRINCIPAL

Fig 3.1.6 Staff attendance for exam duty



Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

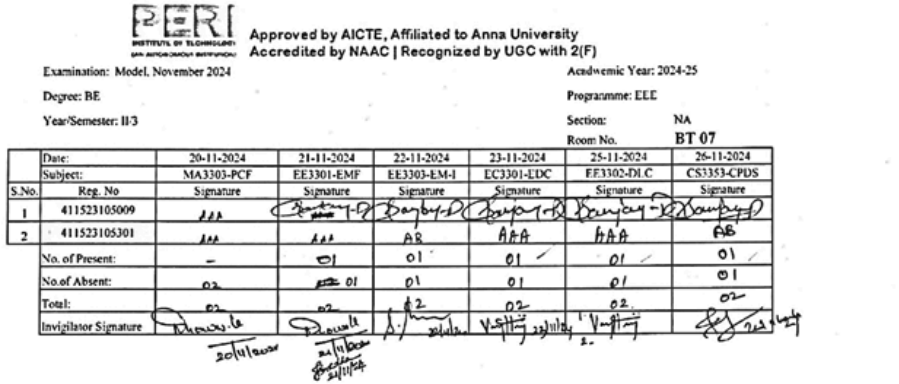
Examination: Model, November 2024 Academic Year: 2024-25

Degree: BE Programme: EEE

Year/Semester: II/3 Section: NA

Room No. BT 14

	Date:	20-11-2024	21-11-2024	22-11-2024	23-11-2024	25-11-2024	26-11-2024
	Subject:	MA3303-PCF	EE3301-EMF	EE3303-EM-I	EC3301-EDC	EE3302-DLC	CS3353-CPDS
S.No.	Reg. No	Signature	Signature	Signature	Signature	Signature	Signature
1	411523105001			AB	AB		
2	411523105002						
3	411523105003						
4	411523105004						
5	411523105005						
6	411523105006						
7	411523105007						
8	411523105008						
	No. of Present:	06	02	06	06	07	07
	No.of Absent:	02	01	02	02	01	01
	Total:	08	08	08	08	08	08
	Invigilator Signature						



Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

Examination: Model, November 2024 Academic Year: 2024-25

Degree: BE Programme: EEE

Year/Semester: II/3 Section: NA

Room No. BT 07

	Date:	20-11-2024	21-11-2024	22-11-2024	23-11-2024	25-11-2024	26-11-2024
	Subject:	MA3303-PCF	EE3301-EMF	EE3303-EM-I	EC3301-EDC	EE3302-DLC	CS3353-CPDS
S.No.	Reg. No	Signature	Signature	Signature	Signature	Signature	Signature
1	411523105009						
2	411523105301			AB	AAA	AAA	AB
	No. of Present:	-	01	01	01	01	01
	No.of Absent:	02	01	01	01	01	01
	Total:	02	02	02	02	02	02
	Invigilator Signature						

Fig 3.1.7 Student attendance for Model exam

Reg. no.:

PERI
INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

MODEL EXAM: November 2024

EE3008-RESTRUCTURED POWER MARKET

SET 1

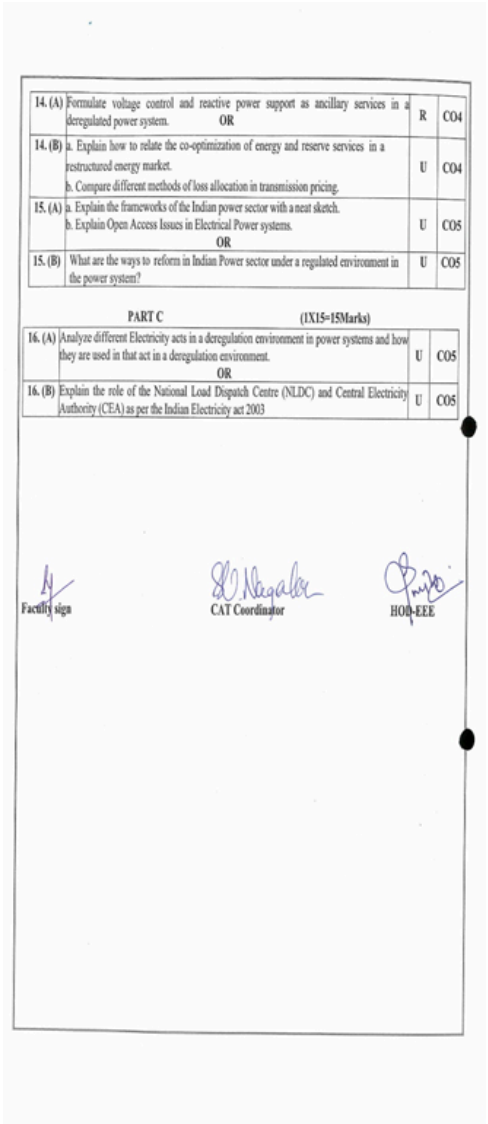
Year/Sem/Sec	IV/VII	Date	.]-11-2024
Department	EEE	Duration	180 minutes
Faculty	Dr. S. Suganthi	Max. Marks	100

PART A (10X2=20 Marks)

1.	State any four benefits in the competitive restructuring environment.	U	CO1
2.	What is meant by the unbundling of the power system?	U	CO1
3.	What is meant by ATC and write the importance?	U	CO2
4.	Define congestion in deregulation.	U	CO2
5.	Discuss on shortage of transmission capacity.	U	CO3
6.	How the non-market methods of congestion management.	R	CO3
7.	What is the difference between the energy market and the capacity market?	U	CO4
8.	Define ancillary service and write about the importance of ancillary service in a restructured power system.	U	CO4
9.	Define Electricity Authority transmission pricing. And what is meant by CERC?	U	CO5
10.	Measure the salient features of the National Electricity policy.	U	CO5

PART B (5X13=65Marks)

11.(A)	Compare various market models in restructured power systems with clear explanations. OR	U	CO1
11. (B)	With suitable examples explain supplier behavior and consumer behavior under a deregulation environment.	U	CO1
12. (A)	Analysis to calculate ATC using AC power flow analysis with suitable examples in the deregulation environment in the power? OR	U	CO2
12. (B)	Formulate the inter-zonal and intra-zonal congestion management problems and discuss the significance of control.	U	CO2
13. (A)	Discuss the mathematical model DCOPF and ACOPF for LMP calculation in the deregulated market. OR	U	CO3
13. (B)	Discuss briefly Financial Transmission Rights (FTR) in power systems under a deregulated environment.	U	CO3



14. (A)	Formulate voltage control and reactive power support as ancillary services in a deregulated power system. OR	R	CO4
14. (B)	a. Explain how to relate the co-optimization of energy and reserve services in a restructured energy market. b. Compare different methods of loss allocation in transmission pricing.	U	CO4
15. (A)	a. Explain the frameworks of the Indian power sector with a neat sketch. b. Explain Open Access Issues in Electrical Power systems.	U	CO5
	OR		
15. (B)	What are the ways to reform in Indian Power sector under a regulated environment in the power system?	U	CO5

PART C (1X15=15Marks)

16. (A)	Analyze different Electricity acts in a deregulation environment in power systems and how they are used in that act in a deregulation environment.	U	CO5
	OR		
16. (B)	Explain the role of the National Load Dispatch Centre (NLDC) and Central Electricity Authority (CEA) as per the Indian Electricity act 2003	U	CO5

Faculty sign CAT Coordinator HOD-EEE

Fig 3.1.8 Sample Set 1 Question paper for Model Exam

Reg. no.:

PERI
INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

MODEL EXAM: November 2024

EE3008-RESTRUCTURED POWER MARKET

SET 2

Year/Sem/Sec	IV/VII	Date	21-11--2024
Department	EEE	Duration	180 minutes
Faculty	Dr. S. Suganthi	Max. Marks	100

PART A (10X2=20 Marks)

1.	Differentiate Total utility and marginal utility	R	CO1
2.	What are the objectives of deregulation in developing countries?	U	CO1
3.	Distinguish between day ahead and block forwards energy market.	U	CO2
4.	What is meant by a transmission congestion contract?	U	CO2
5.	Explain why secondary trading of FTR.	U	CO3
6.	What is a Flow gate right?	U	CO3
7.	Why black start capability is used in restructuring the power system? How the ancillary services help to control the reactive power and voltages in the deregulated power market.	R	CO4
8.	Justify why spinning reserve is important in ancillary service. and define power wheeling.	R	CO4
9.	How availability-based tariff is used to restructure power system?	U	CO5
10.	Give the merits of Indian power exchange for the day-ahead market.	R	CO5

PART B (5X13=65Marks)

11.(A)	Explain short-run and long-run production costs with suitable examples from a restructured power system. OR	U	CO1
11. (B)	Explain the restructuring process with a neat block diagram of various entities involved in deregulation.	U	CO1
12. (A)	Discuss briefly price area congestion management in the power system under a regulation environment. OR	U	CO2
12. (B)	Explain different methods of non-market models of price area congestion management.	U	CO2

13. (A)	Explain the following with suitable examples. (1) FTR auction (2) FTR allocation (3) Secondary trading of FTRs (4) Flow gate right	U	CO3

	OR		
13. (B)	Write briefly FTR merchant transmission investment in power systems under deregulation.	U	CO3
14. (A)	Describe in detail different types of ancillary service in a restructured power system. OR	U	CO4
14. (B)	Briefly describe load-generation balancing as an ancillary service in a restructured power market environment.	U	CO4
15. (A)	Explain the institutional structure of the Indian power sector before and after the period of restructuring. OR	U	CO5
15. (B)	Discuss the various challenges and opportunities in the implementation of open access in India.	U	CO5

PART C **(1X15=15Marks)**

16. (A)	List out the Electricity Act 2003 in a deregulation environment. Point out briefly open access issues in the Indian power sector. OR	U	CO5
16. (B)	a. Why the power exchange is needed in the Indian power sector? b. Explain Open Access Issues in Electrical Power systems.	U	CO5

Staff sign Cat Coordinator HOD-EEE



Fig 3.1.9 Sample Set 2 Question paper for Model Exam

Reg. no.:

PERI
INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

MODEL EXAM: November 2024

EE3008-RESTRUCTURED POWER MARKET

SET 1

Year/Sem/Sec	IV/VII	Date	21-11-2024
Department	EEE	Duration	180 minutes
Faculty	Dr. S. Suganthi	Max. Marks	100

PART A (10X2=20 Marks)

1.	State any four benefits in the competitive restructuring environment. • Enhanced Efficiency: Competition among power generators encourages cost-effectiveness and better resource utilization. • Lower Prices: Consumers may benefit from reduced electricity costs due to competitive pricing. • Improved Service Quality: Providers focus on reliability and customer satisfaction to retain market share. • Innovation: Market competition drives technological advancements in generation, distribution, and efficiency.	U	CO1
2.	What is meant by the unbundling of the power system? Unbundling refers to the separation of different functions in the power system—generation, transmission, and distribution—into distinct entities to promote transparency, competition, and operational efficiency	U	CO1
3.	What is meant by ATC and write the importance? Definition: ATC represents the measure of the surplus transmission capacity available after accounting for committed uses and system reliability requirements. Importance: • Facilitates open access in deregulated markets. • Ensures reliable transmission of electricity without overloading the system. • Enables efficient power trading between regions.	U	CO2

4.	Define congestion in deregulation. Congestion occurs when the demand for power transmission on a particular line exceeds its capacity, leading to restricted power flows and potential reliability issues.	U	CO2
5.	Discuss on shortage of transmission capacity. This occurs when the existing transmission infrastructure cannot handle the required power transfer, leading to issues like higher costs, power losses, and curtailment of	U	CO3

4. National Electricity Policy (NEP)

- **Overview:** The **National Electricity Policy (NEP)**, formulated by the Government of India in 2005, sets the broad framework for the **development** of the electricity sector in the country.
- **Key Objectives:**
  - **Ensuring reliable and affordable power** to all consumers.
  - Encouraging the **growth of renewable energy** and the **reduction of emissions**.
  - **Improving transmission and distribution infrastructure** to reduce losses.
  - Promoting **private sector participation** in generation, transmission, and distribution.

5. Renewable Energy Regulatory Framework

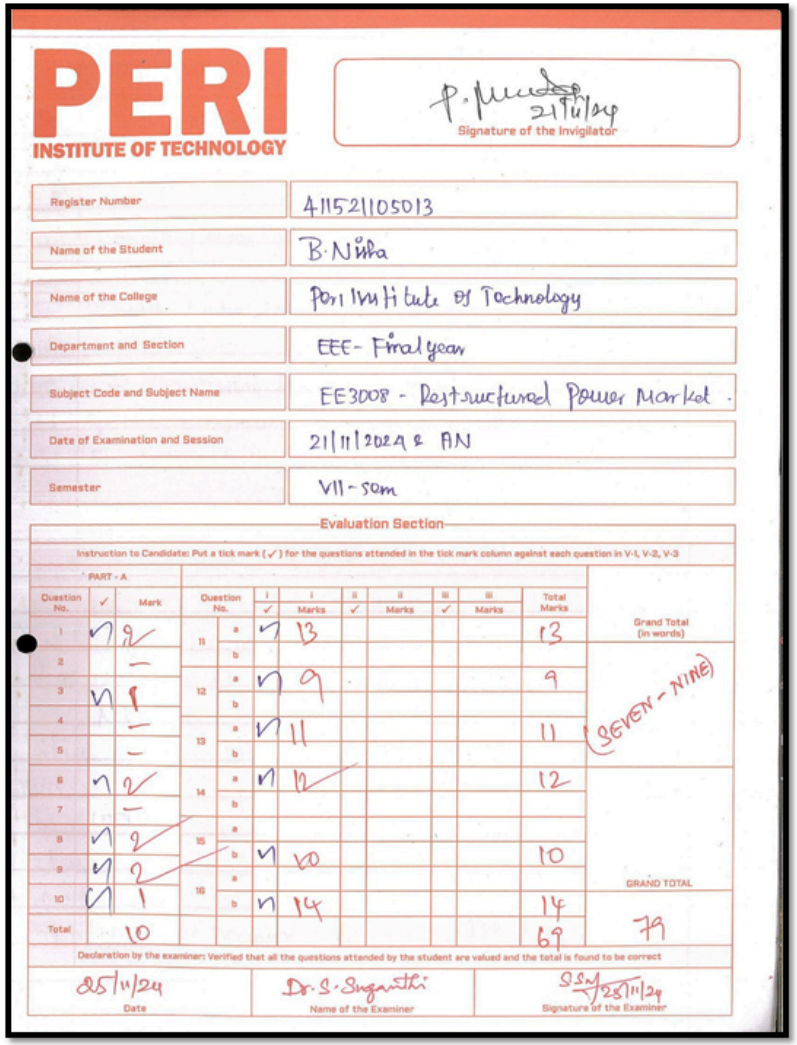
- **Overview:** With India's increasing focus on renewable energy, a specific regulatory framework has been established to promote the generation and integration of renewable energy sources like wind, solar, and hydroelectric power.
- **Key Provisions:**
  - **Renewable Purchase Obligations (RPOs):** Utilities are mandated to purchase a certain percentage of power from renewable sources.
  - **Renewable Energy Certificates (RECs):** Tradable certificates allow renewable energy producers to meet RPOs by selling excess generation.
  - **National Solar Mission:** Focuses on achieving large-scale solar energy generation capacity.
  - **State-wise Renewable Energy Policies:** States have their own frameworks to support renewable energy development, including fiscal incentives, feed-in tariffs, and direct procurement policies.

6. Tariff Policy

- **Overview:** The **Tariff Policy** in India sets guidelines for tariff determination, ensuring that tariffs are cost-reflective and promote efficiency.
- **Key Features:**
  - **Cost-reflective tariffs**: Ensures that tariffs cover the cost of generation, transmission, and distribution.
  - **Incentives for renewable energy**: Special provisions for renewable energy tariffs, including feed-in tariffs and preferential rates for clean energy.
  - **Tariff rationalization**: Aims to reduce cross-subsidies, ensuring that large consumers pay more to subsidize smaller consumers.
  - **Performance-based regulation**: Incentives for utilities to improve service quality and reduce losses.



Fig 3.1.10 Sample Answer key for Model Exam



PERI INSTITUTE OF TECHNOLOGY

Signature of the Invigilator 21/11/24

Register Number	411521105013
Name of the Student	B. Nitha
Name of the College	Peri Institute of Technology
Department and Section	EEE - Final year
Subject Code and Subject Name	EE3008 - Restructured Power Market
Date of Examination and Session	21/11/2024 & AN
Semester	VII - Sem

Evaluation Section

Instruction to Candidate: Put a tick mark (✓) for the questions attended in the tick mark column against each question in V-1, V-2, V-3

PART - A

Question No.	✓	Mark
1	✓	2
2		—
3	✓	1
4		—
5		—
6	✓	2
7		—
8	✓	2
9	✓	2
10	✓	1
Total		10

Question No.		i ✓	i Marks	ii ✓	ii Marks	iii ✓	iii Marks	Total Marks
11	a	✓	13					13
	b							
12	a	✓	9					9
	b							
13	a	✓	11					11
	b							
14	a	✓	12					12
	b							
15	a							
	b	✓	10					10
16	a							
	b	✓	14					14
								69

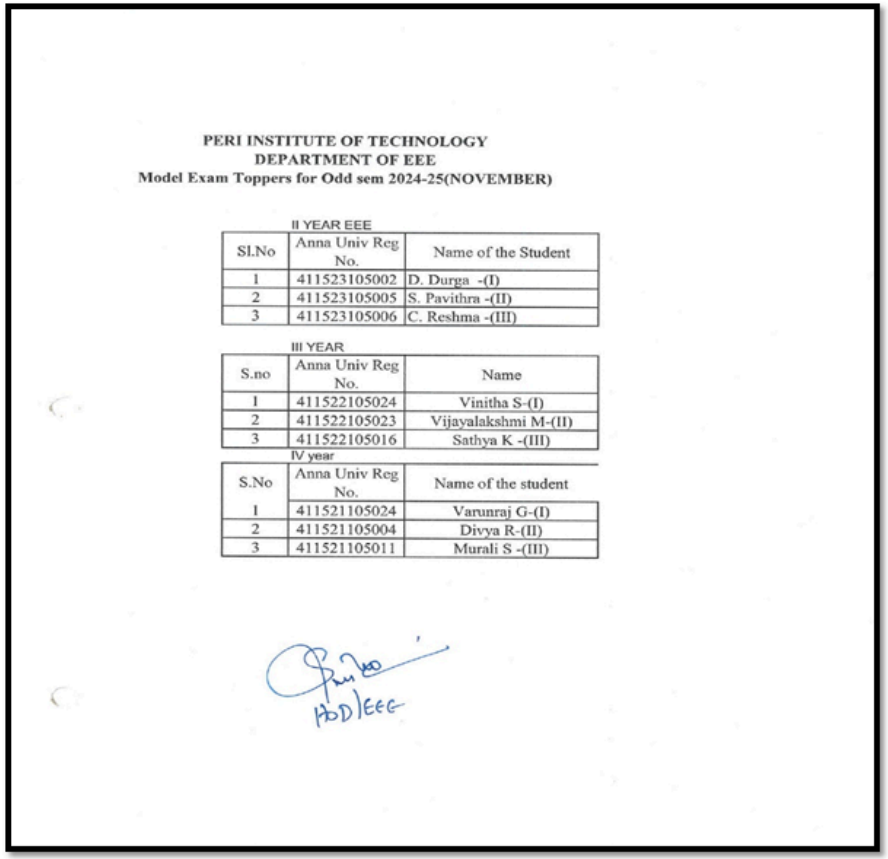
Grand Total (in words): (SEVEN - NINE)

GRAND TOTAL: 79

Declaration by the examiner: Verified that all the questions attended by the student are valued and the total is found to be correct

Date	Name of the Examiner	Signature of the Examiner
25/11/24	Dr. S. Suganthi	SSN 25/11/24

Fig 3.1.11 Sample Answer sheet for Model Exam



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF EEE
Model Exam Toppers for Odd sem 2024-25(NOVEMBER)

II YEAR EEE

Sl.No	Anna Univ Reg No.	Name of the Student
1	411523105002	D. Durga -(I)
2	411523105005	S. Pavithra -(II)
3	411523105006	C. Reshma -(III)

III YEAR

S.no	Anna Univ Reg No.	Name
1	411522105024	Vinitha S-(I)
2	411522105023	Vijayalakshmi M-(II)
3	411522105016	Sathya K -(III)

IV year

S.No	Anna Univ Reg No.	Name of the student
1	411521105024	Varunraj G-(I)
2	411521105004	Divya R-(II)
3	411521105011	Murali S -(III)

HOD/EEE

Fig 3.1.12 Sample Model exam Topper List

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

Institute Marks : 10.00

3.2.1. Process for Conducting and Evaluating Semester End Examinations

As an Anna University-affiliated institution, the college conducts Semester End Examinations (SEE) in accordance with the examination regulations and guidelines prescribed by Anna University. The University prepares and provides the question papers through its designated authorities. The question paper packets are received by the respective Anna University Representative (AUR) appointed by the Anna University Zonal Office.

The question paper packets are opened and acknowledged in the presence of the Chief Superintendent, AUR, and the external and internal invigilators. The college examination cell makes the necessary arrangements for the examination halls, appoints invigilators, verifies student attendance, and ensures the smooth, fair, and transparent conduct of examinations under the supervision of the Chief Superintendent.

Upon completion of the examinations, the answer scripts are securely packed, sealed, and dispatched to the designated University evaluation centre in accordance with the prescribed procedures. The evaluation of answer scripts and processing of results are carried out by Anna University through its established examination system.

3.2.2. Assessment of Question Paper Quality, Analysis of SEE Performance and CO Attainment

The department analyses the SEE question papers after the examinations to assess syllabus coverage, clarity of questions, and the appropriate level of difficulty. Any discrepancies identified during this analysis are recorded and reported through the prescribed Anna University portal.

Anna University releases the consolidated grades/marks obtained by the students. Accordingly, the SEE performance is considered along with the internal assessment results to evaluate Course Outcome (CO) attainment, in accordance with the institutions prescribed assessment methodology.

3.2.3. Transparency of the Post-Evaluation Process

The SEE results declared by Anna University are communicated to students through the prescribed channels. Students are informed about the Universitys provisions for obtaining photocopies of evaluated answer scripts, applying for revaluation, and following other applicable result-related procedures. The department facilitates students in accessing these procedures and maintains the relevant records. To ensure fairness and transparency in the evaluation process, students are provided with the following provisions, in accordance with the applicable Anna University regulations:

Tier 1 – Photocopy of Answer Script: Students who are not satisfied with their examination results may apply for and obtain a digital or physical photocopy of their evaluated answer scripts, as per the Universitys prescribed procedure.

Tier 2 – Scrutiny and Revaluation: The photocopy of the answer script can be examined to identify possible errors, such as mistakes in mark totalling, unvalued sub-questions, or other evaluation discrepancies. Eligible students may subsequently apply for revaluation, wherein the answer script is evaluated by an examiner appointed by Anna University, in accordance with its prescribed procedures.

Tier 3 – Review / Challenge Valuation: Where applicable under the Universitys examination regulations, students may seek further review or challenge valuation of their results through the prescribed University mechanism. The process is carried out by designated examiners under the supervision of an officially appointed University Review Board, which finalizes the students grade.

Reg. No. : | | | | | | | | | | | | | | |

Question Paper Code : 80578

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2024.

Sixth Semester

Electrical and Electronics Engineering

EE 8602 — PROTECTION AND SWITCHGEAR

(Regulations 2017)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the types of fault?
2. Define the protective zone.
3. Derive the torque equation.
4. What are the applications of electromagnetic relay?
5. Write differentiation between current transformer and potential transformer.
6. State that bus bar protection.
7. State the advantages of static relay.
8. Draw the block diagram of numerical relay.
9. Define the re-striking voltage.
10. What is mean by SF_6 and write its significance.

PART B — (5 × 13 = 65 marks)

11. (a) Describes the below question

(i) Explain detailed about the protection schemes. (7)

(ii) What are the methods of grounding? Explain any one method. (6)

Or

(b) Briefly explain about the zones of protection and essential qualification.

12. (a) (i) Explain about the operating principles of relay. (7)

(ii) Explain about universal Relay. (6)

Or

(b) Briefly explain about negative sequence and under frequency relay.

13. (a) Explain about the protection of transformer. Write the applications. (7)

Or

(b) Explain about the protection of generator. What are the advantages and disadvantages? (6)

14. (a) Explain about numerical relay draw the block diagram and application. (7)

Or

(b) Briefly explain about distance protection of transmission lines. (6)

15. (a) What are the types of circuit breakers? Explain any five circuit breakers. (7)

Or

(b) Explain :

(i) Rate of rise of recovery voltage. (7)

(ii) Resistance switching. (6)

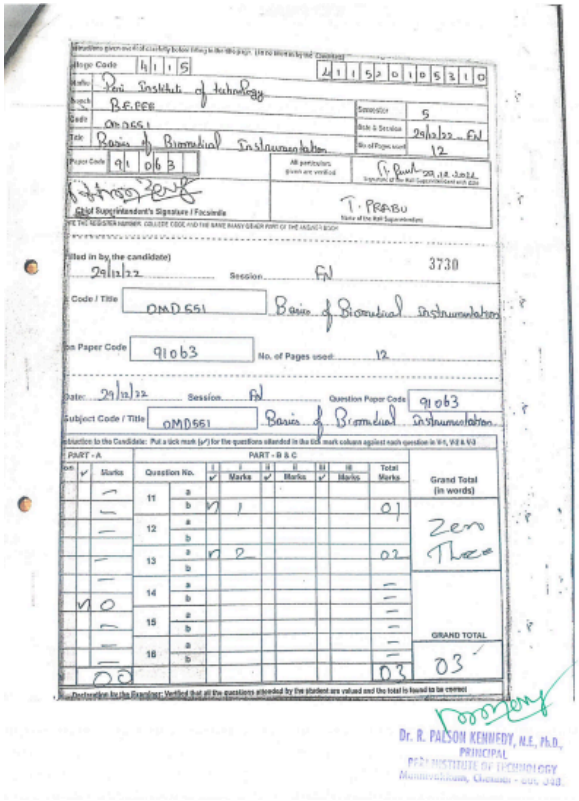
PART C — (1 × 15 = 15 marks)

16. (a) Explain about apparatus protection. Write the analysis and application evaluation of the protection. (7)

Or

(b) Discuss about the physics of arcing phenomenon and arc interruption with its applications. (6)

Fig 3.2.1 Model Anna University Question paper



College Code 4115
Branch B.E.EEE
Subject Code OMD651
Title Basics of Biomedical Instrumentation
Paper Code 91063
Semester 5
Date & Session 29/12/22 - FN
No. of Pages used 12
Chief Superintendent's Signature / Facsimile
T. PRABU
(Filled in by the candidate)
29/12/22 Session FN 3730
Subject Code / Title OMD651 Basics of Biomedical Instrumentation
No Paper Code 91063 No. of Pages used 12
Date: 29/12/22 Session FN Question Paper Code 91063
Subject Code / Title OMD651 Basics of Biomedical Instrumentation

PART - A			PART - B & C								
Sub Div	✓	Marks	Question No.		I ✓	I Marks	II ✓	II Marks	III ✓	III Marks	Total Marks
			11	a							
				b	✓	1					01
			12	a							
				b							
			13	a	✓	2					02
				b							
			14	a							—
		NO		b							—
			15	a							—
				b							—
			16	a							—
				b							—
		—									03

Grand Total (in words): Zero Three
GRAND TOTAL: 03

Dr. R. PAUSON KENNEDY, M.E., Ph.D.
PRINCIPAL
PSG INSTITUTE OF TECHNOLOGY

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

Institute Marks : 10.00

3.3.1 Evaluation of Experiments Conducted in Workshops/Laboratories

Laboratory and workshop sessions are conducted for three hours per session, twice a week, with student batches attending on alternate weeks. These sessions aim to develop practical skills, reinforce theoretical concepts, and enhance students analytical and problem-solving abilities. Each laboratory experiment or workshop exercise is mapped to the relevant Course Outcomes (COs), which are further aligned with the corresponding Program Outcomes (POs) and Program Specific Outcomes (PSOs).

Internal Assessment and Semester End Examination (SEE)

Students performance in laboratory and workshop sessions is continuously assessed based on attendance, execution of prescribed experiments or exercises, completion of observations, maintenance of record notebooks, and performance in viva voce. Two model practical examinations are conducted to assess students ability to perform experiments independently and apply the relevant theoretical concepts.

The Semester End Examination (SEE) is conducted with internal and external examiners, as prescribed by Anna University. Students are assessed on their experimental skills, practical execution, adherence to procedures, observation and result analysis, and subject knowledge through viva voce.

a) Anna University Regulation 2017 (R2017)

Laboratory courses are evaluated for a maximum of 100 marks, comprising 20 marks for Continuous Internal Assessment and 80 marks for the Semester End Examination.

- Continuous Internal Assessment (20 marks): A maximum of 75 marks is awarded for the successful completion of all prescribed laboratory experiments, and 25 marks for the model practical examination. The aggregate is proportionately converted to 20 marks and rounded to the nearest integer.
- Semester End Examination (80 marks): The examination is conducted by internal and external examiners to assess students experimental skills, practical execution, result analysis, and subject knowledge through viva voce. The examination is conducted for 100 marks and proportionately converted to the prescribed 80 marks.

b) Anna University Regulation 2021 (R2021)

Laboratory courses are evaluated for a maximum of 100 marks, comprising 60 marks for Continuous Internal Assessment and 40 marks for the Semester End Examination.

- Continuous Internal Assessment (60 marks): A maximum of 75 marks is awarded for the successful completion of all prescribed laboratory experiments, and 25 marks for the model practical examination. The aggregate is proportionately converted to 60 marks and rounded to the nearest integer.
- Semester End Examination (40 marks): The examination is conducted by internal and external examiners to assess students experimental skills, practical execution, result analysis, and subject knowledge through viva voce. The examination is conducted for 100 marks and proportionately converted to the prescribed 40 marks.

Thus, internal assessment and the SEE collectively evaluate students practical competencies, experimental skills, conceptual understanding, and ability to apply theoretical knowledge to practical problems.

3.3.2 Use of Rubrics for Assessing Student Performance with Relevance to COs/POs

A structured assessment rubric is used to evaluate students performance during laboratory and workshop sessions. The rubric establishes clearly defined performance levels and measurable evaluation criteria to ensure systematic, transparent, and consistent assessment of students practical competencies.

The assessment is based on five parameters: attendance, observation, result accuracy, record maintenance, and viva voce. Each parameter carries a maximum of five marks, resulting in a total of 25 marks.

Table 3.3.1: Assessment Rubric for Laboratory/Workshop Performance

S. No.	Assessment Parameter	Performance Level and Evaluation Criteria	Marks
1	Attendance	Level 5 – Present for the session	5
		Absent – Not present for the session	0

2	Observation	Level 5 – Completed promptly and accurately	5
		Level 4 – Completed on time with minor omissions	4
		Level 3 – Completed with some delay and minor omissions	3
		Level 2 – Incomplete observations with significant omissions	2
		Level 1 – Minimal observations recorded	1
		Level 0 – Not submitted	0
3	Result Accuracy	Level 5 – Correct result with accurate calculations	5
		Level 4 – Correct result with minor calculation errors	4
		Level 3 – Result with minor deviations	3
		Level 2 – Result with significant deviations	2
		Level 1 – Incorrect result with limited understanding	1
		Level 0 – No valid result obtained	0
4	Record Maintenance	Level 5 – Complete, neat documentation and regular submission	5
		Level 4 – Complete documentation with minor presentation issues	4
		Level 3 – Complete record submitted with delay	3
		Level 2 – Partially completed record with missing details	2
		Level 1 – Inadequate documentation	1
		Level 0 – Record not submitted	0
5	Viva Voce	Level 5 – Demonstrates excellent understanding and answers all five questions correctly	5
		Level 4 – Answers four questions correctly	4
		Level 3 – Answers three questions correctly	3
		Level 2 – Answers two questions correctly	2
		Level 1 – Answers one question correctly	1
		Level 0 – Unable to provide a correct response	0
	Total Maximum Marks		25

Note: Attendance is assessed on a binary basis (5 or 0), whereas the remaining four parameters are assessed using performance levels ranging from 0 to 5.

The assessment rubrics are developed with reference to the intended Course Outcomes (COs) of each laboratory course. The individual assessment parameters evaluate students ability to perform experiments, follow prescribed procedures, record and interpret observations, obtain accurate results, maintain technical documentation, and demonstrate conceptual understanding through viva voce.

Each laboratory experiment and its corresponding assessment criteria are mapped to the relevant COs. The COs are further aligned with the POs and PSOs using the prescribed CO–PO/PSO mapping methodology. This ensures that laboratory assessment provides measurable evidence of students practical competencies and contributes to the assessment of program outcome attainment.

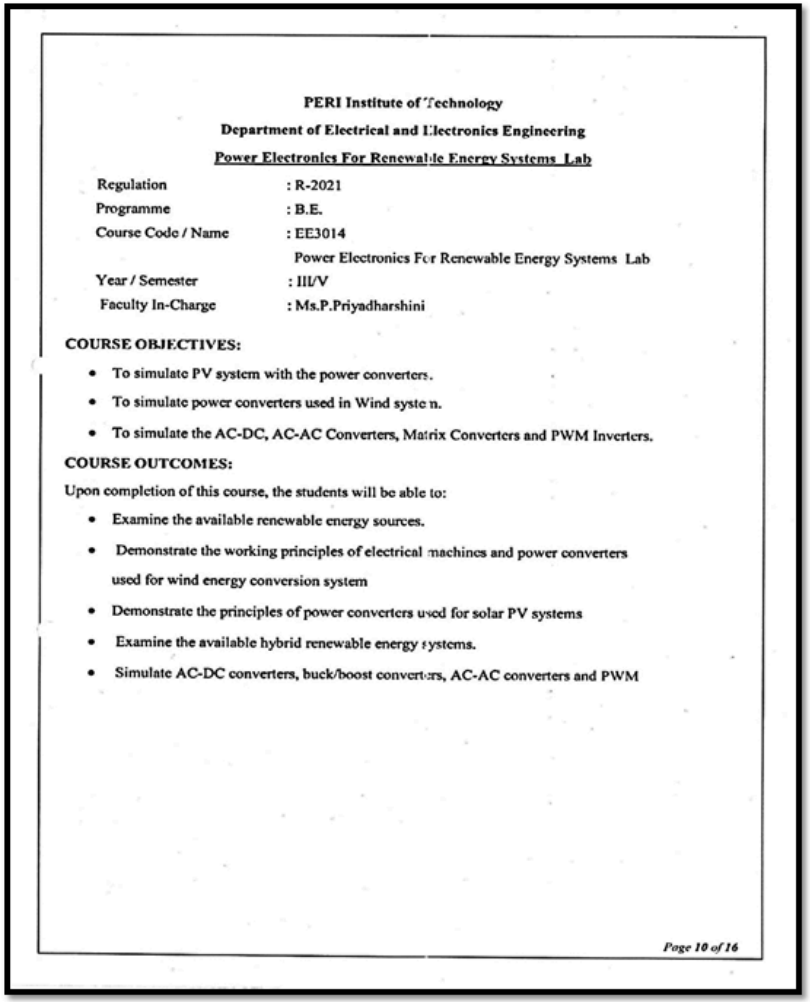
Illustrative Example: CO–Rubric–PO/PSO Mapping

A sample CO– PO/PSO Mapping for EE3411- Electrical Machines II laboratory is given below

Table 3.3.2 Sample CO-PO/PSO Mapping

Course Name: **ELECTRICAL MACHINES LABORATORY – II** Course Code: **EE3411**

Course Outcomes (COs) code & Statement	Program Outcomes (POs)											Program Specific Outcomes (PSOs)		
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PSO-1	PSO-2	PSO-3
CO-1	3	3	1	1	0	0	1.5	1	0	0	3	3	3	2
CO-2	3	3	1	1	0	0	1.5	1	0	0	3	3	3	2
CO-3	3	3	1	1	0	0	1.5	1	0	0	3	3	3	1
CO-4	3	3	1	1	0	0	1.5	1	0	0	3	3	3	1
CO-5	3	3	1	1	0	0	1.5	1	0	0	2	3	3	2
Average	3	3	1	1	0	0	1.5	1	0	0	2.8	3	3	1.6



PERI Institute of Technology

Department of Electrical and Electronics Engineering

Power Electronics For Renewable Energy Systems Lab

Regulation	: R-2021
Programme	: B.E.
Course Code / Name	: EE3014 Power Electronics For Renewable Energy Systems Lab
Year / Semester	: III/V
Faculty In-Charge	: Ms.P.Priyadharshini

COURSE OBJECTIVES:

- To simulate PV system with the power converters.
- To simulate power converters used in Wind system.
- To simulate the AC-DC, AC-AC Converters, Matrix Converters and PWM Inverters.

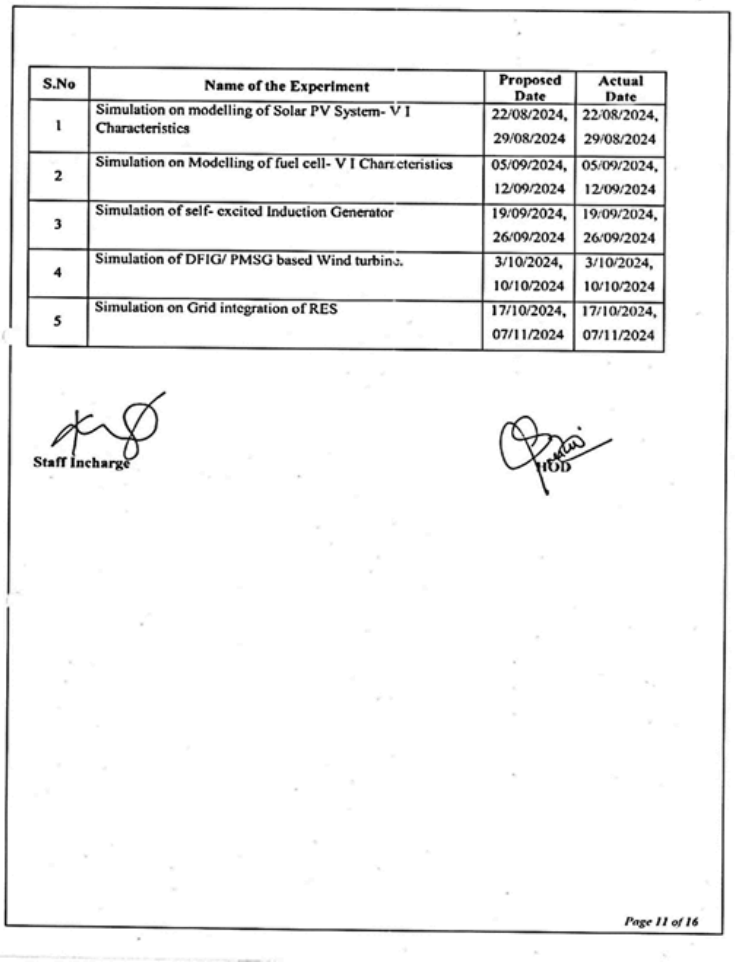
COURSE OUTCOMES:

Upon completion of this course, the students will be able to:

- Examine the available renewable energy sources.
- Demonstrate the working principles of electrical machines and power converters used for wind energy conversion system
- Demonstrate the principles of power converters used for solar PV systems
- Examine the available hybrid renewable energy systems.
- Simulate AC-DC converters, buck/boost converters, AC-AC converters and PWM

Page 10 of 16

Fig 3.3.1 Sample CO of a laboratory course



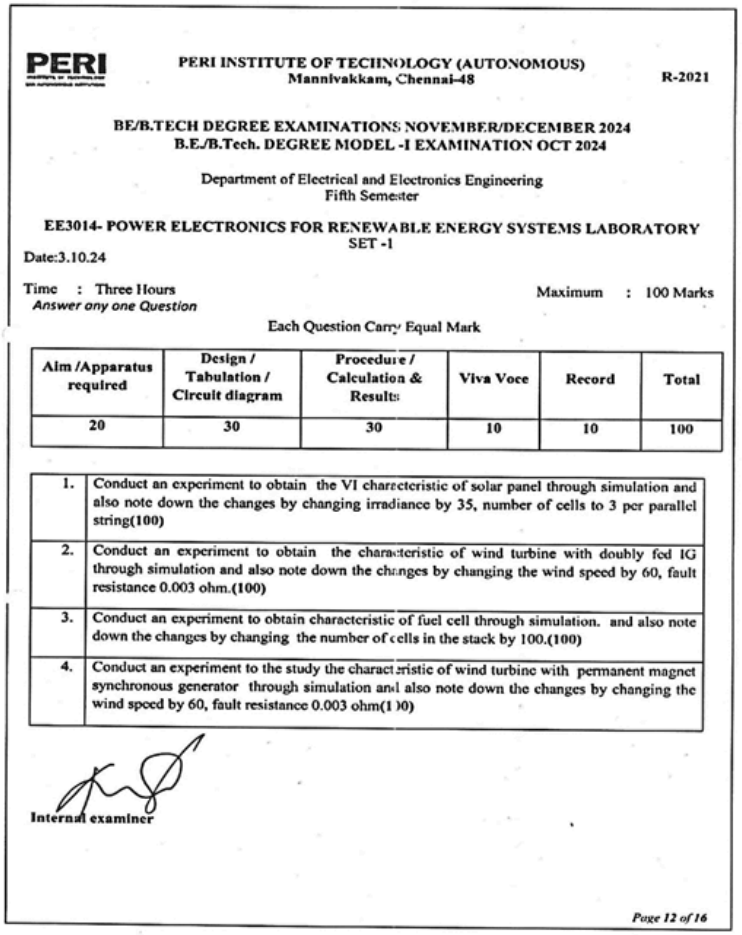
S.No	Name of the Experiment	Proposed Date	Actual Date
1	Simulation on modelling of Solar PV System- V I Characteristics	22/08/2024, 29/08/2024	22/08/2024, 29/08/2024
2	Simulation on Modelling of fuel cell- V I Characteristics	05/09/2024, 12/09/2024	05/09/2024, 12/09/2024
3	Simulation of self- excited Induction Generator	19/09/2024, 26/09/2024	19/09/2024, 26/09/2024
4	Simulation of DFIG/ PMSG based Wind turbine	3/10/2024, 10/10/2024	3/10/2024, 10/10/2024
5	Simulation on Grid integration of RES	17/10/2024, 07/11/2024	17/10/2024, 07/11/2024

Staff Incharge

HOD

Page 11 of 16

Fig 3.3.2 Sample List of experiments



PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
Mannivakkam, Chennai-48

R-2021

BE/B.TECH DEGREE EXAMINATIONS NOVEMBER/DECEMBER 2024
B.E./B.Tech. DEGREE MODEL -I EXAMINATION OCT 2024

Department of Electrical and Electronics Engineering
Fifth Semester

EE3014- POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS LABORATORY
SET -1

Date:3.10.24

Time : Three Hours Maximum : 100 Marks

Answer any one Question

Each Question Carry Equal Mark

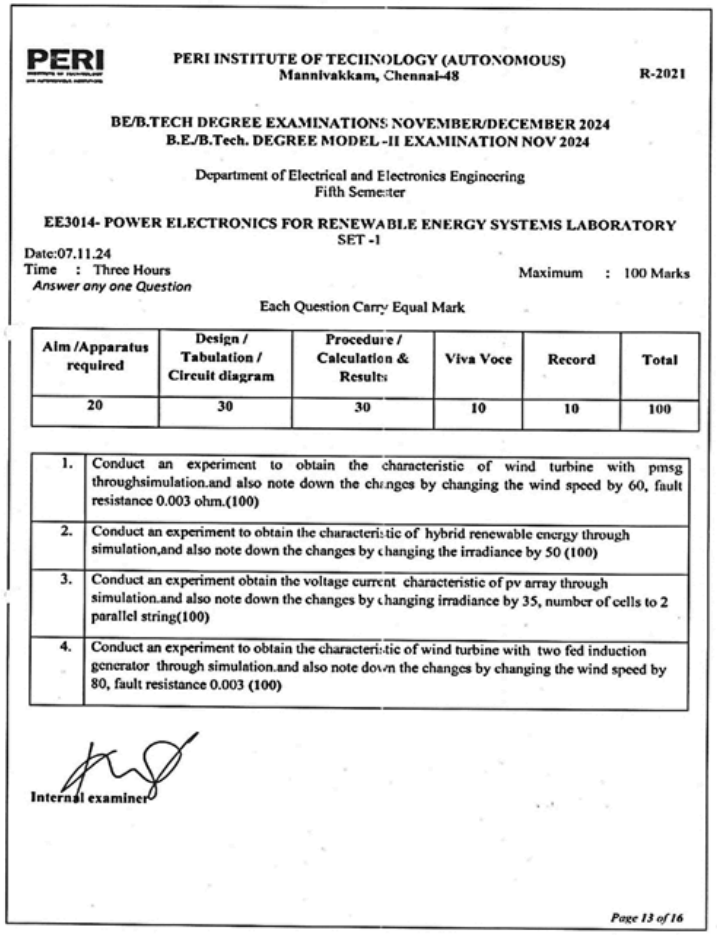
Aim /Apparatus required	Design / Tabulation / Circuit diagram	Procedure / Calculation & Results	Viva Voce	Record	Total
20	30	30	10	10	100

1.	Conduct an experiment to obtain the VI characteristic of solar panel through simulation and also note down the changes by changing irradiance by 35, number of cells to 3 per parallel string(100)
2.	Conduct an experiment to obtain the characteristic of wind turbine with doubly fed IG through simulation and also note down the changes by changing the wind speed by 60, fault resistance 0.003 ohm.(100)
3.	Conduct an experiment to obtain characteristic of fuel cell through simulation. and also note down the changes by changing the number of cells in the stack by 100.(100)
4.	Conduct an experiment to the study the characteristic of wind turbine with permanent magnet synchronous generator through simulation and also note down the changes by changing the wind speed by 60, fault resistance 0.003 ohm(100)

Internal examiner

Page 12 of 16

Fig 3.3.3 Sample Model lab I Question paper



PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
Mannivakkam, Chennai-48

R-2021

BE/B.TECH DEGREE EXAMINATIONS NOVEMBER/DECEMBER 2024
B.E./B.Tech. DEGREE MODEL -II EXAMINATION NOV 2024

Department of Electrical and Electronics Engineering
Fifth Semester

EE3014- POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS LABORATORY
SET -1

Date:07.11.24
Time : Three Hours
Maximum : 100 Marks

Answer any one Question

Each Question Carry Equal Mark

Aim /Apparatus required	Design / Tabulation / Circuit diagram	Procedure / Calculation & Results	Viva Voce	Record	Total
20	30	30	10	10	100

1.	Conduct an experiment to obtain the characteristic of wind turbine with pmsg throughsimulation.and also note down the changes by changing the wind speed by 60, fault resistance 0.003 ohm.(100)
2.	Conduct an experiment to obtain the characteristic of hybrid renewable energy through simulation,and also note down the changes by changing the irradiance by 50 (100)
3.	Conduct an experiment obtain the voltage current characteristic of pv array through simulation.and also note down the changes by changing irradiance by 35, number of cells to 2 parallel string(100)
4.	Conduct an experiment to obtain the characteristic of wind turbine with two fed induction generator through simulation.and also note down the changes by changing the wind speed by 80, fault resistance 0.003 (100)

Internal examiner

Page 13 of 16

Fig 3.3.4 Sample Model lab II Question paper

16.MODEL EVALUATION SHEET

S.No	Name of the Student	Model Lab I	Model Lab II	Attendance
1	Aathinarayanan G	83	89	97
2	Deepika M	87	90	86
3	Dinesh G.	78	85	90
4	Mathankumar P	82	90	96
5	Mohanperumal R	84	85	92
6	Nithish Kumar S	76	89	90
7	Prakash BP	87	90	96
8	Raghul B	85	92	94
9	Saranya N	80	75	95
10	Saraswathi S	85	89	93
11	Sarumathi M	80	79	85
12	Sathya K	82	80	86
13	Sibiraj S	87	80	92
14	Sowmya M	82	75	86
15	Surya B	75	89	91
16	Thulasikothandan M	71	77	89
17	Vijayalakshmi M	85	87	88
18	Vinitha S	90	87	90
19	Balaji R	82	84	85
20	Prasanth P	81	87	88
21	Vishnu J	85	92	96
22	Vishnu R	83	89	97





Fig 3.3.5 Sample Model Exam marks with attendance

PERI
INSTITUTE OF TECHNOLOGY

BONAFIDE CERTIFICATE

Register Number 411521105002

This is a bonafide certificate of the practical work done by

Mr. / Ms B. BUBESH *of the*

Department of B.E ELECTRICAL AND ELECTRONICS ENGINEERING

in the POWER ELECTRONICS *Laboratory during*

the V *Semester of year* III I *and submitted for the*

University Practical Examination conducted on 25 / 11 / 2023

at PERI INSTITUTE OF TECHNOLOGY, Chennai - 600 048.

P. Y 23.11.23
COURSE INSTRUCTOR

24/11/2023
HEAD OF THE DEPARTMENT

P. Y 25.11.23
INTERNAL EXAMINER

BY 25/11/23
EXTERNAL EXAMINER



M. Deepika

PERI
INSTITUTE OF TECHNOLOGY

BONAFIDE CERTIFICATE

Register Number 411522105003

This is a bonafide certificate of the practical work done by

Mr./Ms. M. Deepika *of the*

Department of Electrical and Electronic engineering

in the power electronics *Laboratory during*

the 5th *Semester of year* 3rd *and submitted for the*

University Practical Examination conducted on 02 / 12 / 2024

at PERI INSTITUTE OF TECHNOLOGY, Chennai - 600 048.

29/11/24
COURSE INSTRUCTOR

29/11/2024
HEAD OF THE DEPARTMENT

29/11/24
INTERNAL EXAMINER

EXTERNAL EXAMINER

Fig 3.3.6 Sample Record note of students

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

Institute Marks : 10.00

The industrial training and internship program provides students with a hands-on exposure to technical, professional, and career-oriented skills. Key aspects assessed include attendance and punctuality, technical knowledge and problem-solving abilities, teamwork and communication, report writing, presentation skills, and professionalism as observed by faculty and industry mentors.

3.4.1 Guidelines for Internship Training

- Students should identify core companies that offer internships in their area of interest.
- Students should contact the selected company and request an internship offer letter stating the internship area and proposed dates or duration.
- Students should submit the internship application to their department or college office, along with the company's details, proposed work, dates, and offer letter. After the application is approved, students can obtain a Bonafide certificate from the college for internship training.
- Students should complete the approved internship for the duration required by their curriculum. Under Regulation 2021, internship training must be completed continuously for at least two weeks. For optional internships, the regulation assigns 1 credit for 2 weeks, 2 credits for 4 weeks, and 3 credits for 6 weeks, with 40 hours of training per week. Students should confirm the applicable requirement for their batch.
- At the end of the internship, students should obtain an attendance and completion certificate from the company. The certificate should be signed by an authorized representative and state the internship dates or duration.
- Students should submit the certificate and internship report to their department.
- Students should attend any required presentation, review, or viva, and submit the report by the deadline set by the college.

The assessment is aligned with Program Outcomes (POs) and Program Specific Outcomes (PSOs) to ensure that students not only acquire technical competence but also develop professional ethics, analytical skills, effective communication, and collaborative abilities.

Technical Knowledge & Problem-Solving (30 marks)

Faculty and industry mentors evaluate how well the student understands industrial processes, applies theoretical program knowledge, and contributes to problem-solving or innovation.

Individual &Teamwork (30 marks)

Students are assessed on their ability to demonstrate personal accountability and work independently collaborate with people, communicate effectively with faculty and industry mentors, and contribute as part of a team.

Presentation & Communication (20 marks)

Students make an oral presentation of their training experience. Marks are awarded for clarity, delivery, use of visuals, and ability to answer questions.

Attendance & Punctuality (10 marks)

Attendance and punctuality were closely monitored throughout the training period. Regular presence in sessions reflected discipline, responsibility, and a professional attitude, for which marks awarded.

Report (10 marks)

Each student submits a detailed technical report documenting the industrial processes, learning outcomes, and reflections. The report is checked for technical content, structure, and clarity.

3.4.2 Linkage to Program Outcomes (POs) and Program Specific Outcomes (PSOs)

PO1, PO2, PO3, PO4, PO5, PSO1, and PSO2 are strongly addressed through the acquisition and application of technical and domain-specific knowledge. Students are encouraged to identify and analyze problems, evaluate alternative solutions, and implement appropriate methodologies using modern engineering tools and techniques. This process enhances their ability to apply fundamental concepts, develop analytical thinking, and solve real-world problems effectively while strengthening discipline-specific competencies.

The course also contributes significantly to the attainment of **PO7 and PO10** by promoting professional ethics, responsibility, and effective management practices. Students learn the importance of punctuality, accountability, and adherence to ethical standards while planning and executing assigned tasks. Exposure to scheduling, resource management, and systematic workflow practices helps develop managerial and organizational skills necessary for professional success.

Furthermore, **PO8, PO9 and PSO3** are strengthened through collaborative learning and team-based activities. Students actively engage in discussions, group work, peer interactions, and project execution, which improve their ability to function effectively as individuals and as members of multidisciplinary teams. These experiences foster interpersonal skills, leadership qualities, and the ability to communicate ideas clearly through presentations, discussions, and technical interactions.

Additional emphasis on **PO9, PO10, PSO1, and PSO3** is provided through structured report writing, technical documentation, and the demonstration of subject-specific knowledge and skills. Students learn to prepare professional reports, document their findings systematically, and communicate technical information effectively to diverse audiences. These activities enhance both written and oral communication abilities while reinforcing technical expertise.

The program also integrates elements related to **PO6, PO7 and PO11** by encouraging social, ethical, and environmental awareness. Students are exposed to the broader impact of engineering solutions on society and the environment, promoting responsible decision-making and sustainable practices. Continuous learning, self-improvement, and adaptability are emphasized throughout the course, enabling students to keep pace with emerging technologies and professional developments

Table 3.4.1 Assessment Rubrics for Industrial Training /Internship

Assessment Parameter	**Performance Level and Evaluation Criteria**	**Marks**
Technical Knowledge & Problem-Solving	1.Advanced Domain skills, Concepts and Principle: 2.Moderate Skills in choosing the standard software and appropriate equipment. 3.Lack relevant skills and Minor Mistakes	1.Excellent :20-30 2. Good:10-20 3. Average to Poor:0-10
Individual /Teamwork	1.Actively takes ownership of shared tasks and quickly picks up new tools 2.Contributes when assigned, but rarely volunteers & Learns expected tools at a steady pace 3.Low or missing participation in group effort & Shows little interest in learning new concept.	1.Excellent :20-30 2. Good:10-20 3. Average to Poor:0-10
Presentation & Communication	1.Confident presentation, outstanding vocabulary 2.Decent delivery with good vocabular 3.Reads straight off the slides	1.Excellent :20-30 2. Good:10-20 3. Average to Poor:0-10
Attendance	Depends on number of days attended	10
Report	1.Ontime submission & Formatting, depth of work, diagrams, and code/analysis 2. Ontime submission & Moderate Formatting, depth of work, diagrams, and code/analysis 3.Late submission and irrelevant report	1.Excellent :8-10 2.Good:3-7 3.Poor:0-3

INTERNSHIP TRAINING DETAILS FOR AY 2024-25

Table 3.4.2 Internship Training Details for AY 2024-25

S.No	Name of the student	Year	Internship Program	Company Name	Period	Date
1	Sowmya. M	III	Matlab for Electrical Engineering Applications	AB Technologies	11 days	11/11/24-21/11/24
2	Vijayalakshmi. M	III	Matlab for Electrical Engineering Applications	AB Technologies	11 days	11/11/24-21/11/24
3	Balaji. R	III	Matlab for Electrical Engineering Applications	AB Technologies	11 days	11/11/24-21/11/24
4	Vishnu. J	III	Matlab for Electrical Engineering Applications	AB Technologies	11 days	11/11/24-21/11/24
5	Murali.S	IV	Maintenance Training	Unipres India Pvt. Ltd	31 days	16/08/24-16/09/24
6	Saravanan.K	IV	Internship Training	Pactron India Company	31 days	16/08/24-16/09/24
7	Priyanka M	IV	Production training	Avalon technologies private Ltd	30 days	20/1/25 to 20/2/25
8	Vallarasu	II	Internship training	NLC India ltd	17 days	14/7/25 to 31/7/25
9	Reshma.C	II	Internship training	Just connect electricals pvt ltd	30 days	9/7/25 to 7/8/25
10	Bel Bento Rajan B R	II	Internship training	Just connect electricals pvt ltd	28 days	11/7/25 to 9/8/25
11	Kanimozhi	II	Internship training	Kasa Anlagen India Private Ltd	14 days	8/7/25 to 22/7/25
12	Durga .D	II	Industrial internship programme in production	Kasa Anlagen India Private Ltd	15 days	8/7/25 to 22/7/25
13	Vijayalakshmi M	III	Internship training	Nokia Solutions and Networks India Pvt Ltd	11 days	22/7/25 to 3/8/25
14	Prakash B. P	III	Internship program in embedded systems	Approtech R&D Solutions Pvt Ltd	14 days	9/7/25 to 25/7/25
15	Dinesh G	III	Internship training	Vole tech Manufacturing company pvt.ltd	7 days	21/7/25 to 28/7/25
16	Priyanka M	IV	Production training	Avalon technologies private Ltd	30 days	20/1/25 to 20/2/25

17	Thivya .S	IV	Internship program on data analytics	Excelencia itech consulting Pvt Ltd	41 days	04/03/25 to 25/4 /25

INTERNSHIP TRAINING DETAILS FOR AY 2023-24

Table 3.4.3 Internship Training Details for AYm1

2023-24

S.No	Name of the student	Year	Internship Program	Company Name	Period	Date
1	Likhitha. J	III	Python Training	RETECH Solutions Pvt. Ltd	17 days	20/01/24 to 05/02/24
2	Sandhana Krishnan. B	III	Embedded System Training	RETECH Solutions Pvt. Ltd	19 days	12/02/24 to 01/03/24
3	Prasanth. K	III	Internship Training	Pactron India Company	16 days	22/01/24 to 08/02/24
4	Gokul. S	III	Maintenance Training	Unipres India Pvt. Ltd	20 days	20/01/24 to 20/02/24
5	Jayanthan	IV	Internship Training	Pactron India Company	16 days	22/01/24 to 08/02/24
6	Kingslin	IV	Internship Training	Pactron India Company	16 days	22/01/24 to 08/02/24
7	Velu. P	IV	Store Assistant Training	H2O shield, Ezhichur	32 days	20/01/24 to 20/02/24
8	Venkatesh. M	IV	Store Assistant Training	H2O shield, Ezhichur	32 days	20/01/24 to 20/02/24
9	Aathinarayanan.G	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
10	Deepika. M	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
11	Dinesh.G	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
12	Mathan Kumar P	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
13	Mohan Perumal.R	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024

14	Nithish Kumar. S	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
15	Prakash. B.P	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
16	Raghul.B	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
17	Saranya.N	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
18	Saraswathi.S	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
19	Sarumathi.M	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
20	Sathya.K	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
21	Sibiraj.S	II	Trainee intern	Covai Electricals	12 days	27.07.2024-07.08.2024
22	Sowmya.M	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
23	Surya.B	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
24	Thulasi Kothan.M	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
25	Vijayalakshmi.M	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
26	Vinitha.S	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
27	Balaji.R	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
28	Gurumoorthi.D	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
29	Prasanth.P	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
30	Vishnu.J	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024
31	Vishnu.R	II	Internship Training	Easa Krupa Engineering Pvt Ltd	12 days	27.07.2024-07.08.2024

INTERNSHIP TRAINING DETAILS FOR AY 2022-23

Table 3.4.4 Internship Training Details For AY 2022-23

S.No	Name of the student	Year	Internship Program	Company Name	Period	Date
1	Varunraj G	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
2	Thivya S	II	Offers exposure to electrical systems in textile machinery, motor control, and energy optimization.	GGN spinning Mill (P) Ltd -B unit	7	18/01/23 to 24/01/23
3	Murali S	II	Worked on electrical installations, maintenance	Arostar Enterprises (P) Ltd	15	18/01/23 to 01/02/23
4	Vinayaga Moorthy M	II	Worked on electrical installations, maintenance	Arostar Enterprises (P) Ltd	15	18/01/23 to 01/02/23
5	Samy K	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/01/23 to 25/01/23
6	Sivaraj R	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/01/23 to 25/01/23

7	Ashish J	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/01/23 to 25/01/23
8	Divya R	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
9	Pothigachalam U	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
10	Nikitha N	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
11	Nisha B	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
12	Kaviya M	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
13	Saravanan K	II	Worked on electrical installations, maintenance	Arostar Enterprises (P) Ltd	15	18/01/23 to 01/02/23
14	S.Bubesh	II	Worked on electrical installations, maintenance	Arostar Enterprises (P) Ltd	15	18/01/23 to 01/02/23
15	K.Shasidharan	II	Worked on simulation, circuit design, and software tool usage	LIVEWIRE	15	23/01/23 to 06/02/23

16	Keerthika V	II	Worked on PCB design and testing, applying core electrical knowledge and tools.	Forage	13	14/01/23 to 26/01/23
17	Thirsha M	III	Applied electrical principles in gaming hardware integration and learned emerging tech.	LETS GAMETECH	6	19/01/23 to 24/01/23
18	C.Pavithra	III	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
19	K.Janarthanan	III	Worked On Automation AND Manufacturing Systems	UNIPRES	20	11/01/23 to 30/01/23
20	E.Saravanan	III	Worked on embedded systems and IoT	Adventure Technology solution (P)Ltd	19	09/01/23 to 27/01/23
21	S.Gokul	III	Exposure to high-voltage cable design, testing, and quality assurance.	Polycab India Limited	8	18/01/23 to 25/01/23
22	S.Jayanthan	III	Hands-on experience with residential and commercial wiring, panels, and safety systems	SDR Electric company	35	01/11/22 to 05/12/22
23	P.Jancy Reena	III	Hands-on experience with residential and commercial wiring, panels, and safety systems	SDR Electric company	35	01/11/22 to 05/12/22
24	G.Vigneshwaran	III	Exposure to microcontroller programming, sensor integration, and PCB design.	Adventure Technology solution (P)Ltd	19	09/01/23 to 27/01/23
25	M. Thomas Richard	III	Exposure to microcontroller programming, sensor integration, and PCB design.	Adventure Technology solution (P)Ltd	19	09/01/23 to 27/01/23

26	B.Abishek Samuel	III	Exposure to microcontroller programming, sensor integration, and PCB design.	Adventure Technology solution (P)Ltd	19	09/01/23 to 27/01/23
27	M.Kavikumar	III	Exposure to microcontroller programming, sensor integration, and PCB design.	Adventure Technology solution (P)Ltd	19	09/01/23 to 27/01/23
28	P.Harish	III	Applied electrical principles in gaming hardware integration and learned emerging tech.	LETS GAMETECH	16	19/01/23 to 24/01/23
29	R.Harish	III	Exposure to microcontroller programming, sensor integration, and PCB design.	Adventure Technology solution (P)Ltd	19	09/01/23 to 27/01/23
30	R.Rajkumar	III	Applied electrical principles in gaming hardware integration and learned emerging tech.	LETS GAMETECH	16	19/01/23 to 24/01/23
31	S.Nivetha	III	Applied electrical principles in gaming hardware integration and learned emerging tech.	LETS GAMETECH	16	19/01/23 to 24/01/23
32	D.Jayanth	III	understanding of industrial control panels and safety systems	Formoplastic Controls(P) Ltd	22	18/01/23 to 08/02/23
33	Arunachalam.R.L	III	understanding of industrial control panels and safety systems	Formoplastic Controls(P) Ltd	22	18/1/23 to 8/2/23
34	M.Yuvashree	III	Applied electrical principles in gaming hardware integration and learned emerging tech.	LETS GAMETECH	16	19/01/23 to 24/01/23

35	Archana Jenifer.C	IV	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/1/23 to 25/01/23
36	Balaji.S	IV	Automotive electrical systems, embedded control, and manufacturing automation.	MITSUBA India (P) Ltd	7	20/07/22 to 26/07/22
37	Balaji.S	IV	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/01/23 to 25/01/23
38	Surya P	IV	Experience with machine wiring, control panels, and field installations	Lakdhan Engineering works	11	11/01/23 to 21/01/23
39	Vinoth Kumar.M	IV	Experience with machine wiring, control panels, and field installations	Lakdhan Engineering works	11	11/01/23 to 21/01/23
40	Savitha.R	IV	Experience with machine wiring, control panels, and field installations	Lakdhan Engineering works	11	11/01/23 to 21/01/23
41	Durai Raj.M	IV	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/01/23 to 25/01/23
42	Prakash.V	IV	Experience with machine wiring, control panels, and field installations	Lakdhan Engineering works	11	11/01/23 to 21/01/23
43	K.Ponnarasi	IV	Worked on PCB design and testing, applying core electrical knowledge and tools.	AB Technologies	12	14/01/23 to 25/01/23



APPROTECH
R&D SOLUTIONS PRIVATE LIMITED
SHAPING THE FUTURE OF ENGINEERING MINDS
ISO 9001 : 2015 CERTIFIED COMPANY
CIN : U74900TN2025PTC178688

CERTIFICATE OF COMPLETION

INT:APP25-26/2608-2702

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Prakash B P, Reg. No: 411522105011,** a student of **Peri Institute Of Technology,** pursuing **BE/EEE,** has successfully completed an Internship Program at our organization in the domain of **Embedded Systems.**

The internship was undertaken from **09th July 2025 to 25th July 2025.**

During the course of the internship, the student exhibited commendable professional behaviour and technical proficiency, particularly in the project titled **"Arduino-Based Automatic Plant Watering System Usin Soil Moisture Sensor."**

We extend our best wishes to continue success in all future endeavors.

For Approtech R&D Solutions Pvt. Ltd.,

APPROTECH R&D SOLUTIONS PRIVATE LIMITED CHENNAI 600 045

Authorized Signature



Covai Electricals
EA - Grade Contractors & Engineers

Internship Certificate

This is certify that **G. Aathinarayanan** has successfully completed an internship with **Covai Electricals** as an Trainee intern in the Electrical Department from **[27-07-2024] to [07-08-2024].**

He have worked on the Hexaware project under the supervision and guidance of Mr. Karthick (Project engineer). During the internship, he gained serval knowledge in Electrical LT panel distribution, UPS system and he developed considerable skills, including Competencies Acquired.

Besides showing high comprehension capacity, managing assignments with the utmost expertise, and exhibiting maximal efficiency, he has also maintained an outstanding professional demeanour and showcased excellent moral character throughout the internship period.

I hereby certify his overall work as good to the best of my knowledge.

Wishing him the best of luck in his future endeavours.

For Covai Electricals

Authorized Signatory

COVAI ELECTRICALS CHENNAI 600 032

#58/263,1st Floor,7th Street, Labour Colony, Guindy, Chennai-600 032.
044-4855 5774/75 covaielctricals@yahoo.com, www.covaieletricals.com

Fig 3.4.1 Sample Internship Certificates

INTERNSHIP TRAINING REPORT

EMBEDDED SYSTEMS

ARDUINO-BASED AUTOMATIC PLANT WATERING SYSTEM USING SOIL MOISTURE SENSOR

Submitted by: Prakash B. | Register Number: 411522105011

Programme	B.E. – Electrical and Electronics Engineering
Institution	Peri Institute of Technology
Organisation	Approtech R&D Solutions Pvt. Ltd.
Internship period	09 July 2025 to 25 July 2025
Internship domain	Embedded Systems
Certificate reference	INT:APP25-26/2608-2702

1. INTRODUCTION

Embedded systems are specialised computing systems designed to perform dedicated functions within a larger electrical or electronic product. They combine hardware and software to monitor inputs, process information and control outputs. Microcontrollers, sensors, actuators and embedded programmes are commonly used to develop applications in automation, instrumentation, consumer products and industrial control.

Prakash B., a B.E. student of Peri Institute of Technology, completed an internship in the domain of Embedded Systems at Approtech R&D Solutions Pvt. Ltd. from 09 July 2025 to 25 July 2025. As recorded in the supplied Certificate of Completion, the project title was "Arduino-Based Automatic Plant Watering System Using Soil Moisture Sensor." This report presents the project concept and the relevant technical principles.

2. OBJECTIVES OF THE INTERNSHIP

- To understand the basic architecture and applications of embedded systems.
- To become familiar with the role of an Arduino-compatible microcontroller board in a small automation application.
- To understand how a soil-moisture sensor can be used to estimate the moisture condition of soil.
- To study the basic control logic for operating a water pump according to a moisture threshold.
- To understand the integration of sensors, controller, driver circuit and output device in an automated system.

3. ORGANISATION PROFILE

Company address (as shown on the certificate and official website): No. 41/14, Kamarajar Street, West Tambaram, Chennai, Tamil Nadu – 600045, India.

Approtech R&D Solutions Pvt. Ltd. is a Chennai-based research and development and technical training organisation. Its official website describes services including student internships, hands-on technical training, industrial project assistance, hardware and embedded prototyping, microcontroller firmware development and IoT-related work. The organisation lists Embedded Systems among its training and technology domains. These publicly stated services provide context for the internship domain mentioned in the certificate; they do not independently verify the student's exact daily activities.

4. PROJECT DESCRIPTION

The project titled "Arduino-Based Automatic Plant Watering System Using Soil Moisture Sensor" is an embedded automation concept intended to support watering based on the moisture condition of the soil. Instead of operating a pump only at fixed time intervals, the system uses a sensor input to help determine whether watering is required.

4.1 Main Components and Their Functions

- Arduino microcontroller board: reads the sensor signal, executes the programmed decision logic and controls the output.
- Soil-moisture sensor: provides an electrical signal related to the moisture condition of the soil. Sensor readings depend on the sensor type, soil composition and calibration.
- Relay or motor-driver stage: provides an appropriate interface between the low-power controller output and the pump switching circuit. The pump must not be driven directly from a microcontroller pin.
- Water pump: transfers water to the plant or growing medium when the control condition is met.
- Power supply and connecting wires: provide suitable electrical power and interconnection for the controller and other modules.

4.2 Working Principle

The soil-moisture sensor is placed in the soil near the plant root zone. Its output is read by the Arduino controller through an appropriate input. The programme compares the sensor reading with a selected threshold. When the soil is identified as being below the required moisture level, the controller activates the relay or driver stage to switch on the pump. When the desired moisture condition is reached, the controller switches the pump off. The threshold and sensor polarity must be established by calibration because different sensor modules may produce different output behaviour.

4.3 Simplified Control Sequence

- Read the soil-moisture sensor output.
- Interpret the reading using the calibrated threshold.
- If the soil is dry, activate the pump through a suitable driver or relay.
- Continue monitoring the sensor reading while applying suitable control logic.
- Switch off the pump when the target moisture condition is achieved.

5. TECHNICAL CONSIDERATIONS

A practical plant-watering controller should be designed with attention to sensor calibration, electrical isolation, power ratings and water protection. The sensor should be tested in representative dry and moist soil conditions before a threshold is selected. A relay module or motor driver with a suitable rating is required for the pump, and the pump supply should be designed separately from the microcontroller supply where necessary. Connections should be insulated and the electronic circuit should be protected from water. A maximum pump run-time or other protective condition can help reduce the risk of continuous pumping if a sensor or connection fails.

6. LEARNING OUTCOMES

The project topic provides an opportunity to understand the relationship between sensing, embedded processing and actuation. The main learning areas associated with this project are:

- Understanding the basic blocks of an embedded control system.
- Recognising how a sensor converts a physical condition into an electrical signal.
- Understanding the role of a microcontroller in reading inputs and controlling outputs.
- Learning the purpose of a relay or driver stage when interfacing a pump.
- Appreciating the importance of calibration, testing and electrical safety in an automation prototype.

7. CONCLUSION

The internship at Approtech R&D Solutions Pvt. Ltd. from 09 July 2025 to 25 July 2025 provided an opportunity to study the Embedded Systems domain through the project titled "Arduino-Based Automatic Plant Watering System Using Soil Moisture Sensor." The project illustrates how a microcontroller, sensor and actuator can be combined to develop a simple automated application.

STUDENT SIGNATURE	INDUSTRY MENTOR SIGNATURE	HOD SIGNATURE
Name: Prakash .B	Name: Sathish	Name: Mr S L Sreeden
Date: 25/7/2025	Date: 25/7/2025	Date: 31/7/2025

INTERNSHIP TRAINING REPORT
ELECTRICAL LT PANEL DISTRIBUTION AND UPS SYSTEM

Student Name	G. Aathinarayanan
Department	Electrical Department
Training Organisation	Covai Electricals
Project / Worksite	Hexaware Project
Training Period	27 July 2024 to 07 August 2024
Industry Supervisor	Mr. Karthick, Project Engineer
Organisation Address	No. 58/263, 1st Floor, 7th Street, Labour Colony, Guindy, Chennai – 600 032

1. INTRODUCTION

Industrial internship training provides an opportunity to understand how electrical engineering concepts are applied in actual project environments. It helps students connect classroom learning with electrical installation practices, equipment selection, distribution arrangements, safety requirements and professional work procedures.

I completed my internship training at Covai Electricals as a trainee intern in the Electrical Department from 27 July 2024 to 07 August 2024. As stated in the internship certificate, the training was associated with the Hexaware project under the supervision and guidance of Mr. Karthick, Project Engineer. The certificate records exposure to electrical LT panel distribution and UPS systems.

2. OBJECTIVES OF THE INTERNSHIP

- To understand the role of an electrical contractor in the execution of commercial electrical projects.
- To gain technical awareness of Low-Tension (LT) panel distribution and its role in supplying electrical power.
- To understand the purpose and basic operating principles of an Uninterruptible Power Supply (UPS) system.
- To become familiar with project-site coordination, supervision and the importance of electrical safety.
- To relate fundamental electrical engineering concepts to practical building electrical services.

3. ORGANISATION PROFILE

Covai Electricals is an electrical contracting organisation based in Guindy, Chennai. The company describes its work as involving HT and LT turnkey electrical contracts, including the supply, installation, testing and commissioning of electrical systems. Its published profile also refers to electrical material supply, execution of contracted electrical works, erection, commissioning and testing.

The organisation's published project information includes commercial and corporate facilities in Chennai and other locations. Its project list includes a Hexaware Technologies project at Chennai – ONE, Chennai. This public information provides general context about the organisation's electrical contracting work; the specific training details and period in this report are taken from the internship certificate supplied for the student.

4. TECHNICAL OVERVIEW OF THE TRAINING AREAS

4.1 LT Panel Distribution

A Low-Tension (LT) distribution panel is used to receive electrical power from an incoming source and distribute it to outgoing circuits or loads at low voltage. Depending on the installation, a panel may contain switching devices, protective devices, busbars, metering components and control accessories. Circuit breakers and other protective devices help isolate faulty circuits and protect equipment against abnormal operating conditions.

In a building or commercial facility, the distribution arrangement is planned so that electrical power can be supplied to different sections and loads. Proper identification of feeders, suitable protective-device ratings, cable sizing, earthing and clear circuit labelling are important considerations in a safe and maintainable installation.

4.2 Uninterruptible Power Supply (UPS) System

A UPS is a power-conditioning and backup system that supplies power to selected loads when the normal mains supply fails or becomes unsuitable. A typical static UPS includes a rectifier/charger, battery bank, inverter and static bypass arrangement. During normal operation, the UPS conditions the incoming supply and maintains the battery charge. When the mains supply is interrupted, the battery and inverter provide continuity of supply to the connected critical load.

UPS systems are commonly used for equipment that requires continuity of power, such as information technology equipment, communication systems and control equipment. Important considerations include load capacity, backup duration, battery condition, ventilation, maintenance and safe isolation procedures.

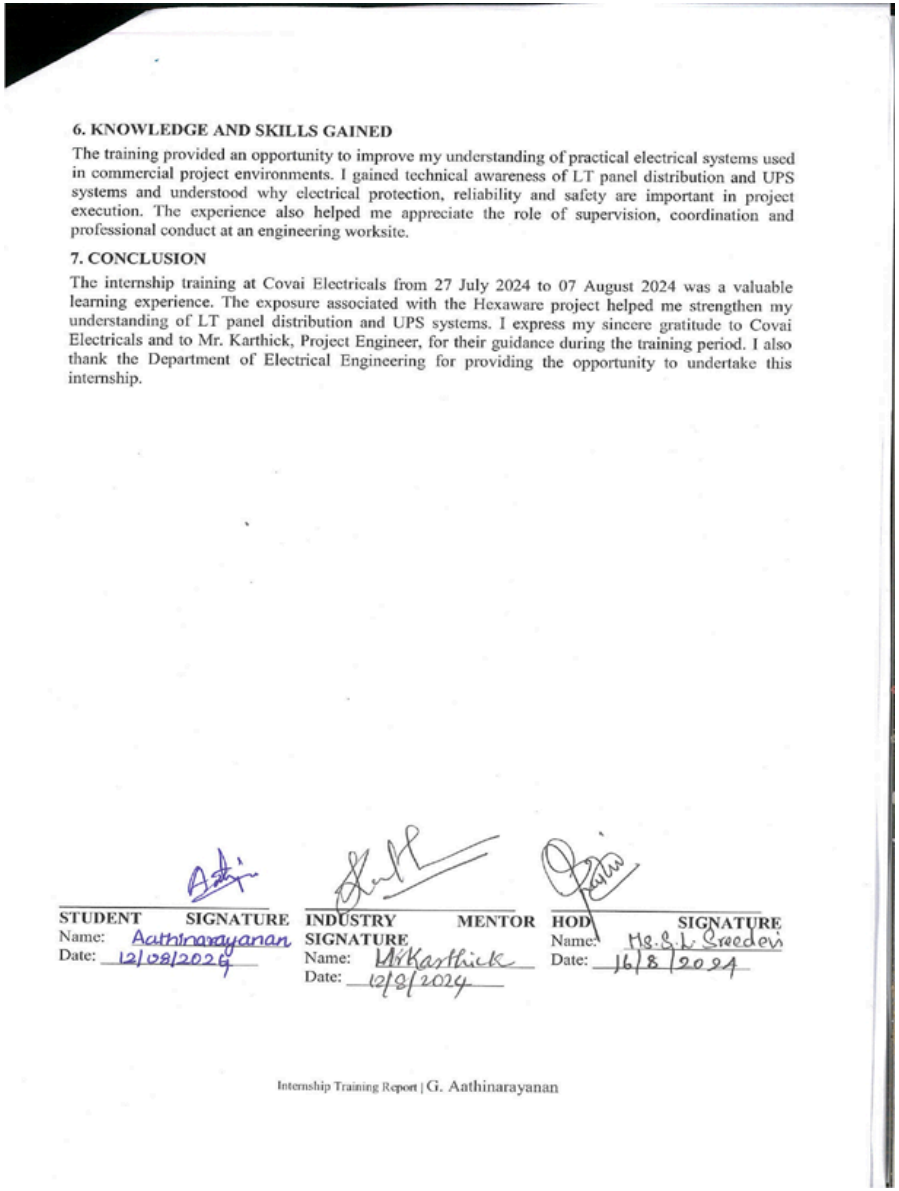
4.3 Electrical Safety and Site Practices

Electrical work requires strict attention to safety. General good practices include identifying the supply source, isolating equipment before work, following authorised procedures, using suitable personal protective equipment, maintaining safe clearances and ensuring proper earthing. Work on live electrical equipment should only be undertaken by authorised and competent personnel under approved safety procedures.

5. INTERNSHIP LEARNING AND PROJECT EXPOSURE

The internship certificate confirms that the student was attached to the Electrical Department and worked on the Hexaware project under the guidance of the Project Engineer. It specifically records learning exposure in LT panel distribution and UPS systems. The following points summarise the technical areas covered in this report and should be read as a general account of the stated training areas, not as a record of unverified individual tasks.

- Understanding the purpose of LT panels in receiving and distributing electrical power within a facility.
- Developing awareness of the major components and protective functions associated with LT distribution panels.
- Understanding the role of a UPS in maintaining continuity of supply to critical electrical and electronic loads.
- Recognising the importance of electrical protection, earthing, safe isolation and routine maintenance awareness.
- Understanding the role of project engineers and supervisors in guiding electrical project activities.



6. KNOWLEDGE AND SKILLS GAINED

The training provided an opportunity to improve my understanding of practical electrical systems used in commercial project environments. I gained technical awareness of LT panel distribution and UPS systems and understood why electrical protection, reliability and safety are important in project execution. The experience also helped me appreciate the role of supervision, coordination and professional conduct at an engineering worksite.

7. CONCLUSION

The internship training at Covai Electricals from 27 July 2024 to 07 August 2024 was a valuable learning experience. The exposure associated with the Hexaware project helped me strengthen my understanding of LT panel distribution and UPS systems. I express my sincere gratitude to Covai Electricals and to Mr. Karthick, Project Engineer, for their guidance during the training period. I also thank the Department of Electrical Engineering for providing the opportunity to undertake this internship.

STUDENT SIGNATURE	INDUSTRY MENTOR SIGNATURE	HOD SIGNATURE
Name: Aathinarayanan	Name: Mr.Karthick	Name: Ms.S.L.Sreedevi
Date: 12/08/2024	Date: 12/8/2024	Date: 16/8/2024

Internship Training Report | G. Aathinarayanan

Fig 3.4.2. Sample Internship report

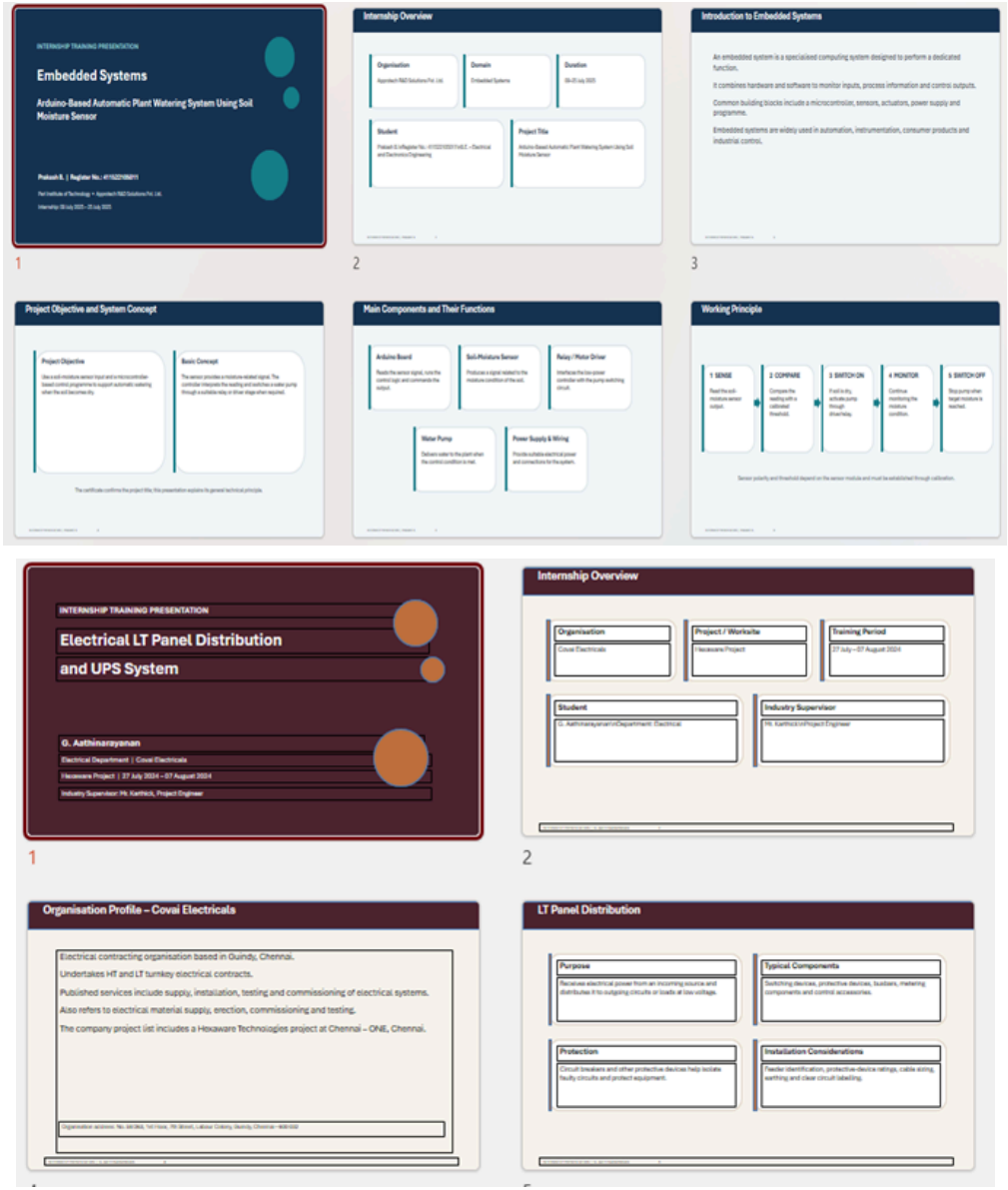


Fig 3.4.3. Sample Internship Presentation

Table 3.4.5 Training given inside campus

S:No	Training Name	Duration (days)	Starting Date

1	Technical-Java Sales and Front End Tech	30	04/11/2024
2	Scientific career Planning	1	09/04/2024
3	Technical-Java	12	29/01/2024
4	Aptitude	6	18/1/2024



PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC under 2(f)
AICTE Permanent ID Number : 1-9327291

CENTRE FOR TRAINING AND EMPLOYABILITY ENHANCEMENT

PERI/TC/TEE/08-2024/001 Date: 01/04/2024

CIRCULAR

We are glad to inform that seminar has been arranged for our third year students on **9th April 2024.** We request all the students to attend the training without fail.

Seminar topic : SCIENTIFIC CAREER PLANNING
Starting Date & Time : 09/04/2024 & 09 - 45am
Students : III Year BE – CSE, ECE & EEE

Department	Sign of the HoD	Sign of the Training Coordinator
CSE		
ECE		
EEE		

Co-ordinator Vice Principal Principal

Copy to :
1. Chairman
2. COO
3. IQAC
4. All Departments

PERI INSTITUTE OF TECHNOLOGY | PERI Knowledge Park, Mannivakkam, Chennai - 600 048, Tamilnadu.
Phone No : 044 3505 5400 | admin@peri.education | www.peri.education

Fig 3.4.4 Sample circular of training schedule

3.5 Evaluation of Projects (20)

Institute Marks : 20.00

Project evaluation is carried out through **four stages of reviews (Zeroth, First, Second, and Third Review)** before the end-semester evaluation. Each stage is assessed based on specific rubrics to ensure systematic progress, attainment of targeted **Program Outcomes (POs)** and **Program Specific Outcomes (PSOs)**, and continuous monitoring of student learning. Evidence of assessment (marks sheets, rubrics, presentations, and reports) will be maintained in the **course file**.

In R-2021 project evaluation, is carried by conducting three reviews during the semester VIII by the review committee. The student shall make presentation on the progress made by him / her before the committee. The total marks obtained in the three reviews shall be reduced for 40 marks and rounded to the nearest integer.

The project report shall carry a maximum of 20 marks. The project report shall be submitted as per the approved guidelines as given by the Director, Centre for Academic Courses. Same marks shall be awarded to every student within the project group for the project report. The viva-voce examination shall carry 40 marks. Marks are awarded to each student of the project group is based on the individual performance in the viva voce examination.

In R-2017 project evaluation is carried by conducting three reviews during the semester by the review committee. The student shall make presentation on the progress made by him / her before the committee. The total marks obtained in the three reviews shall be reduced for 20 marks and rounded to the nearest integer.

The project report shall carry a maximum 30 marks. The project report shall be submitted as per the approved guidelines as given by Director, Academic Courses. Same mark shall be awarded to every student within the project group for the project report. The viva-voce examination shall carry 50 marks. Marks are awarded to each student of the project group based on the individual performance in the viva-voce examination.

Rubrics for Zeroth Review

- Innovation and Presentation: Evaluates the uniqueness, originality, and overall presentation of the project. This component is explicitly linked to PO2, PO3, and PO5.
- Description of the Project : Assesses the technical depth, clarity, and structural details of the project work. This component maps to PO1, PO2, and PO3.
- Scheduling of the Project : Measures the students project management skills, timelines, and execution workflow. This is tied to PO6 and PO9.
- Viva : Evaluates the students understanding, articulation, and defense of their work. This component addresses PO1, PO3, PO9, and PO10.

Table 3.5.1 Rubrics for First Review

PERIIT - PROJECT EVALUATION RUBRICS (5-POINT SCALE)

Centralized Project Rubrics Guide Lines

REVIEW I: Project Formulation and Planning

Sl. No.	Assessment Element	5 – Excellent	4 – Good	3 – Fair / Satisfactory	2 – Needs Improvement	1 – Unsatisfactory
1	**Literature Review & Technical Analysis**	Reviews 17–20 standard technical papers, includes a comparative table of existing methods, identifies clear project gaps, and cites all references correctly.	Reviews 13–16 relevant technical papers, compares prior methods with minor gaps, and cites references in standard format.	Reviews 9–12 general papers/sources with descriptive summaries, partially mentions limitations, and provides basic citations.	Reviews 5–8 sources with simple summaries, lacks technical comparison, and has incomplete references.	Reviews 4 or fewer sources, lacks technical comparison and project rationale, with missing or improper references.

2	**Problem Statement – Technical, Social & Sustainability**	Clearly defines a complex engineering problem with technical, social, environmental and sustainability dimensions; identifies conflicting requirements, stakeholders and constraints.	Clearly defines the technical problem and adequately addresses social, environmental/sustainability aspects and major constraints.	Problem is clearly stated with some consideration of social or sustainability aspects, but limited depth.	Problem statement is broadly defined but lacks clarity regarding social, sustainability, stakeholder or technical constraints.	Problem is vague, poorly defined or unrelated to significant technical, social or sustainability concerns.
3	**Project Planning and Management**	Provides a realistic timeline (Gantt chart), clear milestones, member task distribution, resource/budget needs, and contingency plans.	Provides a structured plan with clear milestones, timeline, and task distribution, with minor gaps in risk planning.	Outlines basic activities and timeline, but lacks detailed task tracking and resource estimation.	Incomplete timeline or task division with missing milestones and unclear roles.	No project plan, timeline, or task division provided.
4	**Methodology and Problem-Solving Approach**	Step-by-step workflow with clear block/flow diagrams, explains why the method is selected over alternatives, and addresses project constraints.	Logical step-by-step workflow with diagrams, technical reasons for the chosen method, and considers alternative approaches.	Standard workflow with basic diagrams, but lacks justification for method selection and does not discuss alternatives.	Incomplete or disordered workflow without clear justification for the chosen method.	Methodology is unclear, incorrect, or missing.

5	**Technical Presentation and Communication**	Well-structured slides, clear diagrams, audible delivery, and adheres strictly to the allocated time limit.	Organized slides with clear visuals, good technical explanation, and proper time management.	Readable slides with standard content; acceptable delivery with minor presentation flow issues.	Disorganized slides, excessive text, poor visuals, or exceeds time limit.	Unprepared presentation with illegible slides and ineffective delivery.
6	**Technical Knowledge and Oral Defence**	Confidently answers all technical questions using correct engineering fundamentals and defends design decisions clearly.	Answers most technical questions accurately with proper justification of project decisions.	Answers basic project questions correctly, but struggles with deeper analytical questions.	Gives hesitant or partially incorrect answers; requires frequent prompting from the panel.	Unable to answer fundamental engineering questions related to the project.

Table 3.5.2 Rubrics for Second Review

Sl. No.	Assessment Element & PO Alignment	5 – Excellent	4 – Good	3 – Fair / Satisfactory	2 – Needs Improvement	1 – Unsatisfactory
1	**Engineering Design / Computational Model / Investigation**	Complete design calculations/schematics based on engineering principles, compares at least 2 design alternatives, and meets project constraints.	Well-developed system design or model with proper calculations and specifications, addressing major constraints.	Basic design or model based on standard templates/formulas, with minor gaps in calculation details.	Incomplete design with missing technical calculations or unrealistic specifications.	Impractical or missing design model with no engineering basis.
2	**Appropriate Use of Modern Engineering Tools**	Selects and applies appropriate modern software/hardware/simulation tools, justifies tool choice, and identifies tool limitations.	Correctly operates relevant software/hardware tools for simulation, modeling, or prototyping.	Uses basic engineering tools/software at a standard level, with limited exploration of tool capabilities.	Basic tool usage with frequent operational errors or inappropriate tool choice for the task.	Unable to operate required engineering software or hardware tools.

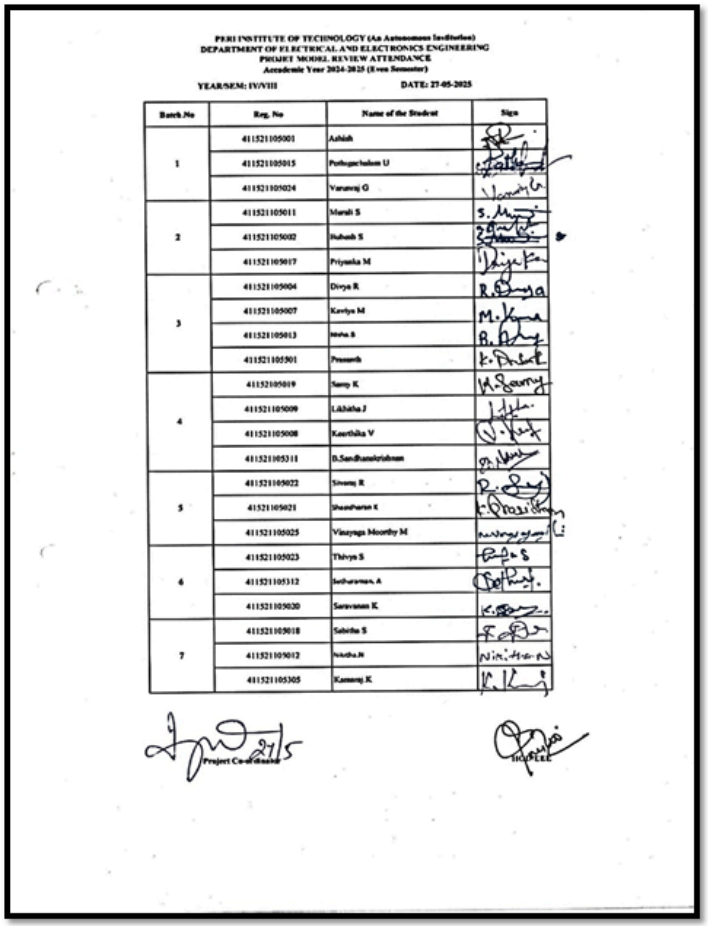
3	**Testing, Validation and Verification**	Implements systematic test cases, validates results against standard benchmarks or theoretical values, and records error analysis.	Conducts structured testing, verifies functionality against requirements, and resolves major identified errors.	Conducts standard testing on basic test cases; verifies core functionality without detailed edge-case testing.	Conducts limited or unstructured tests; test data is incomplete or unverified.	No testing or validation conducted; prototype/code is non-functional.
4	**Evaluation of Social, Environmental & Sustainability Impacts**	Evaluates specific impacts on user safety, environment, energy use, and cost, proposing practical mitigation measures.	Identifies safety, environmental, and cost factors relevant to the project with suitable compliance measures.	Mentions standard safety or environmental regulations in general terms without project-specific analysis.	Mentions environmental or safety aspects only in passing without practical relevance.	Ignores safety, environmental, legal, and social impacts entirely.
5	**Analysis and Interpretation of Results**	Presents data clearly using graphs/tables, analyzes trends, errors, and trade-offs, and draws valid engineering conclusions.	Correctly displays data in tables/plots, analyzes output trends, and draws sound technical conclusions.	Presents basic results with standard graphs/tables; analysis is mostly descriptive with limited technical interpretation.	Incomplete data presentation; weak explanation of results and unable to explain graph trends.	Incorrect, fabricated, or missing results with no valid conclusions.
6	**Technical Presentation and Communication**	Professional slides, clear live demonstration/simulation, organized delivery, and balanced participation by all team members.	Well-structured slides, successful demo, logical flow, and good time management.	Satisfactory presentation and demo; slide formatting or team coordination needs improvement.	Unclear demo, cluttered slides, or poor coordination among team members.	Disorganized presentation with a failed demonstration and ineffective delivery.

7	**Team work & Technical Defence**	All the Team memebers Demonstrates complete understanding of code/circuit/system details and answers analytical questions with clarity.	Team Members Demonstrates clear understanding of project implementation and explains technical decisions well.	Understands individual module well, but has limited understanding of other team members modules.	Shows limited understanding of implementation details; struggles with technical questions.	Unable to explain implementation steps, code logic, or hardware working.

Table 3.5.3: Rubrics for Third Review

Assessment Element & PO Alignment	5 – Excellent	4 – Good	3 – Fair / Satisfactory	2 – Needs Improvement	1 – Unsatisfactory
Adherence to Prescribed Technical Format	Strictly follows all institutional report guidelines (margins, typography, chapter structure, figure/table numbering, and citation style).	Follows report formatting guidelines with only 1–2 minor layout inconsistencies.	Follows general structure, but contains noticeable formatting errors in captions, spacing, or table layouts.	Multiple deviations from formatting guidelines; inconsistent styling and missing sections.	Fails to follow the prescribed report template and structural guidelines.
Academic Integrity and Originality	Original work with plagiarism similarity index below 15%, properly attributed sources, and strict adherence to academic ethics.	Original work with acceptable similarity index (15–20%) and all secondary sources credited.	Similarity index near the acceptable limit (20–25%); requires minor paraphrasing and citation corrections.	High similarity index (> 25%) with poor paraphrasing and uncredited text passages.	Plagiarized work, fabricated data, or uncredited code (> 35% similarity).
Clarity of Technical Discussion and Results	Compares project results with literature benchmarks, evaluates performance metrics, and clearly explains limitations.	Explains final results, performance metrics, and comparison with initial project objectives clearly.	Describes outcomes clearly, but lacks comparison with existing benchmarks or baseline systems.	Brief or surface-level discussion; lists outputs without explaining their technical meaning.	Incomplete or contradictory discussion; fails to show whether project goals were achieved.
Appropriate Use of References and Citations	Cites 17–20 standard technical papers/sources with accurate in-text citations matching the reference list format (IEEE/standard style).	Cites 13–16 relevant technical sources correctly mapped in text and bibliography.	Cites 9–12 sources (mix of books and papers) with minor citation formatting errors.	Cites 5–8 sources; relies mainly on generic websites with inconsistent formatting.	Cites 4 or fewer sources; incomplete bibliography with missing citations.
Technical Presentation and Communication	Clear and professional presentation, seamless working demo, equal team contribution, completed strictly on schedule.	Well-organized slides, smooth demo, good individual contributions, and proper time management.	Satisfactory presentation and demo, though delivery is uneven across team members.	Disorganized slides, incomplete demo, or exceeds the allotted time limit.	Ineffective presentation, failed demo, and lack of team coordination.
Team Work & Technical Defence	All team members demonstrate complete understanding of system operations, trade-offs, and future enhancements during viva.	Team members answer viva questions clearly and defend design choices logically.	Answers basic viva questions satisfactorily, but struggles with optimization and advanced questions.	Only 1–2 members answer questions; shows low individual technical accountability.	Team members are unable to answer fundamental project and domain questions.

Research Publication / Dissemination	Paper draft completed and submitted/accepted to a standard indexed journal or peer-reviewed conference (e.g., IEEE/Scopus).	Complete paper draft prepared in standard format, ready for submission to a recognized conference.	Technical summary or paper prepared, suitable for an internal symposium or department proceedings.	Incomplete paper draft requiring significant technical additions and revisions.	No publication draft prepared, or work does not meet minimum technical standards for submission.



PERI INSTITUTE OF TECHNOLOGY (An Autonomous Institution)
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
PROJECT MODE2- REVIEW ATTENDANCE
Academic Year 2024-2025 (Even Semester)

YEAR/SEM: IV/VIII DATE: 27-05-2025

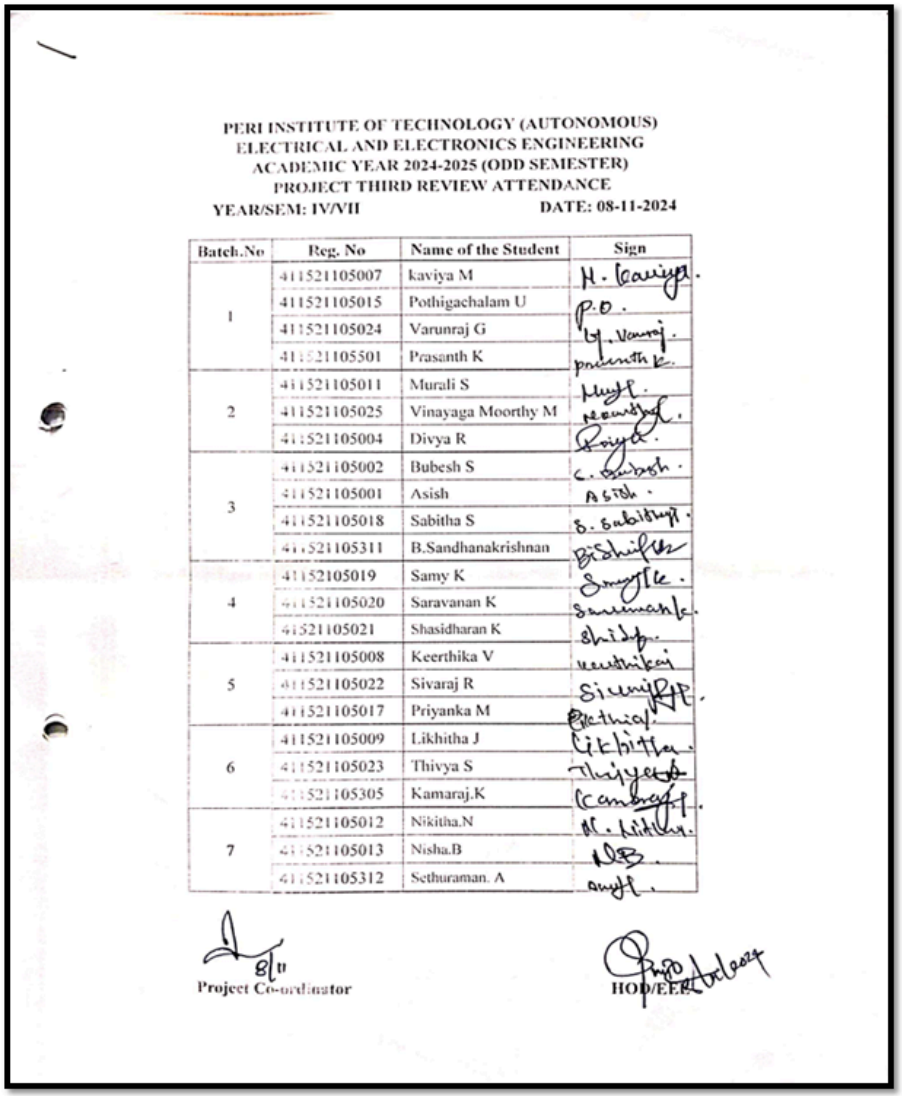
Batch No	Reg. No	Name of the Student	Sign
1	411521105001	Ashish	
	411521105015	Pothgeichelvan U	
	411521105024	Varunraj G	
2	411521105011	Murali S	
	411521105002	Rubesh S	
	411521105017	Priyanka M	
3	411521105004	Divya R	
	411521105007	Kaviya M	
	411521105013	Mohe.S	
	411521105501	Prasanth	
4	41152105019	Sanjy K	
	411521105009	Lakshita J	
	411521105008	Keerthika V	
	411521105311	D.Sandhanakrishnan	
5	411521105022	Sivaraj R	
	41521105021	Shandharan K	
	411521105025	Vinayaga Moorthy M	
6	411521105023	Thivya S	
	411521105312	Selvaraman. A	
	411521105020	Saravanan K	
7	411521105018	Sabitha S	
	411521105012	Nivetha.N	
	411521105305	Kamaraj K	

27/5

Project Co-ordinator

HOD/EEE

Fig 3.5.1 Project attendance sample



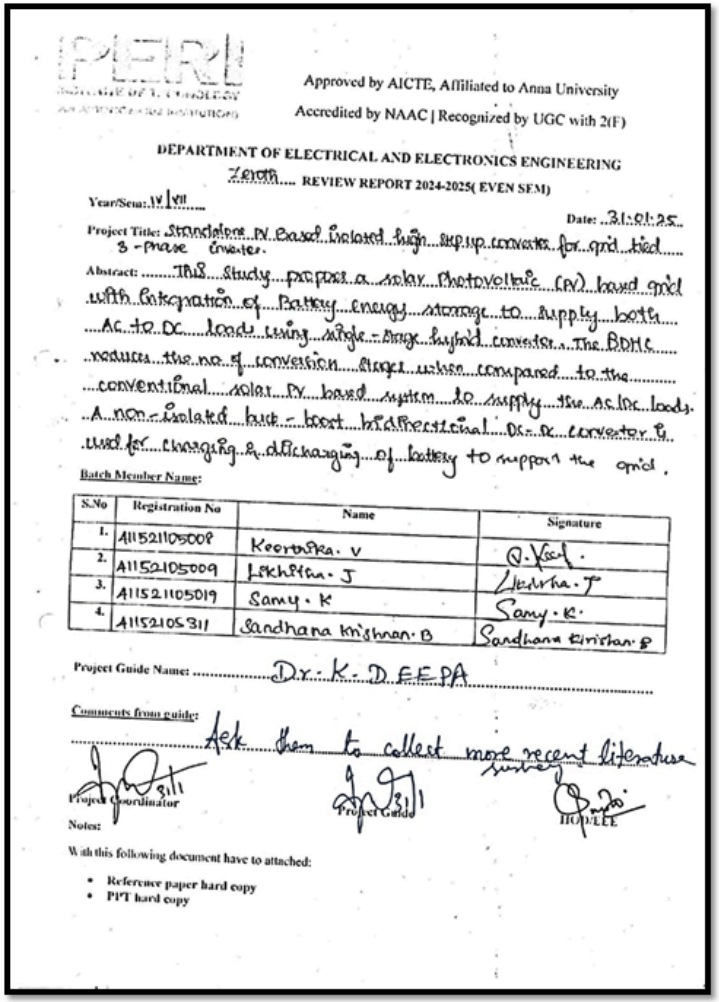
PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2024-2025 (ODD SEMESTER)
PROJECT THIRD REVIEW ATTENDANCE
YEAR/SEM: IV/VII DATE: 08-11-2024

Batch.No	Reg. No	Name of the Student	Sign
1	411521105007	kaviya M	
	411521105015	Pothigachalam U	
	411521105024	Varunraj G	
	411521105501	Prasanth K	
2	411521105011	Murali S	
	411521105025	Vinayaga Moorthy M	
	411521105004	Divya R	
3	411521105002	Bubesh S	
	411521105001	Asish	
	411521105018	Sabitha S	
	411521105311	B.Sandhanakrishnan	
4	411521105019	Samy K	
	411521105020	Saravanan K	
	411521105021	Shasidharan K	
5	411521105008	Keerthika V	
	411521105022	Sivaraj R	
	411521105017	Priyanka M	
6	411521105009	Likhitha J	
	411521105023	Thivya S	
	411521105305	Kamaraj.K	
7	411521105012	Nikitha.N	
	411521105013	Nisha.B	
	411521105312	Sethuraman. A	

Project Co-ordinator

HOD/EEE

Fig 3.5.2 Project attendance sample



PERI

Approved by AICTE, Affiliated to Anna University

Accredited by NAAC | Recognized by UGC with 2(F)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Zeroth REVIEW REPORT 2024-2025(EVEN SEM)

Year/Sem: IV / VII

Date: 31.01.25

Project Title: Standalone PV based Isolated high step up converter for grid tied 3-phase inverter.

Abstract: This study proposes a solar photovoltaic (PV) based grid with integration of Battery energy storage to supply both AC to DC loads using single-stage hybrid converter. The BDHC reduces the no of conversion stages when compared to the conventional solar PV based system to supply the ac/dc loads. A non-isolated buck-boost bidirectional DC-DC converter is used for charging & discharging of battery to support the grid.

Batch Member Name:

S.No	Registration No	Name	Signature
1.	411521105008	Keerthika. V	Keerthika. V
2.	411521105009	Lakshna. J	Lakshna. J
3.	411521105019	Samy. K	Samy. K
4.	411521105311	Sandhana krishnan. B	Sandhana krishnan. B

Project Guide Name: Dr. K. DEEPA

Comments from guide:

Ask them to collect more recent literature survey

Project Coordinator

Project Guide

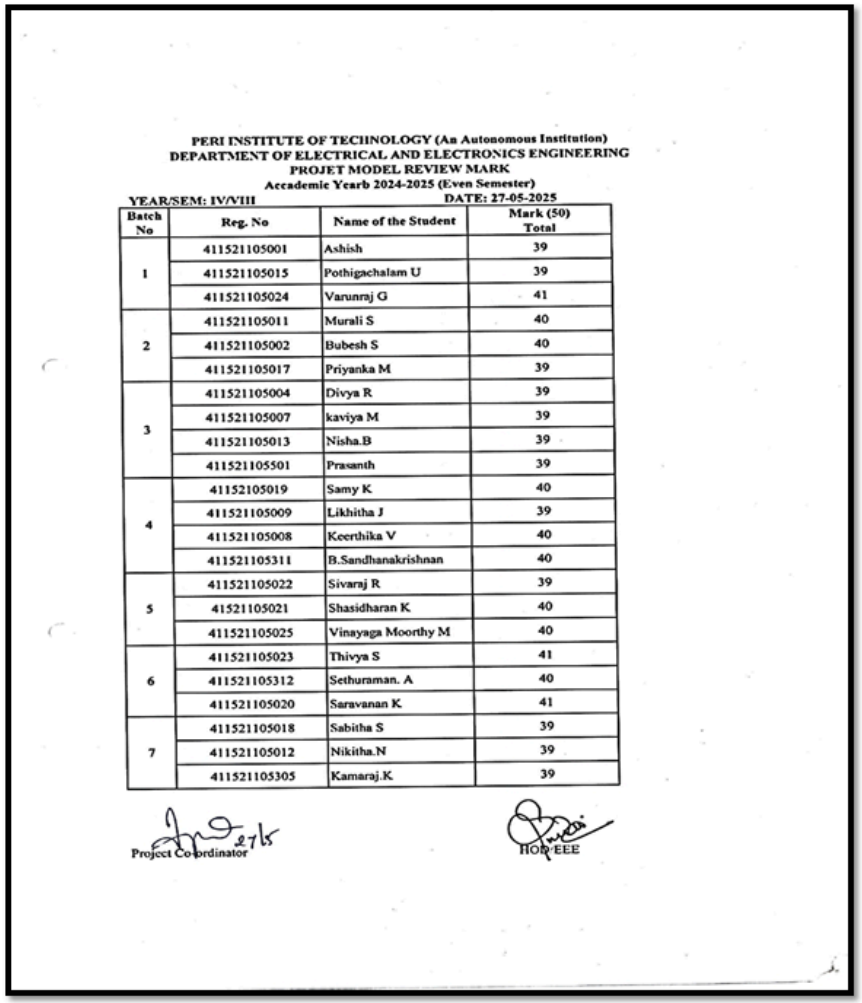
HOD/EEE

Notes:

With this following document have to attached:

- Reference paper hard copy
- PPT hard copy

Fig 3.5.3 Project report sample- Zeroth review



PERI INSTITUTE OF TECHNOLOGY (An Autonomous Institution)
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
PROJET MODEL REVIEW MARK
Accademic Yearb 2024-2025 (Even Semester)

YEAR/SEM: IV/VIII **DATE: 27-05-2025**

Batch No	Reg. No	Name of the Student	Mark (50) Total
1	411521105001	Ashish	39
	411521105015	Pothigachalam U	39
	411521105024	Varunraj G	41
2	411521105011	Murali S	40
	411521105002	Bubesh S	40
	411521105017	Priyanka M	39
3	411521105004	Divya R	39
	411521105007	kaviya M	39
	411521105013	Nisha.B	39
	411521105501	Prasanth	39
4	41152105019	Samy K	40
	411521105009	Likhitha J	39
	411521105008	Keerthika V	40
	411521105311	B.Sandhanakrishnan	40
5	411521105022	Sivaraj R	39
	41521105021	Shasidharan K	40
	411521105025	Vinayaga Moorthy M	40
6	411521105023	Thivya S	41
	411521105312	Sethuraman. A	40
	411521105020	Saravanan K	41
7	411521105018	Sabitha S	39
	411521105012	Nikitha.N	39
	411521105305	Kamaraj.K	39

Project Coordinator

HOD/EEE

Fig 3.5.4 Project marks sample

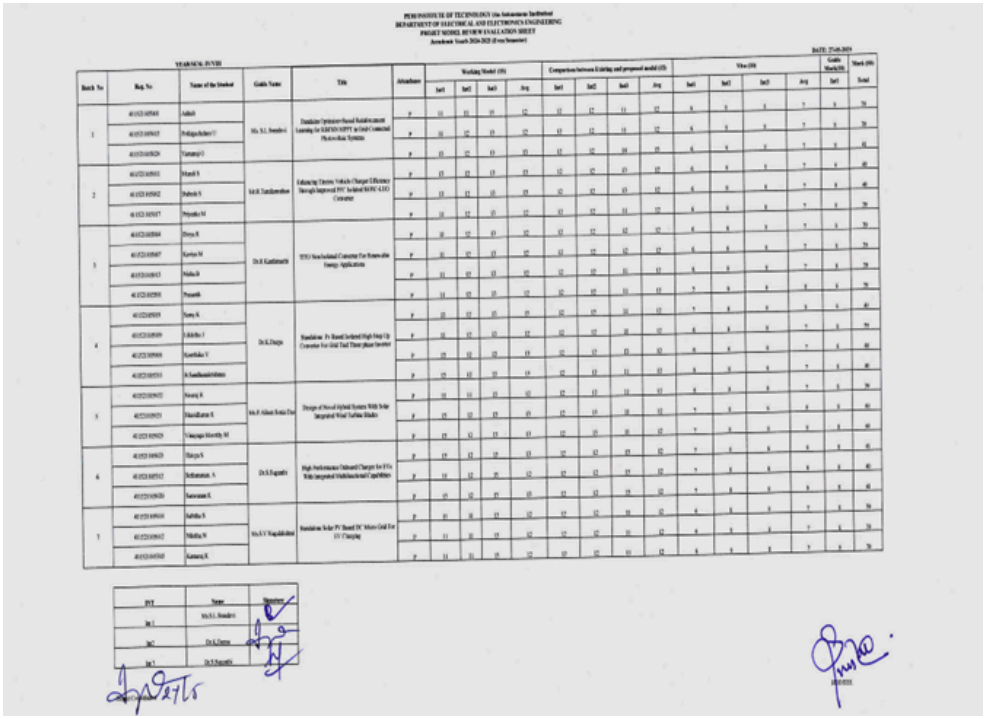


Fig 3.5.5 Project marks splitup sample

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

Institute Marks : 10.00

Students were made aware of need and various sustainable goals during their course of study in the college. They were asked to align their projects with the goals from stage 1. As a result of this, many numbers of students did projects on Electric Vehicle and renewable energy systems. Our department students in the campus follow basic cleanliness. All the faculty and students use electricity and water judicially in college environment.

From department, many training programs were arranged on green energy and EVs. This inspired the students and in turn Green Wheels club was formed to conduct various activities for students from other departments too. Through events on green energy, students became aware of their environment.

The Sustainable Development Goals and their titles are as follows:

SDG 1: No Poverty

SDG 2: Zero Hunger

SDG 3: Good Health and Well-being

SDG 4: Quality Education

SDG 5: Gender Equality

SDG 6: Clean Water and Sanitation

SDG 7: Affordable and Clean Energy

SDG 8: Decent Work and Economic Growth

SDG 9: Industry, Innovation, and Infrastructure

SDG 10: Reduced Inequalities

SDG 11: Sustainable Cities and Communities

SDG 12: Responsible Consumption and Production

SDG 13: Climate Action

SDG 14: Life Below Water

SDG 15: Life on Land

SDG 16: Peace, Justice, and Strong Institutions

SDG 17: Partnerships for the Goals

The student projects demonstrate clear alignment with multiple Sustainable Development Goals. A majority of projects contribute to:

- **SDG 4 – Quality Education** → learning new skills, technical knowledge.
- **SDG 8 – Decent Work & Economic Growth** → skill development, employability.
- **SDG 9 – Industry, Innovation & Infrastructure** → innovation, technology, embedded systems, IoT.
- **SDG 12 – Responsible Consumption & Production** → digitalization, resource efficiency, less paper.

Table 3.6.1 Projects related to SDG

S.NO	REGISTER NUMBER	NAME OF THE STUDENT	TITLE OF PROJECT	GUIDE NAME	SDG GOAL COVERED
1	41152110502 1 41152110502 2 41152110502 5	Shashidharan K Sivaraj R Vinayaga moorthy M	Design of novel hybrid system with solar integrated wind turbine blades	Ms.S.L.Sreedevi	7,4,8
2	41152210500 8 41152210500 1 41152210530 4	Mathan kumar P, Aathi Narayanan G, Vishnu R	Solar Wireless Electric Vehicle charging system	Dr.S.Suganthi	7,4,9
3	41152210501 2 41152210500 9	Raghul B, Mohanperumal R	Enhancing solar street light with motion sensor for improved efficiency and safety	Mr.R.Tamilamuthan	12,4,9
4	41152210502 3 41152210501 4 41152210501 0	Vijayalakshmi M, Saraswathi S, Nithish Kumar S	IOT Based agriculture monitoring system	Dr.R.Kanthimathi	2,4
5	41152110500 2 41152110501 1 41152110531 7	Bubesh S, Murali S, Priyanka M	Enhancing Electric Vehicle Charger efficiency through improved PFC Isolated Sepic Luo Converter	Mr.R.Tamilamuthan	7,8

ANNA UNIVERSITY:CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that the project **"DESIGN OF NOVEL HYBRID SYSTEM WITH SOLAR INTEGRATED WIND TURBINE BLADES"** is the Bonafide work of **SHASIDHARAN.K(411521105021), SIVARAJ.R (411521105022), VINAYAGAMOORTHY.M(411521105025)** who carried out the project under my supervision.

SIGNATURE 11/6/2025	**SIGNATURE**
Mrs.S.L.SREEDEVI.M.E.,M.B.A., (Ph.D.)	Mrs.P.Aileen Sonia Dhas M.E., (Ph.D.)
HEAD OF THE DEPARTMENT	**SUPERVISOR**
Department of Electrical and Electronics Engineering Peri Institute of Technology Mannivakkam, Chennai-48	Department of Electrical and Electronics Engineering Peri Institute of Technology Mannivakkam Chennai-48

Submitted for the VIVA-VOCE Examination held on 05/06/25

INTERNAL EXAMINER **EXTERNAL EXAMINER**

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**Fully Soft Switched Multi-Port DC-DC Converter with High Integration**" is the bonafide work of **DASARADHAN S (411518105005), MAGESH BK (411518105010), MUKESH E (411518105012)** who carried out the project work under my supervision.

Signature

Mrs.S.L.SREEDEVI M.E.,

HEAD OF THE DEPARTMENT

Department of Electrical and Electronics Engineering,

Peri Institute of Technology,

Mannivakkam – 600 048.

Signature

Mr.A.VASANTHARAJ M.E.,

SUPERVISOR

ASSISTANT PROFESSOR

Department of Electrical and Electronics Engineering,

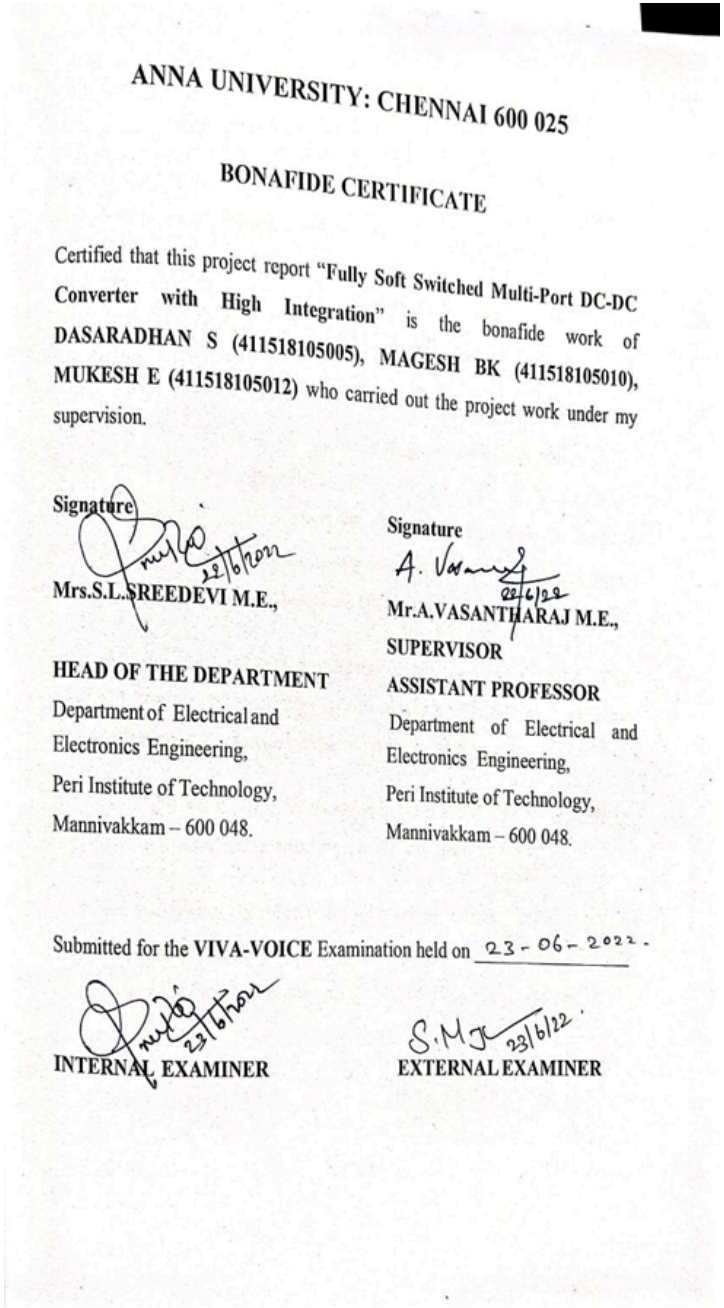
Peri Institute of Technology,

Mannivakkam – 600 048.

Submitted for the **VIVA-VOICE** Examination held on 23-06-2022.

INTERNAL EXAMINER

EXTERNAL EXAMINER



ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**Fully Soft Switched Multi-Port DC-DC Converter with High Integration**" is the bonafide work of **DASARADHAN S (411518105005), MAGESH BK (411518105010), MUKESH E (411518105012)** who carried out the project work under my supervision.

Signature

Mrs.S.L.SREEDEVI M.E.,

HEAD OF THE DEPARTMENT

Department of Electrical and Electronics Engineering,

Peri Institute of Technology,

Mannivakkam – 600 048.

Signature

Mr.A.VASANTHARAJ M.E.,

SUPERVISOR

ASSISTANT PROFESSOR

Department of Electrical and Electronics Engineering,

Peri Institute of Technology,

Mannivakkam – 600 048.

Submitted for the **VIVA-VOICE** Examination held on 23-06-2022.

INTERNAL EXAMINER

EXTERNAL EXAMINER

Figure 3.6.1 Sample project report

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)

Institute Marks : 5.00

3.7.1 List of Assessment Tools and Processes

The institution follows a systematic and well-defined assessment process to evaluate the attainment of Course Outcomes (COs). The assessment tools are designed and mapped to the respective COs to evaluate students' knowledge, analytical abilities, problem-solving skills, and practical competencies. The assessment data are systematically collected, analyzed, and consolidated to calculate CO attainment and determine the extent to which the intended learning outcomes have been achieved.

a) Direct Assessment Tools used to gather data

The following direct assessment tools are used to collect the data for evaluating the course outcomes.

- **Continuous Assessment Tests (CAT I and CAT II):** Assess students understanding of the concepts covered in theory and integrated courses.
- **Model Examinations:** Evaluate students preparedness for the Semester End Examination (SEE) and their understanding of the course content.
- **Assignments:** Assess conceptual understanding, analytical skills, and problem-solving abilities in applicable theory courses under R2021.
- **Laboratory Model Examinations I and II:** Evaluate experimental skills, practical execution, observation, analysis, and the ability to perform experiments independently.
- **Project Reviews I, II and III:** Assess the application of engineering knowledge, problem-solving skills, and progress towards the intended COs of project work.
- **Semester End Examination (SEE):** Evaluates students achievement of the intended COs through the prescribed university examination process for theory, laboratory, integrated, and project courses, as applicable.

b)Indirect Assessment Tools

- **Course End Survey:** Collects students perceptions of their on the learning experience at the completion of the course.

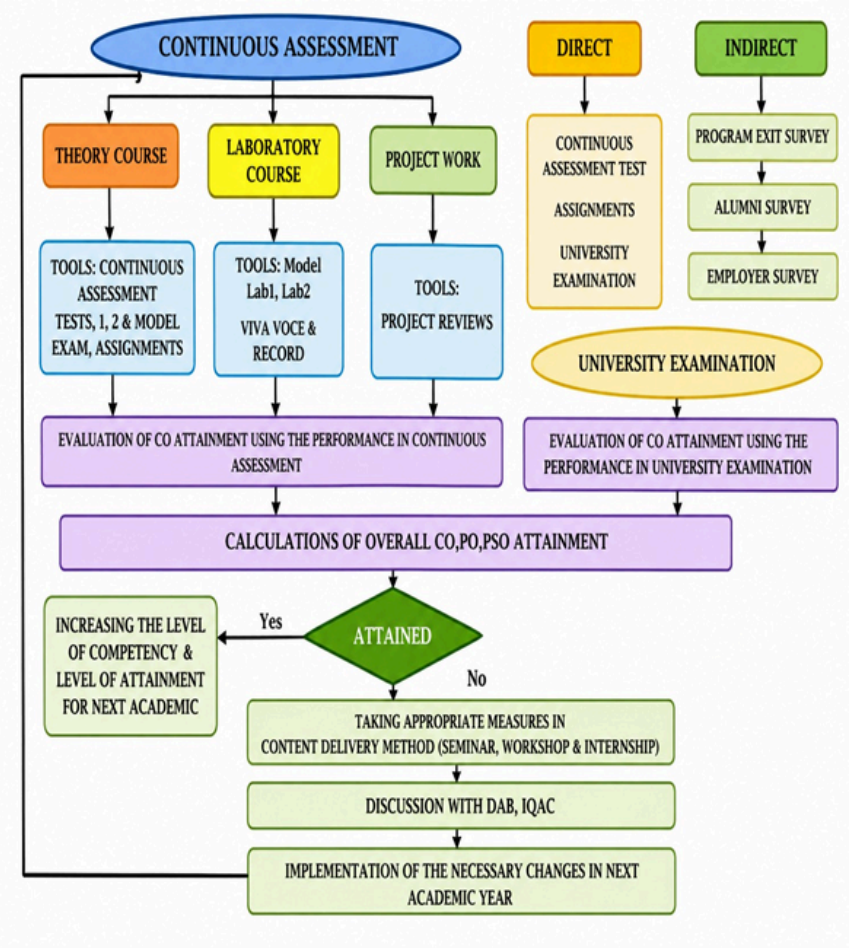


Fig 3.7.1 Flow chart for CO-PO&PSO Attainment

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

Institute Marks : 20.00

The course-handling faculty member relevant assessment tools, maps assessment questions or components to the corresponding COs, analyses student performance, and consolidates the results for CO attainment. The assessment data and attainment calculations are documented and reviewed to identify learning gaps and opportunities for improvement.

1. Alignment of Assessment Tools with Course Outcomes

Assessment tools are selected based on the nature of the course and its intended Course Outcomes (COs). Each assessment question or component is mapped to the relevant COs to establish a clear relationship between the expected learning outcomes and the evidence obtained from student performance. Written examinations and assignments assess conceptual understanding, analytical ability, and problem-solving skills; laboratory assessments evaluate practical and experimental competencies; and project reviews assess the application of engineering knowledge and the ability to solve engineering problems.

This systematic mapping ensures that the assessment process measures the achievement of the intended COs and provides a basis for evaluating course-level learning outcomes.

2. Analysis of Assessment Data and Calculation of CO Attainment

Student performance in each assessment is analysed using the approved assessment methodology. For assessments where question-wise marks are available, each question or assessment component is mapped to the relevant CO, and student performance is evaluated against the prescribed target criterion.

Question-wise attainment is calculated using the following formula:

Question-wise attainment (%) = (Number of students meeting the prescribed target / Number of students who attempted the question) × 100

The attainment percentages of questions mapped to a particular CO are consolidated for each applicable assessment tool. Continuous Assessment-based and Semester End Examination (SEE)-based CO attainment are calculated using the relevant assessment components and the weightages prescribed by the applicable regulations and approved institutional assessment policy.

Indirect CO attainment is assessed through the Course End Survey, which captures students perceptions of their achievement of the intended COs. The survey responses are analysed separately from direct assessment data. Direct and indirect CO attainment values are combined using the approved institutional methodology.

3. Reliability, Documentation, and Continuous Improvement

The use of defined CO mappings, assessment criteria, documented calculations, and approved weightages promotes consistency, transparency, and traceability in the assessment process. The calculated CO attainment values are compared with predefined targets to identify gaps in student learning.

Based on the analysis, course faculty identify areas requiring improvement and implement appropriate corrective measures, such as remedial instruction, additional practice, supplementary learning activities, or modifications to teaching strategies, as applicable. The effectiveness of these measures is reviewed in subsequent course offerings to support continuous improvement.

Supporting evidence includes CAT question papers, question-to-CO mapping sheets, evaluated student answer scripts, CAT mark statements, Course End Survey analysis, CO attainment calculation sheets, and records of corrective actions, as applicable.

4. Measurement of Course Outcome Attainment

The measurement of direct and indirect CO attainment for theory courses is carried out using the assessment methodology adopted by the institution.

3.7.3 Theory Course Performance – University Examination-Based CO Attainment

University examination performance is analysed to evaluate students achievement of the COs assessed through the Semester End Examination. The examination questions are mapped to the relevant COs, and the available student performance data are analysed in accordance with the approved attainment methodology.

For theory courses, the weightage assigned to university examination-based attainment is:

- **R2017:** 80%
- **R2021:** 60%

These weightages are applied in accordance with the assessment scheme applicable to the respective curriculum.

3.7.4 Theory Course Performance – Continuous Assessment-Based CO Attainment

Continuous Assessment-based CO attainment is calculated using the applicable internal assessment components, including CAT I, CAT II, the Model Examination, and assignments or other approved academic activities, as applicable.

The weightage assigned to Continuous Assessment-based attainment is:

- **R2017:** 20%
- **R2021:** 40%

The marks obtained by students in the relevant internal assessments are analysed using the corresponding question-to-CO mappings. The attainment values for each CO are consolidated in accordance with the approved assessment methodology.

The distribution of COs assessed through the internal assessment components is illustrated in Table B.3.7

Table .3.7.1: Mapping of Theory Course Assessment Components to Course Outcomes

Assessment Component	CO 1	CO 2	CO 3	CO 4	CO 5
CAT I	✓	✓	✓	—	—
CAT II	—	—	✓	✓	✓
Model Examination	✓	✓	✓	✓	✓
Assignments/Activities	✓	✓	✓	✓	✓

3.7.5 Laboratory Course Performance – University Examination-Based CO Attainment

University examination performance is analyzed to evaluate students achievement of the COs assessed through the Semester End Practical Examination. The Lab examination questions are mapped to the relevant COs, and the available student performance data are analysed in accordance with the approved attainment methodology.

For lab courses, the weightage assigned to university examination-based attainment is:

- **R2017:** 80%
- **R2021:** 40%

These weightages are applied in accordance with the assessment scheme applicable to the respective curriculum.

3.7.6 Laboratory Course Performance – Continuous Assessment-Based CO Attainment

Continuous Assessment-based CO attainment is calculated using the applicable internal assessment components, including Experimental Evaluation, Model lab exam I and Model lab exam II.

The weightage assigned to Continuous Assessment-based attainment is:

- **R2017:** 20%
- **R2021:** 60%

The marks obtained by students in the relevant internal assessments are analysed using the corresponding question-to-CO mappings. The attainment values for each CO are consolidated in accordance with the approved assessment methodology.

The distribution of COs assessed through the internal assessment components is illustrated in Table 3.7.2

Table 3.7.2. Mapping of Theory Course Assessment Components to Course Outcomes

Assessment Component	CO 1	CO 2	CO 3	CO 4	CO 5
Model Lab I	✓	✓	✓	—	—
Model Lab II	—	—	✓	✓	✓
Experimental Evaluation	✓	✓	✓	✓	✓

3.7.7 Project Performance – University Examination-Based CO Attainment

University examination performance is analyzed to evaluate students achievement of the COs assessed through the Semester End Project Review Examination. The Project review is mapped to the relevant COs, and the available student performance data are analysed in accordance with the approved attainment methodology.

For Project, the weightage assigned to university examination-based attainment is:

- **R2017:** 80%
- **R2021:** 60%

These weightages are applied in accordance with the assessment scheme applicable to the respective curriculum.

3.7.8 Project Performance – Continuous Assessment-Based CO Attainment

Continuous Assessment-based CO attainment is calculated using the applicable internal assessment components, including Project Reviews I,II and III.

The weightage assigned to Continuous Assessment-based attainment is:

- **R2017:** 20%
- **R2021:** 40%

The marks obtained by students in the relevant Project reviews are analysed using the review performance -to-CO mappings. The attainment values for each CO are consolidated in accordance with the approved assessment methodology.

3.7.9. Course Performance – Direct CO Attainment

Direct CO attainment is calculated by combining university examination-based and Continuous Assessment-based CO attainment using the weightages applicable to the respective curriculum.

For R2017: (Theory, Lab and Project)

Direct CO Attainment = (0.80 × University Examination-Based CO Attainment) + (0.20 × Continuous Assessment-Based CO Attainment)

For R2021: (Theory and Project)

Direct CO Attainment = (0.60 × University Examination-Based CO Attainment) + (0.40 × Continuous Assessment-Based CO Attainment)

For R2021: (Laboratory)

Direct CO Attainment = (0.40 × University Examination-Based CO Attainment) + (0.60 × Continuous Assessment-Based CO Attainment)

The resulting value represents direct evidence of students achievement of the respective COs through formal assessment.

3.7.10 Course Performance – Indirect CO Attainment

Indirect CO attainment is determined using the Course End Survey. The survey captures students perceptions of their achievement of individual COs. The responses are consolidated and analysed using the institutions approved survey analysis methodology.

Indirect CO Attainment = CO-wise attainment derived from the Course End Survey

The survey-based result is treated as indirect evidence and is distinguished from attainment measured through examinations and other direct assessment tools.

3.7.11 Course Performance – Overall CO Attainment

Overall CO attainment is calculated by combining direct and indirect CO attainment using the approved institutional weightage.

Where the institutions approved methodology specifies an 80:20 direct-to-indirect ratio, the calculation is:

Overall CO Attainment = (0.80 × Direct CO Attainment) + (0.20 × Indirect CO Attainment)

This calculation is applied only where the stated weightage is prescribed by the approved institutional methodology.

3.7.12 Assignment of CO Attainment Levels

The overall CO attainment percentage is compared with the prescribed attainment thresholds to assign the corresponding attainment level. Under the attainment scale adopted in the stated methodology, the levels are assigned as follows:

CO Attainment Percentage	Attainment Level
Greater than or equal to 70%	3
Greater than or equal to 60%	2
Greater than or equal to 50%	1
Greater than 0% and up to 49%	0

The applicable attainment thresholds and boundary conditions should be consistently defined in the approved departmental assessment policy and applied uniformly across courses.

The attainment levels are used to identify COs that meet or fall short of the predefined targets. The results provide the basis for gap analysis, planning corrective measures, and reviewing the effectiveness of improvement actions in subsequent course offerings.

3.7.13 Record the Attainment of Course Outcomes of all Courses with Respect to Set Attainment Levels

CO ATTAINMENT

2021-2025 Batch

S.No	Course Index	Course Code & Course Name	Direct Attainment (80%)	Indirect Attainment (20%)	Attainment Status (100%)	Level of Attainment (0-3)
2021-2022 Odd Semester I Semester						
1.	C101	HS3151 Professional English – I	46	20	66	2
2.	C102	MA3151 Matrices and Calculus	46	20	66	2
3.	C103	PH3151 Engineering Physics	50	20	70	3
4.	C104	CY3151 Engineering Chemistry	47	20	70	3
5.	C105	GE3151 Problem Solving and Python Programming	40	20	60	2
6.	C106	GE8161 - Problem Solving and Python Programming Laboratory	72	20	92	3
7.	C107	GE3171 English Laboratory	64	20	84	3
2021-2022 Even Semester II Semester						
8.	C108	HS3251 Professional English – II	48	20	68	2
9.	C109	MA3251 Statistics and Numerical Methods	40	20	60	2
10.	C110	PH3202 Physics for Electrical Engineering	40	20	60	2

11.	C111	BE3255 Basic Civil and Mechanical Engineering	40	20	60	2
12.	C112	GE3251 Engineering Graphics	44	20	64	2
13.	C113	EE3251 Electric Circuit Analysis	40	20	60	2
14.	C114	GE3271 Engineering Practices Laboratory	64	20	64	2
15.	C115	EE3271 Electric Circuits Laboratory	72	20	92	3
2022-2023 Odd Semester III Semester						
16.	C201	MA3303 Probability and Complex Functions	44	20	60	2
17.	C202	EE3301 Electromagnetic Fields	30	20	50	1
18.	C203	EE3302 Digital Logic Circuits	42	20	62	2
19.	C204	EC3301 Electron Devices and Circuits	38	20	58	1
20.	C205	EE3303 Electrical Machines – I	38	20	58	1
21.	C206	CS3353 C Programming and Data Structures	40	20	60	2
22.	C207	EC3311 Electronic Devices and Circuits Laboratory	64	20	84	3

23.	C208	EE3311 Electrical Machines Laboratory – I	64	20	84	3
24.	C209	CS3362 C Programming and Data Structures Laboratory	64	20	84	3
25.	C210	GE3361 Professional Development	64	20	84	3
2022-2023 Even Semester IV Semester						
26.	C211	GE3451 Environmental Sciences and Sustainability	42	20	62	2
27.	C212	EE3401 Transmission and Distribution	42	20	62	2
28.	C213	EE3402 Linear Integrated Circuits and application	46	20	66	2
29.	C214	EE3403 Measurements and Instrumentation	56	20	76	3
30.	C215	EE3404 Microprocessor and Microcontroller	54	20	74	3
31.	C216	EE3405 Electrical Machines – II	72	20	92	3
32.	C217	EE3411 Electrical Machines Laboratory – II	80	20	100	3

33.	C218	EE3412 Linear and Digital Circuits Laboratory	80	20	100	3
34.	C219	EE3413 Microprocessor and Microcontroller laboratory	80	20	100	3
2023-2024 Odd Semester V Semester						
35.	C301	EE3501 Power System Analysis	54	20	74	3
36.	C302	EE3591 Power Electronics	37	20	57	1
37.	C303	EE3503 Control Systems	44	20	64	2
38.	C304	EE3032 Energy Storage System	66	20	86	3
39.	C305	EE3007Smart Grid	73	20	93	3
40.	C306	MX 30810-Introduction to Women and Gender studies	80	20	100	3
41.	C307	EE3511 Power Electronics Laboratory	80	20	100	3
42.	C308	EE3512 Control and Instrumentation Laboratory	80	20	100	3
2023-2024 Even Semester VI Semester						
43.	C309	EE3601 Protection and Switchgear	62	20	82	3
44.	C310	EE3602 Power System Operation and Control	47	20	67	2

45.	C311	EE3033 Hybrid Energy Technology	62	20	82	3
46.	C312	EE3035 Grid Integrating Techniques and challenges	80	20	100	3
47.	C313	OCS 352- IOT Concepts and Application	77	20	97	3
48.	C316	EE3611 Power System Laboratory	80	20	100	3
49.	C317	MX3089 Industrial Safety	80	20	100	3
2024-2025 Odd Semester VII Semester						
50.	C401	EE3701 High Voltage Engineering	73	20	93	3
51.	C402	GE3791 Human Values and Ethics	69	20	89	3
52.	C403	Total Quality Management	76	20	96	3
53.	C404	CME365 Renewable Energy Technologies	80	20	100	3
54.	C405	Energy Technology	80	20	100	3
55.	C406	GE3752 Total Quality Management	76	20	96	3
56.	C407	Restructured Power Market	80	20	100	3
2024-2025 Even Semester VIII Semester						
57.	C409	EE3811 Project Work / Internship	80	20	100	3

2020-2024 Batch						
S.No	**Course Index**	**Course Code & Course Name**	**Direct Attainment (80%)**	**Indirect Attainment (20%)**	**Attainment Status (100%)**	**Level of Attainment (0-3)**
2020-2021 Odd Semester I Semester						
1.	C101	HS8151 - Communicative English	58	20	78	3
2.	C102	MA8151 - Engineering Mathematics-I	80	20	100	3
3.	C103	PH8151 - Engineering Physics	53	20	73	3
4.	C104	CY8151 - Engineering Chemistry	75	20	95	3
5.	C105	GE8151 - Problem Solving and Python Programming	71	20	91	3
6.	C106	GE8152 - Engineering Graphics	80	20	100	3
7.	C107	GE8161 - Problem Solving and Python Programming Laboratory	80	20	100	3
8	C108	BS8161 Physics and Chemistry Laboratory	80	20	100	3
2020-2021 Even Semester II Semester						
9.	C109	HS8251 Technical English	75	20	95	3
10.	C110	MA8251 Engineering Mathematics – II	75	20	95	3
11.	C111	PH8253 Physics for Electronics Engineering	75	20	95	3

12.	C112	BE8252 Basic Civil and Mechanical Engineering	75	20	95	3
13.	C113	EE8251 Circuit Theory	75	20	95	3
14.	C114	GE8291 Environmental Science and Engineering	75	20	95	3
15.	C115	GE8261 Engineering Practices Laboratory	80	20	100	3
16.	C116	EE8261 Electric Circuits Laboratory	80	20	100	3
2021-2022 Odd Semester III Semester						
17.	C201	MA8353 Transforms and Partial Differential Equations	78	20	98	3
18.	C202	EE8351 Digital Logic Circuits	78	20	98	3
19.	C203	EE8391 Electromagnetic Theory	80	20	100	3
20.	C204	EE8301 Electrical Machines - I	80	20	100	3
21.	C205	EC8353 Electron Devices and Circuits	80	20	100	3
22.	C206	ME8792 Power Plant Engineering	74	20	94	3
23.	C207	EC8311 Electronics Laboratory	80	20	100	3

24.	C208	EE8311 Electrical Machines Laboratory – I	80	20	100	3
2021-2022 Even Semester IV Semester						
25.	C209	MA8491 Numerical Methods	37	20	57	1
26.	C210	EE8401 Electrical Machines – II	22	20	42	0
27.	C211	EE8402 Transmission and Distribution	30	20	50	1
28.	C212	EE8403 Measurements and Instrumentation	22	20	42	0
29.	C213	EE8451 Linear Integrated Circuits and Applications	18	20	38	0
30.	C214	IC8451 Control Systems	23	20	43	0
31.	C215	EE8411 Electrical Machines Laboratory - II	80	20	100	3
32.	C216	EE8461 Linear and Digital Integrated Circuits Laboratory	80	20	100	3
33.	C217	EE8412 Technical Seminar	80	20	100	3
2022-2023 Odd Semester V Semester						
34.	C301	EE8501 Power System Analysis	37	20	57	1

35.	C302	EE8551 Microprocessors and Microcontrollers	40	20	60	2
36.	C303	EE8552 Power Electronics	25	20	45	0
37.	C304	EE8591 Digital Signal Processing	40	20	60	3
38.	C305	CS8392 Object Oriented Programming	58	20	78	3
39.	C306	OMD551 Basics of Biomedical Instrumentation	37	20	57	3
40.	C307	EE8511 Control and Instrumentation Laboratory	80	20	100	3
41.	C308	HS8581 Professional Communication	80	20	100	3
42.	C309	CS8383 Object Oriented Programming Laboratory	80	20	100	3
2022-2023 Even Semester VI Semester						
43.	C310	EE8601 Solid State Drives	33	20	53	1
44.	C311	EE8602 Protection and Switchgear	57	20	77	2
45.	C312	EE8691 Embedded Systems	48	20	68	2
46.	C313	EE8002 Design of Electrical Apparatus	35	20	55	1

47.	C314	EE8006 Power Quality	63	20	100	3
48.	C315	EE8661 Power Electronics and Drives Laboratory	80	20	100	3
49.	C316	EE8681 Microprocessors and Microcontrollers Laboratory	80	20	100	3
50.	C317	EE8611 Mini Project	80	20	100	3
2023-2024 Odd Semester VII Semester						
51.	C401	EE8701 High Voltage Engineering	26	20	46	0
52.	C402	EE8702 Power System Operation and Control	40	20	60	2
53.	C403	EE8703 Renewable Energy Systems	60	20	80	3
54.	C404	OML751 Testing of Materials	45	20	65	2
55.	C405	GE8071 Disaster Management	52	20	72	3
56	C406	EE8711 Power System Simulation Laboratory	80	20	100	3
57	C407	EE8712 Renewable Energy Systems Laboratory	80	20	100	3
2023-2024 Even Semester VIII Semester						
58.	C408	EE8015 Electric Energy Generation Utilization and conservation	35	20	55	1
59.	C409	EE8019 Smart Grid	61	20	81	3

60	C410	EE8811 Project Work	80	20	100	3

2019-2023 Batch						
S.No	**Course Index**	**Course Code & Course Name**	**Direct Attainment (80%)**	**Indirect Attainment (20%)**	**Attainment Status (100%)**	**Level of Attainment (0-3)**
2019-2020 Odd Semester I Semester						
1.	C101	HS8151 - Communicative English	58	20	78	3
2.	C102	MA8151 - Engineering Mathematics-I	36	20	56	1
3.	C103	PH8151 - Engineering Physics	65	20	85	3
4.	C104	CY8151 - Engineering Chemistry	73	20	93	3
5.	C105	GE8151 - Problem Solving and Python Programming	15	20	35	0
6.	C106	GE8152 - Engineering Graphics	72	20	92	3
7.	C107	GE8161 - Problem Solving and Python Programming Laboratory	80	20	100	3
8	C108	BS8161 Physics and Chemistry Laboratory	80	20	100	3
2019-2020 Even Semester II Semester						
9.	C109	HS8251 Technical English	80	20	100	3

10.	C110	MA8251 Engineering Mathematics – II	80	20	100	3
11.	C111	PH8253 Physics for Electronics Engineering	80	20	100	3
12.	C112	BE8252 Basic Civil and Mechanical Engineering	80	20	100	3
13.	C113	EE8251 Circuit Theory	80	20	100	3
14.	C114	GE8291 Environmental Science and Engineering	80	20	100	3
15.	C115	GE8261 Engineering Practices Laboratory	80	20	100	3
16.	C116	EE8261 Electric Circuits Laboratory	80	20	100	3
2020-2021 Odd Semester III Semester						
17.	C201	MA8353 Transforms and Partial Differential Equations	80	20	100	3
18.	C202	EE8351 Digital Logic Circuits	80	20	100	3
19.	C203	EE8391 Electromagnetic Theory	80	20	100	3
20.	C204	EE8301 Electrical Machines – I	80	20	100	3
21.	C205	EC8353 Electron Devices and Circuits	80	20	100	3

22.	C206	ME8792 Power Plant Engineering	80	20	100	3
23.	C207	EC8311 Electronics Laboratory	80	20	100	3
24.	C208	EE8311 Electrical Machines Laboratory – I	80	20	100	3
2020-2021 Even Semester IV Semester						
25.	C209	MA8491 Numerical Methods	80	20	100	3
26.	C210	EE8401 Electrical Machines – II	80	20	100	3
27.	C211	EE8402 Transmission and Distribution	80	20	100	3
28.	C212	EE8403 Measurements and Instrumentation	80	20	100	3
29.	C213	EE8451 Linear Integrated Circuits and Applications	80	20	100	3
30.	C214	IC8451 Control Systems	80	20	100	3
31.	C215	EE8411 Electrical Machines Laboratory - II	80	20	100	3
32.	C216	EE8461 Linear and Digital Integrated Circuits Laboratory	80	20	100	3

33.	C217	EE8412 Technical Seminar	80	20	100	3
2021-2022 Odd Semester V Semester						
34.	C301	EE8501 Power System Analysis	80	20	100	3
35.	C302	EE8551 Microprocessors and Microcontrollers	80	20	100	3
36.	C303	EE8552 Power Electronics	80	20	100	3
37.	C304	EE8591 Digital Signal Processing	80	20	100	3
38.	C305	CS8392 Object Oriented Programming	80	20	100	3
39.	C306	OMD551 Basics of Biomedical Instrumentation	80	20	100	3
40.	C307	EE8511 Control and Instrumentation Laboratory	80	20	100	3
41.	C308	HS8581 Professional Communication	80	20	100	3
42.	C309	CS8383 Object Oriented Programming Laboratory	80	20	100	3
2021-2022 Even Semester VI Semester						
43.	C311	EE8601 Solid State Drives	40	20	60	2

44.	C312	EE8602 Protection and Switchgear	67	20	87	3
45.	C313	EE8691 Embedded Systems	40	20	60	2
46.	C314	EE8002 Design of Electrical Apparatus	27	20	47	0
47.	C315	EE8006 Power Quality	73	20	90	3
48.	C316	EE8661 Power Electronics and Drives Laboratory	80	20	100	3
49.	C317	EE8681 Microprocessors and Microcontrollers Laboratory	80	20	100	3
50.	C318	EE8611 Mini Project	80	20	100	3
2022-2023 Odd Semester VII Semester						
51.	C401	EE8701 High Voltage Engineering	67	20	87	3
52.	C402	EE8702 Power System Operation and Control	67	20	87	3
53.	C403	EE8703 Renewable Energy Systems	73	20	93	3
54.	C404	OCS752 Introduction to C Programming	33	20	53	1
55.	C405	GE8071 Disaster Management	73	20	93	3
56	C406	GE8077/ Total Quality Management	80	20	100	3

57	C407	EE8711 Power System Simulation Laboratory	80	20	100	3
58	C408	EE8712 Renewable Energy Systems Laboratory	80	20	100	3
2019-2023 Even Semester VIII Semester						
59.	C409	EE8015 Electric Energy Generation Utilization and conservation	80	20	100	3
60.	C410	EE8019 Smart Grid	80	20	100	3
61	C411	EE8811 Project Work	80	20	100	3

identifies the

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

Institute Marks : 25.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	1.75	2	2	2	2	1.80	1.80	.25	1.75	2	1.8	PO12
C102	1.8	1.8	0	1.8	1.8	1.8	0	0	0	0	1.8	PO12
C103	2	2.2	1.33	0	0	0	0	0	0	0	1.8	PO12
C104	1.73	1.7	2	0	0	0	0	0	0	0	1.78	PO12
C105	2	2	2	2	0	0	0	0	0	0	0	PO12
C106	2	2	2	2	2	2	2	2.3	1.8	1.8	1.8	PO12
C108	3	3	3	3	3	3	1.5	3	3	3	3	PO12
C107	3	3	3	3	3	0	1.5	0	0	1	3	PO12
C109	1.75	2	2	2	2	1.8	1.8	.25	1.75	2	1.8	PO12
C110	2.2	2.2	0	1	0	0	0	1.4	0	0	1.8	PO12
C111	2	2	2	2	2	2	2	2.3	1.8	1.8	1.8	PO12
C112	1.8	1.8	0	1.8	1.8	1.8	0	0	0	0	1.8	PO12
C113	1.5	.67	1	0	0	.25	0	0	0	1	1.75	PO12
C114	1.5	.67	1	0	0	.25	0	0	0	0	1.75	PO12
C115	3	3	3	3	3	3	3	0	3	0	3	PO12
C116	2	.17	0	0	0	00	0	0	0	0	2	PO12
C117	3	3	3	3	3	3	3	0	3	0	3	PO12
C118	3	3	3	3	3	3	3	0	3	0	3	PO12
C119	3	3	3	3	3	3	3	0	3	0	3	PO12
C201	1	1	1	0	0	0	0	1	0	0	1	PO12
C202	.6	.6	.6	.5	0	0	.66	0	0	0	.6	PO12
C203	1	1	1	1	0	0	1	0	0	0	1	PO12
C204	1	1	1	1	1	0	.5	0	0	0	1	PO12
C205	1	1	1	1	1	0	.5	0	0	0	1	PO12
C206	1	1	1	1	1	1	.5	1	1	1	1	PO12
C207	2.8	2.8	2.2	2.8	0	0	0	2.8	0	0	0	PO12
C208	2.88	2.82	2.75	2.78	2.8	2.5	1.25	2.83	2.71	2.8	2.75	PO12

C209	2.8	2.8	2.2	2.8	0	0	0	2.8	0	0	0	PO12
C210	1	1	1	1	0	0	3	2	2	1	1	PO12
C211	1	1	1	1	0	1	.5	00	0	0	0	PO12
C212	1	1	1	1	0	1	.5	0	0	0	0	PO12
C213	1	1	1	1	1	1	.5	0	1	1	1	PO12
C214	1	1	1	1	0	0	.5	0	0	0	1	PO12
C215	1.2	1.2	1.11	1.08	1.14	0	.6	00	0	0	0	PO12
C216	2	2	2	2	0	0	1	2	0	0	2	PO12
C217	0	2	2	2	2	0	1	0	0	2	2	PO12
C218	2	2	2	2	0	0	1	0	0	0	2	PO12
C301	2	2	2	2	0	0	2	0	0	0	2	PO12
C302	3	3	3	3	0	0	3	0	0	0	3	PO12
C303	2	2	2	2	0	0	2	0	0	0	2	PO12
c304	1	1	1	1	0	0	2	0	0	0	1	PO12
C305	3	3	3	3	0	0	3	0	0	0	3	PO12
C306	3	3	3	3	0	0	3	0	0	0	3	PO12
C307	3	3	3	3	3	3	3	1.7	3	3	3	PO12
C308	3	3	3	3	0	0	0	0	0	0	0	PO12
C309	3	3	3	3	0	0	0	0	0	0	0	PO12
C311	2	2	2	2	2	2	2	2	2	2	0	PO12
C312	1	1	1	1	0	1	.5	0	1	0	1	PO12
C313	2	2	2	2	0	0	0	0	2	0	2	PO12
C314	3	3	3	3	3	0	0	0	3	0	3	PO12
C315	3	3	3	3	3	3	3	1.67	3	3	3	PO12
C316	3	3	3	3	3	3	3	1.67	3	3	3	PO12
C401	3	3	3	3	0	0	0	0	3	0	3	PO12
C402	0	0	2	2	2	2	2.5	3	3	2	2	PO12
C403	3	3	3	3	3	3	3	3	3	3	3	PO12
C404	3	3	3	3	3	3	3	3	3	3	3	PO12

C405	0	03	3	0	3	3	3	3	0	0	3	PO12
C407	3	3	3	0	0	3	1.5	0	0	3	3	PO12
C408	2	2	2	2	2	2	2.5	2	2	2	2	PO12

PO Attainment Indirect

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
EXIT SURVE	1.74	1.76	2.9	2.6	2.62	2.31	1.74	2.3	2.9	2.32	2.9	PO12
ALUMINI SUI	2.6	2.8	2.4	2.6	3	2.77	3	2.12	2.16	2.56	2.78	PO12
EMPLOYER	1.8	2.6	2.4	1.6	2.2	2.25	1.86	1.56	1.46	2.27	2.76	PO12

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	2.09	2.06	2.08	2.11	2.29	2.04	1.85	1.87	2.39	2.11	2.10	0
InDirect Attainment	2.05	2.39	2.57	2.27	2.61	2.44	2.20	1.99	2.17	2.38	2.81	0
Overall Attainment	2.08	2.13	2.18	2.14	2.35	2.12	1.92	1.89	2.35	2.16	2.24	0

PSO Attainment

Course	PSO1	PSO2	PSO3
C101	0	0	0
C102	0	0	0
C103	0	0	0
C104	0	0	0
C105	3	3	1
C106	0	0	0
C107	3	3	3
C108	0	0	0
C109	0	00	0
C110	1	0	0

C111	0	0	0
C112	0	0	0
C113	0	0	0
C114	0	0	0
C115	2	2	2
C116	3	3	3
C117	3	3	2
C118	2	1	0
C119	0	0	0
C201	2	2	0
C202	3	2	1
C203	3	0	1
C204	3	0	1
C205	3	3	3
C206	2	2	2
C207	0	3	0
C208	2	2	2
C209	2.5	2.6	1.6
C210	0	0	0
C211	1	.88	1
C212	1	2	1
C213	1	1	1.8
C214	1	1	1
C215	1	1	1
C216	1	1	1.6
C217	2	1	2
C218	3	1	3
C301	1	1	1.4
C302	3	3	3
C303	1.8	2.5	0
C304	1	1	0

C305	0	0	0
C306	2	2	2
C307	0	0	0
C308	3	3	3
C309	3	3	3
C311	3	1.4	1
C312	1	.88	1
C313	1	1	2
C314	1	1	0
C315	0	0	0
C316	0	0	0
C401	3	2	2
C402	1	1.2	0
C403	0	0	0
C404	1	1	0
C405	3	3	0
C407	1	1.8	0
C408	2	2	0

PSO Attainment Indirect

Survey	PSO1	PSO2	PSO3
EXIT SURVEY	1.74	2.6	2.2
ALUMINI SURVEY	2.12	1.8	2
EMPLOYER SURVEY	2.66	2.11	2.25

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	2.01	1.83	1.84
InDirect Attainment	2.17	2.17	2.15
Overall Attainment	2.04	1.90	1.90

4 STUDENTS' PERFORMANCE (120) Total Marks 58.59

:

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)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	30	30	30	30	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	11	9	23	24	18	11	20
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	0	5	12	32	4	2
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.	11	9	28	36	50	15	22

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	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (LYG)	2019-20 (LYGm1)	2018-19 (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	1
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	1	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	1	0	0	1
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	1	4	1	1	2
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	1	4	9	11	2	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	1	1	10	0	1
N6=N61+N62+N63	N6=N61+N62+N63	0	1	6	14	22	3	3

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
2024-25 (CAY)	11				
2023-24 (CAYm1)	8	9			
2022-23 (CAYm2)	22	22	23		
2021-22 (CAYm3)	23	20	24	23	
2020-21 (LYG)	28	17	38	28	28
2019-20 (LYGm1)	12	10	12	12	12
2018-19 (LYGm2)	20	18	20	20	20

4.1 Enrolment Ratio (20)

Institute Marks : 5.00

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]
2024-25 (CAY)	30	11	0	36.67
2023-24 (CAYm1)	30	9	0	30.00
2022-23 (CAYm2)	30	23	0	76.67

Average [(ER1 + ER2 + ER3) / 3] = 47.78 ≡ 5.00

Assessment : 5.00

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

Institute Marks : 4.67

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

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) 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).	66.00	64.00	62.00
B=No. of students who graduated from the program in the stipulated course duration	28.00	12.00	20.00
Success Rate (SR)= (B/A) * 100	42.42	18.75	32.26

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 31.14

SR Points : 4.67

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 (limited to 10 % of N)).

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

Institute Marks : 5.63

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

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
X=(Mean of 1st 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 1st year/10)	6.48	5.40	6.29
Y=Total no. of successful students	9.00	22.00	20.00
Z=Total no. of students appeared in the examination	9.00	23.00	24.00
API [X*(Y/Z)]	6.48	5.17	5.24

Average API[(AP1+AP2+AP3)/3] : 5.63

Assessment = Average API : 5.63

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

Institute Marks : 3.97

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
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 2rd year/10)	4.58	5.02	5.48
Y=Total no. of successful students	23.00	24.00	38.00
Z=Total no. of students appeared in the examination	27.00	32.00	49.00
API [X * (Y/Z)]	3.90	3.76	4.25

Average API [(AP1 + AP2 + AP3)/3] : 3.97

Assessment [AverageAPI] : 3.97

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

Institute Marks : 5.76

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
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)	6.65	4.82	7.37
Y=Total no. of successful students	23.00	28.00	12.00
Z=Total no. of students appeared in the examination	24.00	38.00	12.00
API [X*(Y/Z)]:	6.37	3.55	7.37

Average API [(AP1 + AP2 + AP3)/3] : 5.76

Assessment [1.5 * AverageAPI] : 5.76

4.6 Placement, Higher Studies and Entrepreneurship (30)

Institute Marks : 8.56

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

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	66.00	64.00	62.00
X=No. of students placed	24.00	9.00	16.00
Y=No. of students admitted to higher studies	1.00	1.00	1.00
Z= No. of students taking up entrepreneurship	1.00	1.00	1.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	39.39	17.19	29.03

Average Placement Index = (P_1 + P_2 + P_3)/3: 28.54

Placement Index Points: 8.56

4.7 Professional Activities (25)

4.7.1 Professional Societies/ Bodies, Chapters, Clubs, and Professional Engineering Events Organized (5)

Institute Marks : 5.00

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	PEESA ASSOCIATION
2	GREEN WHEELS CLUB
3	SOLAR EXPLORERS CLUB

Table No. 4.7.1.2: List of events/programs organized.

(CAYm1) 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	PEESA ASSOCIATION	Guest Lecture on “The Power of a Positive Mindset and Productivity”	National Level	12/04/2024
2	SOLAR EXPLORERS CLUB	Seminar on “Pathway to Land a Career as Scientist” in Government Sector”	National Level	05/04/2024
3	PEESA ASSOCIATION	National Seminar on “ Understanding of Renewable Energy Sources and Importance of Engineers in the Renewable Energy Industry”	National Level	27/02/2024
4	PEESA ASSOCIATION	Training on Industrial Automation using PLC and SCADA	National Level	18/01/2024
5	PEESA ASSOCIATION	Aptitude Training	National Level	18/01/2024
6	PEESA ASSOCIATION	Java Training	National Level	18/01/2024
7	GREEN WHEELS CLUB	One Week Workshop on Embedded- Internet of Things (IOT) for smart sensing applications	National Level	28/10/2023
8	PEESA ASSOCIATION	National Level Seminar on “ Opportunities and Future Embedded System	National Level	19/10/2023
9	PEESA ASSOCIATION	Guest Lecture on “Developing a Creative Mindset and Goal Settings”	National Level	26/09/2023
10	GREEN WHEELS CLUB	Seminar on “Power Enhancement and Partial Shading”	National Level	22/09/2023
11	PEESA ASSOCIATION	PERIIT Electrical Engineering Students Association Inauguration	National Level	22/09/2023
12	SOLAR EXPLORERS CLUB	PERIIT Electrical Engineering Students Association Inauguration Online National Level Seminar on "The role of Power Electronics in Renewable Energy Sy	National Level	30/08/2023
13	PEESA ASSOCIATION	Matlab Training on “Electric Vehicle Technology”	National Level	24/07/2023

(CAYm2) 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	PEESA ASSOCIATION	Five days Workshop on “Embedded C”	National level	26/04/2023
2	PEESA ASSOCIATION	Hands on Training on “Ardunio”	National level	12/04/2023
3	SOLAR EXPLORERS CLUB	Technical paper presentation on “PAPER WARS”	National Level	28/03/2023
4	PEESA ASSOCIATION	Talk show- Just a Minute	National Level	22/03/2023
5	PEESA ASSOCIATION	Non-Technical Quiz – Battle of the Brains	National Level	16/03/2023
6	GREEN WHEELS CLUB	Workshop on “Designing light controlled switch using EDA tool”	National Level	22/02/2023
7	PEESA ASSOCIATION	Seminar on “Applications of Robotics in Electrical Field”	National Level	07/02/2023
8	PEESA ASSOCIATION	Seminar on “Industrial Automation with PLC and SCADA”	National Level	15/10/2022
9	SOLAR EXPLORERS CLUB	3 Days Workshop On PCB Designing	National Level	21/09/2022
10	PEESA ASSOCIATION	Guest Lecture on “Renewable Energy”	National Level	20/09/2022
11	PEESA ASSOCIATION	Seminar on “Career and opportunities As a Design Engineer”	National Level	06/09/2022
12	PEESA ASSOCIATION	QUIZ – EEE Technical and Non-Technical	National Level	03/09/2022
13	GREEN WHEELS CLUB	Guest Lecture on Artificial Intelligence	National Level	02/09/2022
14	PEESA ASSOCIATION	2 Days Workshop On Mobile Technology	National Level	24/08/2022
15	PEESA ASSOCIATION	PERIIT Electrical Engineering Students Association Inauguration	National Level	24/08/2022

(CAYm3) 2021-22

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	PEESA ASSOCIATION	Workshop on Design thinking and Electrical design development	National Level	07/05/2022
2	SOLAR EXPLORERS CLUB	Workshop on Industrial Automation	National Level	06/05/2022
3	PEESA ASSOCIATION	Guest Lecture on Leveraging Electric Vehicle Technology	National Level	27/04/2022
4	PEESA ASSOCIATION	Webinar on Introduction to Variable Frequency Drive	National Level	26/04/2022
5	PEESA ASSOCIATION	Alumni connect on High Voltage Engineering	National Level	22/04/2022
6	GREEN WHEELS CLUB	Guest Lecture on PLC Programming and Machine Automation	National Level	19/04/2022
7	PEESA ASSOCIATION	National Webinar on Basics of Instrumentation	National Level	28/03/2022
8	SOLAR EXPLORERS CLUB	National Seminar on Industry 4.0	National Level	22/03/2022
9	GREEN WHEELS CLUB	National Seminar on Learning Style and Importance of Critical Reflection	National Level	15/03/2022
10	PEESA ASSOCIATION	National Workshop on Energy Conservation and Renewable Energy	National Level	14/03/2022

4.7.2 Student's Participations in Professional Events (10) Institute Marks : 10.00

Table No. 4.7.2.1: List of students participated in professional events.

(CAYm1) 2023-24

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	Prakash B.P	Paper Presentation in “ELYTRICO 2K24” – National Level Technical Symposium, by AMET	National Level	21/03/2024	Participated
2	Balaji R.	Paper Presentation in “ELYTRICO 2K24” – National Level Technical Symposium, by AMET	National Level	21/03/2024	Participated
3	Thivya S.	Workshop on IoT by AB Technologies	National Level	04/11/2023	Participated
4	Arunachalam R.L.	Paper Presentation in “NAKSHATRA ’23” – National Level Technical Symposium, by S.A. Engineering College	National Level	09/11/2023	Participated
5	Nivedika Priyadharshini P.	Paper Presentation in “ICSTEM 2024” – International Conference, by RRASE College of Engineering	National Level	07/04/2024	Participated
6	Sindhumathy U.	Paper Presentation in “ICSTEM 2024” – International Conference, by RRASE College of Engineering	National Level	07/04/2024	Participated
7	Srilakshmi S.	Paper Presentation in “ICSTEM 2024” – International Conference, by RRASE College of Engineering	National Level	07/04/2024	Participated

(CAYm2) 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	Ponnarasi.K	Paper Presentation in “NAKSHATRA ’22” – National Level Technical Symposium by S.A. Engineering College	National Level	14/09/2022	First Prize
2	Ponnarasi.K	Paper Presentation in “NAKSHATRA ’22” – National Level Technical Symposium by S.A. Engineering College	National Level	14/09/2022	First Prize
3	Ponnarasi.K	“IDEATHON ’22” by Builders Engineering College	National Level	15/09/2022	Appreciated
4	Ponnarasi.K	Paper Presentation in “TELCLUSTER ’22” – National Level Technical Symposium by Kongunadu College of Engineering and Technology	National Level	17/09/2022	Participated
5	Ponnarasi.K	Technical Quiz in “TELCLUSTER ’22” – National Level Technical Symposium by Kongunadu College of Engineering and Technology	National Level	17/09/2022	Second Prize
6	Ponnarasi.K	Circuit Debugging in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
7	Ponnarasi.K	Project Presentation in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Prize
8	Ponnarasi.K	Technical Quiz in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Prize
9	Ponnarasi.K	Technical Quiz in “TECH FEST 2K22” – National Level Technical Symposium by Loyola-ICAM College of Engineering and Technology	National Level	08/10/2022	First Prize
10	Ponnarasi.K	Paper Presentation in “TECH FEST 2K22” – National Level Technical Symposium by Loyola-ICAM College of Engineering and Technology	National Level	08/10/2022	First Prize
11	Ponnarasi.K	“Winner City Final” by Dell Generation Inspiration Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	11/10/2022	Participated
12	Ponnarasi.K	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
13	Ponnarasi.K	Hunky Brains in “CHRYSALIS 2K23” by VELS University	National Level	31/03/2023	First Prize
14	Ponnarasi.K	Lie Detector in “CHRYSALIS 2K23” by VELS University	National Level	31/03/2023	First Prize
15	Ponnarasi.K	Paper Presentation in “FAISCA 2K23” – National Level Technical Symposium by New Prince Shri Bhavani College of Engineering and Technology	National Level	20/04/2022	First Prize
16	Ponnarasi.K	Paper Presentation in “DELTRIX ’23” – National Level Technical Symposium by Dhanalakshmi Srinivasan College of Engineering and Technology	National Level	26/04/2023	First Prize
17	S. Balaji	Paper Presentation in “NAKSHATRA ’22” – National Level Technical Symposium by S.A. Engineering College	National Level	14/09/2022	First Prize
18	S. Balaji	Project Display in “NAKSHATRA ’22” – National Level Technical Symposium by S.A. Engineering College	National Level	14/09/2022	First Prize
19	S. Balaji	Paper Presentation in “TELCLUSTER’22” National Level Technical Symposium 2K22 by Kongunadu College of Engineering and Technology National Level Techni	National Level	17/09/2022	First Prize

20	S. Balaji	Circuit Debugging in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Second Prize
21	S. Balaji	Technical Quiz in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Prize
22	S. Balaji	Project Presentation in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Prize
23	S. Balaji	Technical Quiz in “TECH FEST 2K22” – National Level Technical Symposium by Loyola-ICAM College of Engineering and Technology	National Level	08/10/2022	First Prize
24	S. Balaji	Paper Presentation in TECH FEST 2K22 National Level Technical Symposium by Loyola – ICAM College of Engineering and Technology	National Level	08/10/2022	First Prize
25	S. Balaji	Paper Presentaion in “QUANTUM FEST “23” National Level Technical Symposium by SRMIST	National Level	10/02/2023	First Prize
26	S. Balaji	Technical Quiz in “QUANTUM FEST “23” National Level Technical Symposium by SRMIST	National Level	10/02/2023	Participated
27	S. Balaji	Paper Presentation in “Deltrix ‘23” National Level Technical Symposium by Dhanalakshmi Srinivasan college of Engineering and Technology	National Level	26/04/2023	First Prize
28	V. Prakash	Paper Presentation in “NAKSHATRA’22” National Level Technical Symposium by S.A Engineering College National Level Technical Symposium	National Level	14/09/2022	First Prize
29	V. Prakash	Project Display in “NAKSHATRA’22” National Level Technical Symposium by S.A Engineering College National Level Technical Symposium	National Level	14/09/2022	First Prize
30	V. Prakash	Paper Presentation in “TELCLUSTER’22” National Level Technical Symposium 2K22 by Kongunadu College of Engineering and Technology National Level Techni	National Level	17/09/2022	First Prize
31	V. Prakash	Technical Quiz in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Prize
32	V. Prakash	Project Presentation in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Prize
33	V. Prakash	Technical Quiz in TECH FEST 2K22 National Level Technical Symposium by Loyola – ICAM College of Engineering and Technology	National Level	08/10/2022	First Prize
34	V. Prakash	Paper Presentation in TECH FEST 2K22 National Level Technical Symposium by Loyola – ICAM College of Engineering and Technology	National Level	08/10/2022	First Prize
35	V. Prakash	“Winner City Final” by Dell Generation Inspiration	National Level	11/10/2022	Participated
36	M. Durairaj	Project Presentation in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
37	R.Savitha	Project Presentation in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
38	Suriya.P	Project Presentation in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Second Prize

39	Suriya.P	Technical Quiz in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Second Prize
40	Suriya.P	Brain Teaser in “QUANTUM FEST “23” National Level Technical Symposium by SIMATS	National Level	02/10/2022	First Prize
41	Suriya.P	Winner City Final” by Dell Generation Inspiration	National Level	11/10/2022	Participated
42	Suriya.P	ORBIT PERFORMING” in “Transcend 2.0” National Level Technical Symposium by Sri Venkateswara College of Techology	National Level	28/10/2022	Participated
43	Suriya.P	“PLATA O PLOMO” in “Transcend 2.0” National Level Technical Symposium by Sri Venkateswara College of Techology	National Level	28/10/2022	Second Prize
44	Suriya.P	Paper Presentation in “Transcend 2.0” National Level Technical Symposium by Sri Venkateswara College of Techology	National Level	28/10/2022	Participated
45	Vinoth Kumar.M	Non Technical Quiz in “TECHNOPHILIA ’22” – National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Prize
46	Vinoth Kumar.M	Project Presentation in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Second Prize
47	Iyyapan.P	Circuit Debugging in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
48	Iyyapan.P	Technical Quiz in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
49	Iyyapan.P	Project Presentation in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Second Prize
50	Abimanyu. S	Non Technical Quiz in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	First Place
51	Abimanyu. S	Project Presentation in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
52	Dinesh Kumar. V	Technical Quiz in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Second Prize
53	Hariharan. R	Circuit Debugging in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
54	Hariharan. R	Technical Quiz in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
55	Hariharan. R	Project Presentation in “TECHNOPHILIA -22” National Level Technical Symposium by St. Joseph’s College of Engineering	National Level	23/09/2022	Participated
56	Hariharan. R	IBC’S MEDIA “ALT HACK” by ANNA UNIVERSITY	National Level	24/03/2023	Participated
57	Thomas Richard.M	Technical Quiz in “MECHGUST ‘23” by Chennai Institute of Technology	National Level	24/03/2023	Participated
58	Thomas Richard.M	Technical Puzzle in “MECHGUST ‘23” by Chennai Institute of Technology	National Level	24/03/2023	Participated
59	Poovarasan.A	Technical Quiz in “MECHGUST ‘23” by Chennai Institute of Technology	National Level	24/03/2023	Participated

60	Poovarasan.A	Technical Puzzle in “MECHGUST ‘23” by Chennai Institute of Technology	National Level	24/03/2023	Participated
61	R L Arunachalam	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
62	D Jayanth	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
63	A Nitheesh	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
64	C Pavithra	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
65	R Rajkumar	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
66	P Harish	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
67	K Janarathanan	Paper Presentation in “GIST 23” – National Level Technical Symposium by DACE	National Level	23/02/2023	First Prize
68	R Hariharan	IBC’S MEDIA “ALT HACK” by ANNA University	National Level	24/02/2022	Participated
69	Pothigachalam.U	Worskop on Cyber Security by Live Wire Tambaram	National Level	04/03/2023	Participated
70	Kamaraj k	Aero Modeling Workshop in “takshashica 2023” by Chennai Institute of Technology	National Level	30/03/2023	Participated
71	Boobesh s	Aero Modeling Workshop in “takshashica 2023” by Chennai Institute of Technology	National Level	30/03/2023	Participated
72	Vinagaya Moorthy.M	Aero Modelling Workshop in “takshashica 2023” by Chennai Institute of Technology	National Level	30/03/2023	Participated
73	Murali S	Aero Modeling Workshop in “takshashica 2023” by Chennai Institute of Technology	National Level	30/03/2023	Participated
74	Keerthika V	Aero Modeling Workshop in “takshashica 2023” by Chennai Institute of Technology	National Level	30/03/2023	Participated
75	Varun Raj G	Aero Modeling Workshop in “takshashica 2023” by Chennai Institute of Technology	National Level	30/03/2023	Participated
76	Divya S	Aero Modeling Workshop in “takshashica 2023” by Chennai Institute of Technology	National Level	30/03/2023	Participated

(CAYm3) 2021-22

S.No	Name of the Student	Name of the Event	State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Arunachalam L	Paper Presentation in “CIVICLAN 2K21” Virtual National Level Technical Symposium by B.S. Abdur Rahman Crescent Institute of Science and Technology	National Level	26/05/2021	Participated
2	D Jayanth	Paper Presentation in “CIVICLAN 2K21” Virtual National Level Technical Symposium B.S. Abdur Rahman Crescent Institute of Science and Technology	National Level	26/05/2021	Participated
3	A Nitheesh	Paper Presentation in “CIVICLAN 2K21” Virtual National Level Technical Symposium by B.S. Abdur Rahman Crescent Institute of Science and Technology	National Level	26/05/2021	Participated
4	C.Pavithra	Paper Presentation in “CIVICLAN 2K21” Virtual National Level Technical Symposium by B.S. Abdur Rahman Crescent Institute of Science and Technology	National Level	26/05/2021	Participated

4.7.3 Publication of Journals, Magazines, Newsletters, etc. in the Department (5) Institute Marks : 5.00

Table No. 4.7.3.1: List of students involved in publication of journals, magazines, and newsletters, etc. in the Department.

(CAYm1) 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	Towards Tomorrow /Even	Ms.S.L.Sreedevi	Pavithra.C	8	1	HARD COPY
2	Towards Tomorrow /ODD	Ms.S.L.Sreedevi	Sabitha.R	5	1	HARD COPY
3	Freedom From Darkness/ Annual	Arunachalam.L	Sabitha.R	5	1	HARD COPY

(CAYm2) 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	Towards Tomorrow /Even	Ms.S.L.Sreedevi	Archana Jenifer.C	8	1	Hard copy
2	Towards Tomorrow /Odd	Mrs.S.L.Sreedevi	Sabitha.R	3	1	Hard copy
3	Freedom From Darkness/ Annual	Ms.Ponnarasi	Ramya.S	6	1	Hard copy

(CAYm3) 2021-22

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	Towards Tomorrow /Even	Mrs.S.L.Sreedevi	Archana Jenifer .C	6	1	Hard copy
2	Towards Tomorrow /Odd	Mrs.S.L.Sreedevi	Archana Jenifer.C	5	1	Hard copy
3	Freedom From Darkness/ Annual	Mr.Rajkumar M	Abishek Samuel.B	4	1	Hard Copy

4.7.4 Student Publications (5) Institute Marks : 5.00

Table No. 4.7.4.1: List of student publications.
(CAYm1) 2023-24

S.No	Name of the Paper	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	Single Stage Solar PV Fed Brushless DC Motor Driven Water Pump	Arunachalam R L	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
2	Single Stage Solar PV Fed Brushless DC Motor Driven Water Pump	Chandru S	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
3	Single Stage Solar PV Fed Brushless DC Motor Driven Water Pump	Keerthana V	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
4	Aquatic Junk Scrubber	Jayanth D	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
5	Aquatic Junk Scrubber	Praveenkumar A	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
6	Aquatic Junk Scrubber	Yuvashree M	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
7	High Voltage Transmission Line Inspection By Using Hanging Robot	Nitheesh A	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
8	High Voltage Transmission Line Inspection By Using Hanging Robot	Ramya S	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
9	High Voltage Transmission Line Inspection By Using Hanging Robot	Srikanth G	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
10	Hybrid Charging Parking Lots For EV	Pavithra C	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
11	Hybrid Charging Parking Lots For EV	Nivetha S	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
12	Hybrid Charging Parking Lots For EV	Thirsha M	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil

13	A Novel Approach With MIMO Control-Based Interleaved Second Order Buck Converter For EV Charging App	Janarthanan K	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
14	A Novel Approach With MIMO Control-Based Interleaved Second Order Buck Converter For EV Charging App	Rajkumar R	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
15	A Novel Approach With MIMO Control-Based Interleaved Second Order Buck Converter For EV Charging App	Harish P	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
16	AI Based Wireless Charging Station For EV	Jayanthan S	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
17	AI Based Wireless Charging Station For EV	Kingslin A	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
18	Last-Mile Voltage Stability Enhancement Using Smart Meters	Gokul S	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
19	Last-Mile Voltage Stability Enhancement Using Smart Meters	Velu P	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
20	Priority Based EV Changing System	Krishnakumar R	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
21	Priority Based EV Changing System	Kavikumar M	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
22	Priority Based EV Changing System	Harish R	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
23	High Step-Up Three-Port Converter For Renewable Energy System	Poovarasan A	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
24	High Step-Up Three-Port Converter For Renewable Energy System	Thomas Richard M	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
25	Secure Energy Management Smart Metering Model System With Theft Alert Feature	Abishek Samuel	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil

26	Secure Energy Management Smart Metering Model System With Theft Alert Feature	B.Saravanan	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
27	Secure Energy Management Smart Metering Model System With Theft Alert Feature	Vigneshwaran	8	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
28	Integrated Bi-Directional Dc-Dc Converter Design For Electric Trolley	Ashish L	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
29	Integrated Bi-Directional Dc-Dc Converter Design For Electric Trolley	Pothigachalam U	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
30	Integrated Bi-Directional Dc-Dc Converter Design For Electric Trolley	Varunraj G	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
31	System Integration Of Electric Trolley	Divya R	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
32	System Integration Of Electric Trolley	Likhitha J	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
33	Battery Management System In Electric Trolley	Murali S	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
34	Battery Management System In Electric Trolley	Saravanan K	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
35	Battery Management System In Electric Trolley	Vinayagamoorthy M	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
36	PID Controller Design For Electric Trolley	Keerthika V	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
37	PID Controller Design For Electric Trolley	Nisha B	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
38	PID Controller Design For Electric Trolley	Priyanka M	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil

39	Solar Panel Design For Electric Trolley	Samy K	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
40	Solar Panel Design For Electric Trolley	Shasidharan K	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
41	Solar Panel Design For Electric Trolley	Sivaraj R	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
42	Solar Panel Design For Electric Trolley	Sandhana krishnan B	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
43	Design Of BLDC Motor For Electric Trolley	Bubesh S	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
44	Design Of BLDC Motor For Electric Trolley	Kamaraj K	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
45	Design Of BLDC Motor For Electric Trolley	Sethuraman A	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
46	DC To DC Converter In MPPT For Electric Trolley	Sabitha S	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
47	DC To DC Converter In MPPT For Electric Trolley	Kaviya M	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil
48	DC To DC Converter In MPPT For Electric Trolley	Nikitha N	6	International Research Journal of Education and Technology	International Research Journal of Education and Technology ISSN 2581-7795 ISBN: 978-93-340- 6066-9	6	5	nil

(CAYm2) 2022-23

S.No	Name of the Paper	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	High efficient multiple energy storage smart cycle	Vinoth Kumar.M	8	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
2	High efficient multiple energy storage smart cycle	Iyappan P	8	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
3	High efficient multiple energy storage smart cycle	Surya P	8	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
4	Quasi switching Buck Boost Converter for Transmission line	Dinesh Kumar.V	8	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
5	Quasi switching Buck Boost Converter for Transmission line	Hariharan.R	8	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
6	Quasi switching Buck Boost Converter for Transmission line	Abimanyu	8	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
7	Drowsy driver anti sleep	Praveen Kumar.A	6	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
8	Solar Panel cleaner with timer system	Chandru.S	6	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
9	Solar Panel cleaner with timer system	Poovarasan .A	6	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
10	Automated to domestic load energy saver using Arduino	Thivya.S	4	RRASE College of Engineering	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil
11	IoT Based water tank level monitoring system by using new blynk App	Thivya.S	4	PERI Institute of Technology	International Conference on Recent Trends in Science, Technology, Engineering & Mathematics	0	0	nil

(CAYm3) 2021-22

S.No	Name of the Paper	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	-	-	0	-	-	0	0	-

5 FACULTY INFORMATION (100) Total Marks 100.00

:

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	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?	Date of Joining in the Dept. (incase of dept. transfer)
1	Dr. V Moorthy	AKQPM4602C	NA	M.E. and Ph.D.	JNTU	Power Systems	08/08/2022	4	Professor	Professor	08/08/2022	Regular	Yes		No	
2	Ms. S Vijayalakshmi	ATOPV0282E	NA	M.E.	Anna University	Power Elecrtonics and Drives	19/02/2022	4.5	Assistant Professor	Assistant Professor		Regular	Yes		No	
3	Ms. T Sridevi	FEHPS2843D	NA	M.E.	S R M University	Power Electronics and Drives	09/02/2022	3.4	Assistant Professor	Assistant Professor		Regular	No	28/06/2025	No	
4	Dr.R.Kanthimathi	BTYPK4125J	NA	M.E. and Ph.D.	Anna University	Power Electronics and Drives	22/06/2022	4.1	Associate Professor	Associate Professor	22/06/2022	Regular	Yes		No	
5	Ms.S.L.Sreedevi	CZEPS1712G	NA	M.E.	Anna University	Power Systems	17/06/2013	13.1	Assistant Professor	Assistant Professor		Regular	Yes		Yes	
6	Dr.S.Suganthi	EHKPS6725K	NA	M.E. and Ph.D.	Anna University	Power Systems	28/08/2024	0.10	Assistant Professor	Assistant Professor		Regular	Yes		No	
7	Mr.R.Tamilamuthan	ALMPT9656J	NA	M.E.	Anna University	VLSI Design	12/06/2017	8.1	Assistant Professor	Assistant Professor		Regular	Yes		No	
8	Mrs.Naga Lakshmi Sanivarapu	AJMPN5039P	NA	M.E.	Anna University	Power Electronics and Drives	04/08/2021	5	Assistant Professor	Assistant Professor		Regular	Yes		No	
9	Ms.P.Aileen Sonia Dhas	AKPPA4400K	NA	M.E.	Anna University	Power Electronics and Drives	21/02/2024	1.4	Assistant Professor	Assistant Professor		Regular	Yes		No	
10	Ms.B.Pandyselvi	AQIPP6106G	NA	M.E.	Anna University	Power Systems	17/04/2023	1.4	Assistant Professor	Assistant Professor		Regular	No	31/08/2024	No	
11	Ms.P.Priyadharshini	BNUPP6333F	NA	M.E.	Anna University	Embedded system Technologies	03/07/2023	3.1	Assistant Professor	Assistant Professor		Regular	Yes		No	
12	Dr.P.Yamuna	AXJPY4275R	NA	M.E. and Ph.D.	Anna University	Power Systems	01/07/2021	3.1	Associate Professor	Associate Professor	01/07/2021	Regular	No	31/07/2024	No	

13	Ms.B.Dhivya	BUNPD0743D	NA	M.E.	Anna University	Applied Electronics	13/02/2023	2.4	Assistant Professor	Assistant Professor		Regular	No	27/06/2025	No	
14	Mr.A.Antony Charles	AYJPA2224R	NA	M.Tech	Ponnaiyah Ramajayam Institute of Science and Technology (PRIST University)	Power Electronics and Drives	08/08/2022	0.11	Assistant Professor	Assistant Professor		Regular	No	31/07/2023	No	
15	Mr.S.Srinivasan	BNPPS5754N	NA	M.E.	Hindustan Institute of Technology and Science (Hindustan University)	Power Electronics and Drives	01/11/2023	0.7	Assistant Professor	Assistant Professor		Regular	No	08/06/2024	No	
16	Dr.S.Leela	AFWPL7301Q	NA	M.E. and Ph.D.	Bharath Institute of Higher Education and Research (Bharath University)	Power electronics and Industrial drives	03/05/2017	7.2	Professor	Professor	03/05/2017	Regular	No	31/07/2024	No	
17	Dr.K.EzhilVignesh	ABBPE9104R	NA	M.E. and Ph.D.	Anna University	Power Systems	04/01/2021	2.6	Associate Professor	Associate Professor	04/01/2021	Regular	No	31/07/2023	No	
18	Dr.G.Irin Loretta	ABQPI5312H	NA	M.E. and Ph.D.	Anna University	Power Systems	16/08/2021	1.11	Assistant Professor	Assistant Professor		Regular	No	31/07/2023	No	
19	Dr.S.Dinakaraj	BGEPD7488J	NA	M.E. and Ph.D.	Vellore Institute of Technology	Power Electronics & Drives	03/01/2022	1.6	Assistant Professor	Assistant Professor		Regular	No	31/07/2023	No	
20	Ms.J.Rekha	BYMPR8767G	NA	M.E.	Anna University	Power Electronics and Drives	17/12/2018	4.4	Assistant Professor	Assistant Professor		Regular	No	04/05/2023	No	
21	Mr.M.B.Joseph Gerald	AJTPJ9325R	NA	M.E.	Anna University	High Voltage engineering	17/12/2018	4.1	Assistant Professor	Assistant Professor		Regular	No	19/01/2023	No	
22	Mr.A.Vasantharaj	BANPV4725K	NA	M.E.	Anna University	High Voltage engineering	20/01/2020	2.6	Assistant Professor	Assistant Professor		Regular	No	30/07/2022	No	

23	Ms.A.Vijayalakshmi	ARUPV6266V	NA	M.E.	Sathyabama Institute of Science and Technology (Sathyabama University)	Power electronics and Industrial drives	02/12/2021	1.1	Assistant Professor	Assistant Professor		Regular	No	02/01/2023	No	
24	Ms.A.Himaja	BICPH7411C	NA	M.E.	Gandhi Institute for Technological Advancement (GITA University)	VLSI Design	08/04/2022	1.3	Assistant Professor	Assistant Professor		Regular	No	31/07/2023	No	
25	Ms. A.N.Abhirami	BMTPA5461M	NA	M.E.	Anna University	Power Electronics and Drives	13/06/2019	3.1	Assistant Professor	Assistant Professor		Regular	No	29/07/2022	No	
26	Dr.T.N.Suresh	DGPPS2547E	NA	M.Tech and Ph.D.	Vels Institute of Science, Technology & Advanced Studies (Vels University)	Nano Technology	23/03/2023	1.4	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No	
27	Dr.J.Raji	BAVPR7439C	NA	M.E. and Ph.D.	Anna University	Power Electronics and Drives	02/02/2022	3.4	Associate Professor	Associate Professor	02/02/2022	Regular	No	01/07/2025	No	
28	Dr. K Deepa	BPTPD4598D	NA	M.E. and Ph.D.	Anna University	Power Electronics & Drives	21/06/2022	3.1	Professor	Professor	21/06/2022	Regular	No	31/07/2025	No	
29	Dr.V.Moorthy	AKQPM4602C	NA	M.E. and Ph.D.	Jawaharlal Nehru Technological University Hyderabad	Power Systems	08/08/2024	2	Professor	Professor	08/08/2024	Regular	Yes		No	
30	Mrs.R.Anitha	BFTPA1410B	NA	M.E.	Anna University		03/08/2021	5	Assistant Professor	Assistant Professor		Regular	Yes		No	

5.1 Student-Faculty Ratio (SFR) (30)

Institute Marks : 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): 1

Electrical & Electronics Engineering						
Year of Study	**CAY**		**CAYm1**		**CAYm2**	
	(2024-25)		**(2023-24)**		**(2022-23)**	
	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	30	0	30	3	30	3
3rd Year	30	3	30	3	60	6
4th Year	30	3	60	6	60	6
Sub-Total	**90**	**6**	**120**	**12**	**150**	**15**
Total	**96**		**132**		**165**	

Grand Total	96	132	165

PG

No. of PG Programs in the Department 1

Power Electronics & Drives			
Year of Study	**CAY(2024-25)**	**CAYm1(2023-24)**	**CAYm2 (2022-23)**
	Sanction Intake	**Sanction Intake**	**Sanction Intake**
1st Year	18	18	18
2nd Year	18	18	18
Total	**36**	**36**	**36**
Grand Total	36	36	36

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 1

Electrical & Electronics EngineeringPower Electronics & Drives

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	30	33	33
UG1.C	33	33	66
UG1.D	33	66	66
UG1: Electrical & Electronics Engineering	**96**	**132**	**165**
PG1.A	18	18	18
PG1.B	18	18	18
PG1: Power Electronics & Drives	**36**	**36**	**36**
DS=Total no. of students in all UG and PG programs in the Department	132	168	201
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=** 132	**S2=** 168	**S3=** 201
DF=Total no. of faculty members in the Department	12	13	15
AF= Total no. of faculty members in the allied Departments	3	3	3
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 15	**F2=** 16	**F3=** 18
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Total faculty (TF = (F + PoP) - FF)	**TF1= 13**	**TF2= 16**	**TF3= 18**
Student Faculty Ratio (SFR)=S/(TF)	**SFR1= 8.80**	**SFR2= 10.50**	**SFR3= 11.17**
Average SFR for 3 years	**SFR= 10.16**		

Average SFR for three assessment years : 10.16

Assessment SFR : 30

5.2 Faculty Qualification (25)

Institute Marks : 25.00

Year	X	Y	RF	FQ = 2.5 x [(10X + 4Y) / RF)]
2024-25(CAY)	5	7	6.00	32.50
2023-24(CAYm1)	6	7	8.00	27.50
2022-23(CAYm2)	7	8	10.00	25.50

Average Assessment : 28.50

5.3 Faculty Cadre Proportion (25)

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2024-25)	1.00	2.00	1.00	2.00	4.00	8.00
CAYm1(2023-24)	1.00	2.00	2.00	3.00	6.00	8.00
CAYm2(2022-23)	1.00	2.00	2.00	4.00	7.00	9.00
Average Numbers	1.00	2.00	1.67	3.00	5.67	8.33

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 : 25.00

5.4 Visiting/Adjunct/Emeritus Faculty etc. (10)

Institute Marks : 10.00

Table No. 5.4.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.

(CAYm1) 2023-24

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. Selvakumar Neethimani	Director	Eagle Wind Tech, Chennai	Skill Development Course	60.00

(CAYm2) 2022-23

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. D. Anand	Technical Head	Automobile and Project Management, Cloudkampus, e- learning Division, Chennai	Skill Development Course	60.00

(CAYm3) 2021-22

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. Rajendra Nalluri	Technical Head	Automobile and Project Management, Cloudkampus, e- learning Division, Chennai	Skill Development Course	60.00

5.5 Faculty Retention (10)

Institute Marks : 10.00

Description	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)
RF=No. of required faculty in the Department 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=DS/20).	6	8	10
AF=The no. of available faculty members in the Department including allied Departments	12	13	15
A= The no. of faculty members at the current institute with less than 1 year of experience (A in AF)	1	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)	2	2	3
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)	1	1	1
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)	3	4	3
E= The no. of faculty members at the current institute with more than 4 years of experience (E in AF)	5	6	7
FR=(((A*0) +(B*1)+(C*2)+(D*3)+(E*4))/RF) *2.50 (points limited to 10)	10	10	10

Average : 10.00

Assessment Marks : 10.00

6 FACULTY CONTRIBUTIONS (120)

Total Marks 95.00

6.1 Professional Development Activities (60)

6.1.1 Memberships in Profession Societies at National/International Levels (5)

Institute Marks : 5.00

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. V. Moorthy	IET/International Body	Member
2	Mrs. S. L. Sreedevi	ISTE/National Body	Member
3	Mrs. S. L. Sreedevi	Solar Energy Society of India/National Body	Member
4	Mrs. S. L. Sreedevi	IAENG/International Body	Member
5	Mrs. S. L. Sreedevi	Smt.Geetha Maa Foundation/National Body	Member
6	Dr. S. Suganthi	ISTE/National Body	Member
7	Dr. S. Suganthi	IAENG/International Body	Member
8	Mrs. P. Aileen Sonia Dhas	ISTE/National Body	Member
9	Mrs. R. Anitha	ISTE/National Body	Member
10	Mrs. R. Anitha	IAENG/International Body	Member
11	Mr. R. Tamilamuthan	IAENG/International Body	Member
12	Mrs. S. V. Nagalakshmi	IAENG/International Body	Member
13	Mrs. P. Priyadharshini	IAENG/International Body	Member
14	Mrs. R. Anitha	Systems Society of India/National Body	Member
15	Mrs. P. Aileen Sonia Dhas	IAENG/International Body	Member

6.1.2 Faculty as Resource Persons or Participants in STTPs/FDPs (15)

Institute Marks : 5.00

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) 2023-24

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Mr. R. Tamilamuthan	Power System Operation and Control	16/08/2023	Cuddalore	MRK Institute of Technology
2	Dr. K. Deepa	One Week Online Faculty Development Programme on “Entrepreneurial Perspectives on Green Energy and E	25/05/2024	Andhra Pradesh	Shri Vishnu engineering College for Women
3	Dr. R. Kanthimathi	Future Trends and Advances in Electrical Sciences	12/10/2023	Chennai	Bharath Institute of Higher Education and Research

(CAYm2) 2022-23

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Dr. S. Leela	Webinar on “Recent Trends and Technologies “	15/12/2022	Chennai	Sathyabama Institute of Science and Technology, Chennai
2	Dr. K. Ezhil Vignesh	Faculty development program on “Challenges and New Trends in Power Electronics”	16/02/2023	Pichanur, Coimbatore.	JCT College of Engineering and Technology

(CAYm3) 2021-22

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Dr. S. Leela	Virtual Guest Lecture on “State Space Analysis”	17/05/2022	Coimbatore	Sri Eshwar College of Engineering
2	Dr. P. Yamuna	Guest Lecture on” Instrumentation Amplifier and its Applications”	12/11/2021	Coimbatore	Sri Eshwar College of Engineering
3	Mrs. S. L. Sreedevi	Centre for Research and Development,Research presentation	12/11/2021	Mannivakkam, Chennai.	PERI Institute of Technology

6.1.2.2 Faculty Members’ Participation in STTPs/FDPs (10) Institute Marks : 10.00

Name of the faculty	Max 5 Per Faculty		
	2023-24(CAYm1)	2022-23(CAYm2)	2021-22(CAYm3)
Dr.K.Deepa	3.00	5.00	5.00
Dr. R. Kanthimathi	5.00	5.00	5.00
Mrs. S. L. Sreedevi	5.00	5.00	5.00
Mr. R. Tamilamuthan	5.00	5.00	5.00
Dr. P. Yamuna	5.00	5.00	3.00
Ms. B. Dhivya	5.00	0.00	0.00
Dr. S. Dinakar Raj	0.00	5.00	5.00
Dr. G. Irin Loretta	0.00	5.00	3.00
Ms. A. Vijayalakshmi	0.00	0.00	3.00
Mrs. P. Aileen Sonia Dhas	0.00	0.00	0.00
Dr. S. Leela	5.00	3.00	5.00
Mrs. B. Pandyselvi	5.00	0.00	0.00
Mr. A. Antony Charles	0.00	5.00	0.00
Dr. S. Suganthi	0.00	0.00	0.00
Mrs. S. V. Nagalakshmi	5.00	5.00	5.00
Mrs. R. Anitha	5.00	5.00	3.00
Mrs. P. Priyadharshini	5.00	0.00	0.00
Dr. K. Ezhil Vignesh	0.00	3.00	5.00
Ms. M. Himaja	0.00	5.00	0.00
Ms. J. Rekha	0.00	5.00	5.00

Mr. A. Vasantha raj	0.00	0.00	5.00
Mr. M B Joseph Gerald	0.00	0.00	5.00
Dr. T. N. Suresh	5.00	0.00	0.00
Dr. J. Raji	3.00	0.00	0.00
Sum	61.00	66.00	67.00
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).	6.60	8.40	10.05
Assessment Points (AP)= 2 * (Sum/(0.5* RDF)) (Points limited to 5 for each assessment year)	10.00	10.00	10.00

Average assessment over 3 years: 10.00

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

Institute Marks : 10.00

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 any
1	Dr. K Deepa	Introduction to Internet of Things	NPTEL	Elite
2	Dr. R. Kanthimathi	Introduction to Internet of Things	NPTEL	Elite
3	Mrs. S. L. Sreedevi	Introduction to Internet of Things	NPTEL	Elite
4	Dr. S. Suganthi	Introduction to Internet of Things	NPTEL	Elite gold
5	Dr. R. Kanthimathi	Software Testing	NPTEL	-
6	Mrs. S. L. Sreedevi	Introduction to soft Computing	NPTEL	Elite
7	Mrs. S. L. Sreedevi	Data Mining	NPTEL	-
8	Mrs. S. L. Sreedevi	Sensors and Actuators	NPTEL	Elite
9	Mrs. S. L. Sreedevi	Introduction to machine learning	NPTEL	Elite
10	Mrs. S. L. Sreedevi	NBA Accreditation and Teaching and Learning in Engineering	NPTEL	Elite
11	Mrs. S. L. Sreedevi	Python for Data Science	NPTEL	Elite
12	Mrs. S. L. Sreedevi	Accreditation and Outcome-Based Learning.	NPTEL	Elite
13	Mrs. S. L. Sreedevi	Fundamentals of Artificial Intelligence	NPTEL	Elite
14	Mrs. S. L. Sreedevi	Introduction to law on Electricity	NPTEL	Elite
15	Mr. R. Tamilamuthan	Computer Architecture	NPTEL	Elite
16	Mr. R. Tamilamuthan	Cloud Computing	NPTEL	Elite
17	Mrs. P. Aileen Sonia Dhas	Experimental Robotics	NPTEL	Elite
18	Dr. S. Suganthi	NBA Accreditation and Teaching and Learning in Engineering	NPTEL	Elite
19	Mrs. S. V. Nagalakshmi	EV - Vehicle Dynamics and Electric Motor Drives	NPTEL	-
20	Mrs. S. V. Nagalakshmi	Optical Wireless Communications for Beyond 5G Networks and IoT	NPTEL	Elite
21	Mrs. P. Priyadharshini	Introduction to Internet of Things	NPTEL	Elite
22	Mrs. S. L. Sreedevi	Cloud Computing	NPTEL	Elite
23	Mrs. S. L. Sreedevi	Sustainable Power Generation Systems	NPTEL	-
24	Mrs. S. L. Sreedevi	Power System Protection and Switchgear	NPTEL	Elite
25	Mr. R. Tamilamuthan	Python for Data Science	NPTEL	-
26	Dr. K. Deepa	Electric Vehicles and Mobility	Coursera	-
27	Dr. P. Yamuna	Industrial Automation Fundamentals	Simplilearn	-
28	Ms. B. Pandyselvi	Introduction to Renewable Energy	Simplilearn	-
29	Dr J Raji	Advanced Power Electronics and Control	NPTEL	-
30	Mrs. R. Anitha	Solar Energy Basics	Coursera	-

31	Ms. B. Dhivya	Introduction to Renewable Energy	Simplilearn	-
32	Mrs S. L. Sreedevi	Smart Grid: Basics to Advanced Technologies	NPTEL	-
33	Mrs S. L. Sreedevi	Basic Electric Circuits	NPTEL	-
34	Mrs S. L. Sreedevi	Solar Energy Engineering and Technology	NPTEL	Elite
35	Mrs S. L. Sreedevi	Introduction to Smart Grid	NPTEL	Elite
36	Mr. R. Tamilamuthan	Electric Vehicles - Part -I	NPTEL	Elite
37	Mr. R. Tamilamuthan	Basic Electric Circuits	NPTEL	-
38	Mr. R. Tamilamuthan	Solar Energy Engineering and Technology	NPTEL	Elite
39	Dr. S. Leela	Machine Learning for Beginners	Great Learning	-
40	Dr. P. Yamuna	Machine Learning for Beginners	Great Learning	-
41	Dr. S. Dinakar Raj	Deep Learning Fundamentals	Simplilearn	-
42	Dr. G. Irin Loretta	Cryptography and Network Security	NPTEL	-
43	Dr J Raji	Advanced Power Electronics and Control	NPTEL	-
44	Mrs. B. Pandyselvi	Machine Learning for Beginners	Great Learning	-
45	Mr. A. Antony Charles	Solar Energy Engineering and Technology	NPTEL	Elite
46	Ms. M. Himaja	Biomedical Nanotechnology	NPTEL	-
47	Dr. S. Leela	Artificial Intelligence in Electrical Engineering	Coursera	-
48	Dr. K. Ezhil Vignesh	Deep Learning Fundamentals	Infosys Springboard	-
49	Ms. J. Rekha	Electric Power Systems	Coursera	-
50	Ms. A. N. Abhirami	Solar Energy Basics	Coursera	-
51	Dr. S. Dhinakaraj	Introduction to PLC Programming	Great Learning	-
52	Mr. R. Tamilamuthan	Deep Learning Fundamentals	Infosys Springboard	-

6.1.4 FDP/STTP Organized by the Department (10) Institute Marks : 10.00

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

(CAYm1) 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	A 6 Days FDP on Smart Systems and Current Trends	05/02/2024	6 days	Dr. V. Suresh, Assistant Professor-EEE, Easwari Engineering College	54
2	A 6 Days FDP on Smart Systems and Current Trends	05/02/2024	6 days	Dr. Prashant, St.Joseph College of Engineering & Tech, Chennai	54
3	A 6 Days FDP on Smart Systems and Current Trends	05/02/2024	6 days	Mrs. V. Prema, Asst. Professor /CSE, SRMVEC	54
4	A 6 Days FDP on Smart Systems and Current Trends	05/02/2024	6 days	Mr J. Suresh, Technical Lead, Avasoft	54
5	A 6 Days FDP on Smart Systems and Current Trends	05/02/2024	6 days	Mr. Palanikumar G, Team Lead, SCB Pvt. Ltd	54
6	A 6 Days FDP on Smart Systems and Current Trends	05/02/2024	6 days	Dr. K. Saravanan,Associate Professor,EEE Department, SRM Institute of Science and Technology	54
7	A 6 Days FDP on Smart Systems and Current Trends	05/02/2024	6 days	Mr Francis David, Assistant Professor, DACE	54
8	A 5 Days FDP on Agentic Digital Twins for Next-Gen Power Systems	03/07/2023	5 Days	Dr. R. Sridhar,Professor,Department of EEE, SRM Institute of Science and Technology, Chennai	48
9	A 5 Days FDP on Agentic Digital Twins for Next-Gen Power Systems	03/07/2023	5 Days	Dr. T. Jagadesan,Associate Professor,Department of EEE, Karunya University, Coimbatore	48
10	A 5 Days FDP on Agentic Digital Twins for Next-Gen Power Systems	03/07/2023	5 Days	Dr. P. Manikandan,Associate Professor,Muthayammal Engineering College.	48
11	A 5 Days FDP on Agentic Digital Twins for Next-Gen Power Systems	03/07/2023	5 Days	Dr. S. Subramaniyan,Professor, Department of EEE, Annamalai University.	48
12	A 5 Days FDP on Agentic Digital Twins for Next-Gen Power Systems	03/07/2023	5 Days	Dr. C. Christofer Asir Rajan, Professor,Puducherry Technological University.	48
13	A 5 Days FDP on Agentic Digital Twins for Next-Gen Power Systems	03/07/2023	5 Days	Dr. A.M. Balamurugan, Associate Professor, SJCE.	48

(CAYm2) 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	A 6 Days FDP on IoT-Enabled Hybrid Power Systems for the Future Grid	11/07/2022	6 days	Mr K.S. Kavin,Managing Director,AB Technologies.	46
2	A 6 Days FDP on IoT-Enabled Hybrid Power Systems for the Future Grid	11/07/2022	6 days	Dr C. Christofer Asir Rajan,Professor, Department of EEE, Puducherry Technological University	46
3	A 6 Days FDP on IoT-Enabled Hybrid Power Systems for the Future Grid	11/07/2022	6 days	Dr. T. Jagadesan,Associate Professor,Department of EEE, Karunya University, Coimbatore	46
4	A 6 Days FDP on IoT-Enabled Hybrid Power Systems for the Future Grid	11/07/2022	6 days	Dr V. Krishna Kumar,Associate Professor,St. Joseph's Institute of Technology, OMR, Chennai	46
5	A 6 Days FDP on IoT-Enabled Hybrid Power Systems for the Future Grid	11/07/2022	6 days	Dr S. Albert Alexander, Asso Professor, School of Electrical Engineering, VIT Vellore.	46
6	A 6 Days FDP on IoT-Enabled Hybrid Power Systems for the Future Grid	11/07/2022	6 days	Mr C. Monish, Research Engineer, Palo Alto Networks, Bangalore.	46
7	A 6 Days FDP on Robotics and autonomous systems	20/02/2023	6 days	Dr. M. Senthil Pandian, Asst. Professor, SSN College	54
8	A 6 Days FDP on Robotics and autonomous systems	20/02/2023	6 days	Dr. S. Pradeep Kumar, Assistant Professor, VELs University.	54
9	A 6 Days FDP on Robotics and autonomous systems	20/02/2023	6 days	Dr J. Sutha, Professor, SRMVEC.	54
10	A 6 Days FDP on Robotics and autonomous systems	20/02/2023	6 days	Dr. Kishore Kanna, Associate Professor, Vel Tech	54
11	A 6 Days FDP on Robotics and autonomous systems	20/02/2023	6 days	Mr Venkatesan, Assistant Professor, RMK College.	54
12	A 6 Days FDP on Robotics and autonomous systems	20/02/2023	6 days	Mr Prakash, Tech Lead iRoboChakra	54

(CAYm3) 2021-22

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	A 5-Day FDP on Adaptive and Intelligent Energy Management for Sustainable Power Systems	09/08/2021	5 Days	Mr. K.S. Kavin,Managing Director, AB Technologies	46
2	A 5-Day FDP on Adaptive and Intelligent Energy Management for Sustainable Power Systems	09/08/2021	5 Days	Dr. R. Karpagam,Associate Professor,Easwari Engineering College, Chennai.	46
3	A 5-Day FDP on Adaptive and Intelligent Energy Management for Sustainable Power Systems	09/08/2021	5 Days	Dr Kumara Selvan, Professor, SCAD College.	46
4	A 5-Day FDP on Adaptive and Intelligent Energy Management for Sustainable Power Systems	09/08/2021	5 Days	Mr J Suresh Kumar, Senior Analyst, CTS	46
5	A 5-Day FDP on Adaptive and Intelligent Energy Management for Sustainable Power Systems	09/08/2021	5 Days	Dr. C. Ganesh, Associate Professor, Dhanalakshmi Srinivasan College of Engineering.	46
6	6 Days FDP on Decentralized Security for Smart Grids Using Blockchain Technology (Online)	07/02/2022	6 Days	Dr M. V. Ishwarya, Associate Professor, Agni College	50
7	6 Days FDP on Decentralized Security for Smart Grids Using Blockchain Technology (Online)	07/02/2022	6 Days	Dr P. DEVI, Associate Professor. P.B College of Engineering	50
8	6 Days FDP on Decentralized Security for Smart Grids Using Blockchain Technology (Online)	07/02/2022	6 Days	Dr. J. Prakash, Professor, VIT	50
9	6 Days FDP on Decentralized Security for Smart Grids Using Blockchain Technology (Online)	07/02/2022	6 Days	Dr. C. Ganesh, Associate Professor, Dhanalakshmi Srinivasan College of Engineering	50
10	6 Days FDP on Decentralized Security for Smart Grids Using Blockchain Technology (Online)	07/02/2022	6 Days	Mr. Venkatesan, Teal Lead, Pumo Tech Pvt. Ltd	50

6.1.5 Faculty Support in Student Innovative Projects (10)

Institute Marks : 10.00

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

(CAYm1) 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	Mrs. S. L. Sreedevi	Single-Stage Solar PV Fed Brushless DC motor Driven Water Pump.	May 2024	Chennai	-
2	Mr. R. Tamilamuthan	A Novel Approach with MIMO Control-Based Interleaved Second-Order Buck Converter for EV Charging App	May 2024	Chennai	-
3	Dr. K. Deepa	Electric Vehicle Charging Using Flexible Energy Sources	May 2024	Chennai	-
4	Dr. K. Deepa	PLC based Industrial Automation and Motor control System	06/10/2023	Chennai	-
5	Ms. B. Dhivya	Transmission Line Inspection Method Using Hanging Robot	May 2024	Chennai	-
6	Ms. B. Pandyselvi	Priority–Based EV Charging System	May 2024	Chennai	-
7	Dr. S. Leela	IoT-Based Smart Energy Meter with Real-Time Monitoring and Billing	06/10/2023	Chennai	-
8	Dr. R. Kanthimathi	Solar PV-Based Battery Charging System Using MPPT Techniques	06/10/2023	Chennai	-
9	Ms. S. V. Nagalakshmi	Smart Home Energy Management System Using IoT	06/10/2023	Chennai	-

(CAYm2) 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	Dr. P. Yamuna	Intelligent Electricity Theft Detection Using Smart Meter Data	17/11/2022	Chennai	-
2	Dr. K. Deepa	Smart EV Charging Station with Solar Energy Integration	17/11/2022	Chennai	-
3	Dr. R. Kanthimathi	Smart Helmet-Based Accident Detection and Emergency Alert System	17/11/2022	Chennai	-
4	Dr. G. Irin Loratta	Solar-Powered Smart Irrigation System with Soil Moisture Monitoring	17/11/2022	Chennai	-
5	Mr. Antony Charles	Streamlined Smart Home Automation using Internet of Things	May 2023	Chennai	-
6	Mrs. S. L. Sreedevi	E-BOAT Using Solar with Dual Axial Solar Tracker	May 2023	Chennai	-

(CAYm3) 2021-22

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. P. Yamuna	E-Vehicle Charging System using RFID	June 2022	Chennai	-
2	Mr. A. Vasantha Raj	Fully soft Switched Multi-Port DC-DC Converter with High Integration	June 2022	Chennai	-

6.1.6 Faculty Internship/Training/Collaboration with Industry (10) Institute Marks : 10.00

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	Ms. B. Pandyselvi	Naan Mudhalvan	L&T Edu Tech, Chennai	5 days	Effectively Guided final-year students
2	Dr. R. Kanthimathi	Emerging Technologies in EEE	Bharath Institute of Technology, Chennai	5 days	Enhanced Student's Technical Skills and Practical Competencies.
3	Mrs. S. L. Sreedevi	Emerging Technologies in EEE	Bharath Institute of Technology, Chennai	5 days	Guided project students and published paper in IEEE conference.
4	Mr. R. Tamilamuthan	Computer-Aided Schema Design and Routing Optimization for EV Charging Infrastructure	Adhityaa Infomedia Technologies	4 days	Guided student projects that resulted in a patent publication.
5	Mr. R. Tamilamuthan	Software skill development Training on: MATLAB and Embedded system	Foreview Technologies Private Ltd, Chennai	1 day	Enhanced Research Skills & created Motivation to students
6	Mrs. S. L. Sreedevi	ICT Tools and Innovative Teaching Techniques	IOT Academy	2 days	Motivated to develop current trends based on Projects
7	Dr. P. Yamuna	Training On Internet of Things	Adventure Solution Pvt Ltd, Chennai	5 days	Guided an innovative project
8	Dr. J. Raji	Hands-on Industrial Training on PLC, SCADA and Advanced Automation Technologies	Retech solution private ltd., Chennai	1 day	Effectively Guided Students in Project Development.
9	Dr. S. Dhinakar raj	IP Awareness/Training program under National IP Awareness Mission	IP Office, India	1 day	Enhanced Student's Technical Skills and Practical Competencies
10	Dr. G. Irin Loretta	IP Awareness/Training program under National IP Awareness Mission	IP Office, India	1 day	Enhanced Student's Technical Skills and Practical Competencies

6.2 Research and Development Activities (60)

6.2.1 Academic Research (10)

Institute Marks : 10.00

Table No. 6.2.1.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	2	2	0
2	No. of peer reviewed conference papers published	4	3	3
3	No. of books/book chapters published	1	1	0

6.2.2 Development Activities (10)

Institute Marks :

6.2.3 Sponsored Research Project (15)

Institute Marks :

2023-24 (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

2022-23 (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

2021-22 (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)

Institute Marks : 15

2023-24 (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
Dr. S. L. Sreedevi	Dr.S.Suganhti	EEE	Sustainable Biogas Production from Food Waste	Edmi educational services,No.7/ 32, Priyanka Gandhi St, M.G.R Nagar, K.K Nagar, Chennai - 78	9 Months	265000.00
						Amount received (Rs.):265000.00

2022-23 (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
0	0	0	0	0	0	0.00
						Amount received (Rs.):0.00

2021-22 (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
0	0	0	0	0	0	0.00
						Amount received (Rs.):0.00

Total amount (Lacs) received for the past 3 years: 265000.00

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(10)

Institute Marks : 6.00

6.2.5 A Amount received (6)

2023-24 (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
S.L. Sreedevi	PV fed SEPIC Converter for grid tied system with ultra capacitor	4 Months	0.01	0.10	paper published
B. Dhivya	E- Vehicle Charging System using RFID	5 months	0.01	0.08	paper published
K. Deepa , R.Kanthimathi ,	Condition Monitoring of Transformer using IOT	4 months	0.01	0.08	paper published
Dr. K. Deepa	Hybrid nano fabrication	7 months	0.70	0.70	paper published
Aileen Sonia P	Battery Management System for Electric Trolly	4 months	0.01	0.08	paper published
Aileen Sonia P.	Last-Mile Voltage Stability Enhancement Using Smart Meters	4 months	0.01	0.08	paper published
Mr. Tamilamudhan R	System Integration of Electric Trolley	4 months	0.01	0.08	paper published
Dr. Kanthimathi R	PID Controller Design for Electric Trolley	4 months	0.01	0.08	paper published
Mr. Antony Charles A	Design Of BLDC Motor for Electric Trolley	4 months	0.01	0.08	paper published
Ms. Sreedevi S L	Aquatic Junk Scrubber	4 Months	0.01	0.08	paper published
			Amount received (Rs.): 0.79		

2022-23 (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
S.L Sreedevi	An AC-DC single stage Full bridge hybrid converter with improved output characteristics	4 months	5000.00	5000.00	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ijirt.org/publishedpaper/IJIRT155826_PAPER.pdf
S.L. Sreedevi	DC-DC Boost Converter with Ripple Reduction Techniques for Electric Vehicle	4 months	10000.00	7500.00	paper published
			Amount received (Rs.): 15000.00		

2021-22 (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 (4)

Institute Marks : 4.00

Table No. 6.2.5.1: List of faculty members received seed money or internal research grant from the Institution.

S.N.	Faculty name	Project title/ Support for Activity	Duration	Amount (Rs)	Amount Utilized (Rs)	Outcomes of the project
CAYm1 (Academic Year 2023-2024)						
1. 1	S.L. Sreedevi	PV fed SEPIC Converter for grid tied system with ultra capacitor	4 Months	10,000	9500	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ijatem.com/wp-content/uploads/2023/10/IJATEM23AUG002-2.pdf
2. ..	B. Dhivya, S. Vijayalakhsmi, P. Aileen Sonia, S. L. Sreedevi, R. Tamilamuthan, A. Antony Charles, Dr. R. Kanthimathi, B. Pandyselvi	E- Vehicle Charging System using RFID	5 Months	10,000	7500	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ijirt.org/publishedpaper/IJIRT163450_PAPER.pdf

3.	K. Deepa , R.Kanthimathi , S. Srinivasan , B. Dhivya , S. Vijayalakshmi , P.Aileen Sonia , S. Sreedevi R. Tamilamuthan	Condition Monitoring of Transformer using IOT	4 Months	10,000	7500	https://ijirt.org/publishedpaper/IJIRT163512_PAPER.pdf.
4.	Dr. K. Deepa	Hybrid nanofabrication of AZ91D alloy-SiC-CNT and Optimize the drill machinability characteristics by ANOVA route	7 Months	70,000	70,000	https://link.springer.com/article/10.1007/s11082-023-06121-9
5.	Aileen Sonia P	Battery Management System for Electric Trolly Application	4 Months	10,000	7500	https://www.irjweb.com/index.php
6.	Aileen Sonia P.	Last-Mile Voltage Stability Enhancement Using Smart Meters	4 Months	10,000	7500	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.irjweb.com/Last-Mile%20Voltage%20Stability%20Enhancement%20Using%20Smart%20Meters.pdf

7.	Mr. Tamilamudhan R	System Integration of Electric Trolley	4 Months	10,000	7500	https://www.irjweb.com/index.php
8.	Dr. Kanthimathi R	PID Controller Design for Electric Trolley	4 Months	10,000	7500	https://www.irjweb.com/index.php
9.	Mr. Antony Charles A	Design Of BLDC Motor for Electric Trolley	4 Months	10,000	7500	https://www.irjweb.com/index.php
10.	Ms. Pandyselvi B	DC To DC Converter in MPPT for Electric Trolley	4 Months	10,000	7500	https://www.irjweb.com/index.php
11.	Ms. Sreedevi S L	Aquatic Junk Scrubber	4 Months	10,000	7500	https://www.irjweb.com/index.php
Amount received (Rs.)					**1,47,000**	
CAYm2 (Academic Year 2022-2023)						
1.	S.L Sreedevi	An AC-DC single stage Full bridge hybrid converter with improved output characteristics	4 Months	5000	5000	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ijirt.org/publishedpaper/IJIRT155826_PAPER.pdf
2.	S.L. Sreedevi	DC-DC Boost Converter with Ripple Reduction Techniques for Electric Vehicle	4 Months	10000	7500	https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%203/Dc-Dc%20Boost%20Converter%20with%20Ripple%20Reduction%20Techniques%20for%20Electric%20Vehicle.pdf (https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%203/Dc-Dc%20Boost%20Converter%20with%20Ripple%20Reduction%20Techniques%20for%20Electric%20Vehicle.pdf)

3.	S.L. Sreedevi	An Integrated Motor-Drive and Battery-Charging System Based on a Split-Field-Winding Doubly Salient Electromagnetic Machine	4 Months	10000	7500	https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/An%20Integrated%20Motor-Drive%20and%20Battery-Charging%20System%20Based%20on%20a%20Split-Field-Winding%20Doubly%20Salient%20Electromagnetic%20Machine.pdf (https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/An%20Integrated%20Motor-Drive%20and%20Battery-Charging%20System%20Based%20on%20a%20Split-Field-Winding%20Doubly%20Salient%20Electromagnetic%20Machine.pdf)
4.	S.L. Sreedevi	Design of an MLI with a reduced amount of Switches	4 Months	10000	7500	https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/Design%20of%20an%20MLI%20with%20a%20reduced%20amount%20of%20Switches.pdf (https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/Design%20of%20an%20MLI%20with%20a%20reduced%20amount%20of%20Switches.pdf)
5.	S.L. Sreedevi	Switching State Step up Converter Mixed with Magnetic Coupling and Voltage Multiplier Techniques for High Gain Conversion	4 Months	5000	5000	https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%203/Automatic%20Smart%20Solar%20Radiation%20Tracker%20for%20PV%20Power%20Plants.pdf (https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%203/Automatic%20Smart%20Solar%20Radiation%20Tracker%20for%20PV%20Power%20Plants.pdf)
6.	S.L. Sreedevi	Automatic Smart Solar Radiation Tracker for PV Power Plants	4 Months	5000	5000	https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/Step%20up%20%E2%80%93%20Step%20down%20Converters%20Based%20on%20Semi-active%20Rectifiers%20for%20High%20Output%20Voltage.pdf (https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/Step%20up%20%E2%80%93%20Step%20down%20Converters%20Based%20on%20Semi-active%20Rectifiers%20for%20High%20Output%20Voltage.pdf)
7.	Dr. P. Yamunaa	Design of an MLI with a reduced amount of Switches	4 Months	5000	5000	https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/Design%20of%20an%20MLI%20with%20a%20reduced%20amount%20of%20Switches.pdf (https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%204/Design%20of%20an%20MLI%20with%20a%20reduced%20amount%20of%20Switches.pdf)
8.	Dr. P. Yamunaa	Automatic Smart Solar Radiation Tracker for PV Power Plants	4 Months	5000	5000	https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%203/Automatic%20Smart%20Solar%20Radiation%20Tracker%20for%20PV%20Power%20Plants.pdf (https://jscer.org/wp-content/uploads/2023-Volume%206-Issue%203/Automatic%20Smart%20Solar%20Radiation%20Tracker%20for%20PV%20Power%20Plants.pdf)

9.	Dr. P. Yamunaa	Mobile Phone Detector using Super Capacitor	4 Months	5000	5000	https://drive.google.com/file/d/1z9gAUkLN3_DNvkin8iXP9v04wV7CvajU/view (https://drive.google.com/file/d/1z9gAUkLN3_DNvkin8iXP9v04wV7CvajU/view)
Amount Received (Rs.)					**52,500**	
CAYm3 (Academic Year 2021-2022)						
1.	S.L. Sreedevi	High Efficiency Bridgeless Single-Power-Conversion Battery Charger for Light Electric Vehicle	4 Months	7000	5000	https://ijirt.org/master/publishedpaper/IJIRT153381_PAPER.pdf (https://ijirt.org/master/publishedpaper/IJIRT153381_PAPER.pdf)
Amount received (Rs.)					**5000**	
Total amount (Lacs) received for the past 3 years					**2,04,500**	

7 FACILITIES AND TECHNICAL SUPPORT (100)

Total Marks 100.00

7.1 Adequate and well equipped laboratories, and technical manpower (40)

Institute Marks : 50.00

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	Electrical Mach	3	DC Shunt Mot	2017 Regulatic	Mr.Sabareesar	Lab Assistant	B.E EEE
2	Power Electror	3	Cathode Ray C	2017 regulatior	Ms.Gowri	Lab Assistant	B.E ECE
3	Engineering Pr	3	Single phase h	2017 regulatior	Mr.Sabareesar	Lab Assistant	B.E EEE
4	Power System	3	Personal comp	2017 regulaion	Ms.Gowri	Lab Assistant	B.E ECE
5	Renewable ene	3	Personal comp	2017 regulatior	Ms.Gowri	Lab Assistant	B.E ECE
6	Control Systen	3	Analog PID tra	2021 regulatior	Ms.Gowri	Lab Assistant	B.E ECE

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

Institute Marks : 20.00

Sr. No	Name of the Facility	Details	Purpose for creating facility	Utilization	Relevance to POs/PSOs
1	Motor Starting Techniques – Demonstration Facility Demonstration of DC Motors Demonstration of Television and AM/FM Radio	Demonstration of DOL Starter, Star-Delta Starter, Auto-Transformer Starter and other available motor starting arrangements Demonstration of different types of DC motors, their construction. Demonstration of television and AM/FM radio systems to familiarize students with their basic components	To provide students with practical, hands-on experience with electrical and electronic components in the Electrical Machines and Circuits Laboratories, and to help them understand theoretical concepts through real-time applications.	Electrical Machines Laboratory and Circuits and Devices Laboratory Utilized by faculty members and students throughout the semester	PO1, PO3, PO4, PO5, PO8, PO10, PSO1, PSO2
2	Code books for components	Indian standard testing for DC, AC machines, transformers	To know various specifications of various components	Utilized for electrical machines lab I and II (40%)	PO3,PO4,PO5,PO6,PO7 PSO1,PSO2
3	Department library	Stacked with Books Project Reports	To support a specific academic discipline within a college, enabling deeper research and learning for students and faculty by offering immediate access to relevant materials	Utilized by students and faculties for reference	PO1,PO2,PO3,PO6 PSO1,PSO2
4	Robotics Lab	The Robotics Laboratory is equipped with Arduino boards, and embedded development tools to support electrical automation, control systems, and robotics applications	To provide students with practical, hands-on training in robotics, embedded systems sensor-based applications, thereby developing their technical and problem-solving skills.	Throughout the semester	PO1, PO2, PO3, PO4, PO5, PO9, PO12,PSO1,PSO2.

5	Extended Learning	GUVI and SkillRack are online platforms that provide programming courses, coding exercises, problem-solving challenges, and practice activities in various programming languages.	To enhance students' programming skills, logical thinking, analytical abilities, and problem-solving capabilities through continuous coding practice and technical learning	Utilized by students and faculty members to practice programming, solve coding problems, and enhance their technical skills through the GUVI and Skill Rack platforms	PO1,PO2,PO3,PO4,PO5,PO12,PSO1,PSO2
6	IIT Virtual Lab	Remote access to simulation-based Laboratories in various disciplines of Science and Engineering. •	A complete Learning Management System around the Virtual Labs where the students/ teachers can avail the various tools for learning.	Throughout the semester	PO1 PO2 PO3, PO4, PO5,PO10 PSO 1, PSO 2
7	e-Learning Lounge	Video's From NPTEL, Swayam, Edusat Videos.	Understanding the Video oriented Teaching and learning.	Throughout the semester	PO5,PSO1,PSO2
8	Multispecialty Seminar Hall	Equipped with projector, speakers, microphone and computer.	To enhance practical knowledge and improve laboratory learning.	Used for lab demonstrations, technical presentations, discussions and training related to laboratory experiments.	PO1, PO2, PO3, PO4, PO5, PO9, PO10,
9					

7.3 Maintenance of laboratories and overall ambiance (10)

Institute Marks : 10.00

Daily Maintenance

- All minor repairs and maintenance activities are carried out by the laboratory technicians.
- Laboratory equipment, experimental kits, measuring instruments and electrical connections are visually inspected before conducting experiments.
- The working conditions of electrical machines, transformers, power electronic trainers and measuring instruments are checked.
- Connecting wires, probes, switches, plugs and sockets are checked for visible damage and loose connections.
- The working conditions of passive components, transistors and ICs are verified using multimeters, LCR meters and IC testers, wherever required.
- Computers and simulation software in computer-based laboratories are checked for proper functioning.
- Laboratory equipment, workbenches and experimental kits are cleaned regularly by the laboratory technicians.
- Damaged connecting wires and defective components are identified and reported to the laboratory in-charge for necessary action.
- Laboratory floors and work areas are cleaned by the housekeeping department.
- Students are instructed to follow electrical safety precautions while handling laboratory equipment.
- Students are instructed to switch off the power supply to experimental kits and equipment after completing their experiments.
- Eating and drinking inside the laboratories are strictly prohibited.

Weekly Maintenance

- Electrical machines, transformers and experimental setups are inspected for unusual noise, vibration and overheating.
- Measuring instruments such as CROs, digital multimeters, voltmeters, ammeters and LCR meters are checked for proper functioning.
- Power electronic trainer kits, rectifier circuits, inverter circuits and converter modules are inspected for proper operation.
- Connecting wires, probes, switches and other accessories are checked for wear and tear.
- UPS systems and battery backup facilities are inspected to ensure proper functioning.
- Computers, LAN and WLAN connections in simulation laboratories are checked by the concerned technical team.
- Experimental components such as diodes, resistors, capacitors, transistors and ICs are checked and segregated based on their working conditions.
- Weekly maintenance activities are recorded by the laboratory technician and reported to the laboratory in-charge for necessary action.

Monthly Maintenance

- A monthly maintenance report is prepared, indicating the working condition of laboratory equipment, consumables, non-consumables and furniture, and submitted to the Head of the Department for further action.
- Electrical machines, transformers, motors and power electronic equipment are inspected for performance and operational safety.
- Measuring instruments are checked for accuracy and proper functioning. Calibration is arranged wherever required.
- Earthing connections, electrical wiring, distribution boards and protective devices are inspected to ensure electrical safety.
- Stock registers, maintenance registers and service records are reviewed and updated.

Preventive maintenance:

- The working condition of laboratory equipment is checked periodically to ensure proper functioning.
- Students are instructed on the safe handling and operation of equipment before performing experiments.

- Laboratory manual is given to the students which include list of experiments and the procedure of doing the experiments.
- Stock register is maintained in all laboratories
- Suitable thickness of the wire based on current rating is used in the fuses to avoid the malfunctioning.
- The working condition of passive elements and transistors is checked by using multimeter and LCR Meter in all laboratories.
- The working condition of the ICs is checked using IC tester.
- UPS back up is provided for all system based laboratories.

Breakdown maintenance:

- Minor repairs are carried out by the lab technicians.
- For complex failures involving specialized components or sophisticated machinery, the college will contact on call external vendor for service
- Service register is maintained in all laboratories

Live maintenance:

- When a minor fault occurs, it is communicated to concern team through peri technical support and peri infra maintenance whatsapp group by posting messages
- Issue resolved as quickly as possible and reported in whatsapp group after fault clearance

Electrical Machines Lab:

- Electrical Machines, Meters (voltmeter, Ammeter) are calibrated by lab technicians.
- Wirings are checked at regular intervals in order to avoid voltage fluctuations.
- Ageing of the machines are reduced by routine inspections.
- Cleaning of machines are carried out regularly
- Maintenance and stock registers are maintained with all records
- Earthling is checked regularly for safety purpose

Power system Simulation Lab:

- Softwares are updated at regular intervals based on its evolutions.
- Computers and kits for experiments are serviced in order to avoid malware and other factors.
- LANs, WLANs are checked by networking team to have better performance.
- Separate Login entry and exit Registers are maintained for faculties and students.
- Air Conditioners are serviced habitually.

Power Electronics Lab:

- Trainer ICs and kits are serviced in Regular intervals.
- Wirings are checked at regular intervals in order to avoid voltage fluctuations.
- Student’s projects and innovative works are kept in the Lab.
- Cleaning of the kits and workbenches are done periodically.

Electric Circuits lab

- Diodes, resistors are checked and separated based on the working conditions.
- CRO, signal generators, probes, multi meters, voltmeters and ammeters are checked regularly.
- Wirings are checked at regular intervals in order to avoid voltage fluctuations.
- Cleaning process is done at periodic intervals
- Damaged connecting wires are preplaced by new wires

Engineering practices lab:

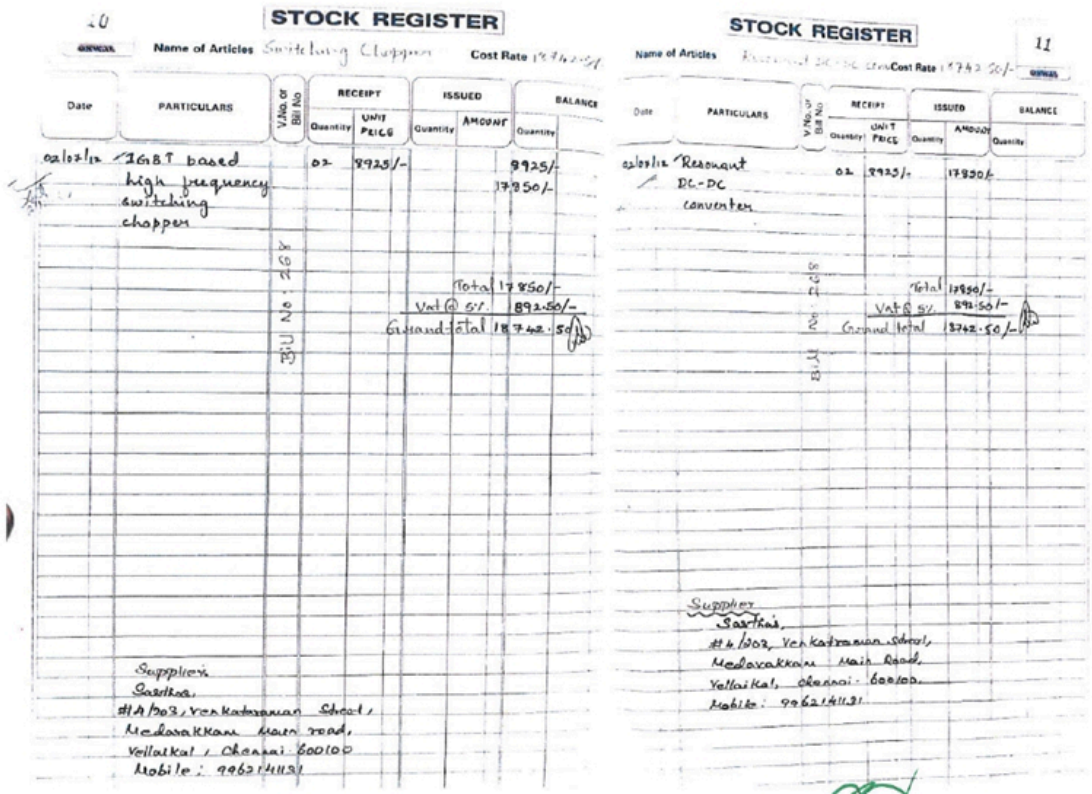
- All house wiring setup should be maintained properly.
- Damaged wires are replaced periodically
- screw drivers, soldering ion , stop watches , megger should be maintained properly
- Faulty fluorescent lamps, bulbs are replaced periodically

Overall Ambience:

- The department enjoys the privilege of having spacious and well equipped lab providing knowledge to students in the view of Industrial environment.
- The overall ambience is good enough for the students to excel in their practical applications.
- The well-resourced laboratory in our department motivates the students to be more innovative.
- All laboratories are updated with sophisticated and modernized equipment’s to satisfy the curricular requirements.
- All laboratories are well furnished with work benches and good ventilating facility.
- Modern Laboratories enable students and researchers to keep abreast of emerging trends and applications.

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)



STOCK REGISTER

Name of Articles: Switching Chopper

Date	PARTICULARS	V.No. or Bill No	RECEIPT Quantity	RECEIPT UNIT PRICE	ISSUED Quantity	ISSUED AMOUNT	BALANCE Quantity
02/07/12	IGBT based high frequency switching chopper	BU No: 269	02	8925/-			9925/- 17850/-

Total 17850/-
Vat @ 5% 892.50/-
Grand total 18742.50/-

Supplier:
Sastras,
#4/302, Venkataraman School,
Medavakkam Main Road,
Vellaikal, Chennai 600100.
Mobile: 9962141131

STOCK REGISTER

Name of Articles: Resonant DC-DC converter

Date	PARTICULARS	V.No. or Bill No	RECEIPT Quantity	RECEIPT UNIT PRICE	ISSUED Quantity	ISSUED AMOUNT	BALANCE Quantity
02/07/12	Resonant DC-DC converter	BU No: 269	02	8925/-			17850/-

Total 17850/-
Vat @ 5% 892.50/-
Grand total 18742.50/-

Supplier:
Sastras,
#4/302, Venkataraman School,
Medavakkam Main Road,
Vellaikal, Chennai: 600100.
Mobile: 9962141131

Fig. 7.3.1 Stock Register

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

PERI INSTITUTE OF TECHNOLOGY

Department of Electrical and Electronics Engineering

Equipment / Lab Maintenance Sheet

Department	EEE	Date	27/09/2022
Name of The Lab	Electrical Machines Lab	Reporting Month	September - 2022
Name of The Lab In-charge	Dr. P. Yamuna.	Name of the Lab Instructor	Mr. Saravanan.

Daily:

Sl. No	Things to be Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Wires	✓	✓			✓	✓	✓					✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		
2	Lab Clean	✓	✓			✓	✓	✓					✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		
	Signature																															

Weekly:

Sl. No	Things to be Checked	1st							2nd							3rd							4th							5th		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Generators	✓						✓						✓								✓							✓			
2	Motors	✓						✓						✓								✓							✓			
3	Load	✓						✓						✓								✓							✓			
4	Transformer	✓						✓						✓								✓							✓			
	Signature																															

Monthly:

Sl. No	Things to be Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Volt meters																													✓		
2	Ammeters																													✓		
3	Watt meters																													✓		
	Signature																															

Lab Instructor

Lab In-Charge

HOD/EEE

PRINCIPAL

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

Fig 7.3.2 Equipment Maintenance sheet

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

PERI INSTITUTE OF TECHNOLOGY (Autonomous)
Department of Electrical and Electronics Engineering
Breakdown Maintenance Sheet

Department	EEE	Date	23/08/2023
Name of The Lab	Electrical Machines lab	Reporting Month	August
Name of The Lab In-charge	Dr. K. Deepa	Name of the Lab Instructor	Mr. Gokulraj

S. No	Name of the Equipment	Details of Breakdown	Action Taken	Amount Spent in Rs.	Remarks	Signature of Lab in-charge	HOD Signature
	Rheostat.	Burnt	23/08/23	1500/-	Good		
	Ammeter (0-5A)	Nomenclature	"	Service 1000/-	Good		
	Voltmeter (0-300)V	Nomenclature	23/08/23	Service (1000)	Good.		

Lab Instructor

Lab In-charge

HOD/EEE
Electrical and Electronics Engineering
PERI Institute of Technology
PERI Knowledge Park, Mannivakkam, Chennai-600 048.

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

Fig 7.3.3 Breakdown Maintenance sheet

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

OHMTRONIXS

OHMTRONIXS
The Complete Lab Solutions

GSTIN: 33AKKPR3897G2ZM

OHM/23-24/SER/011

DATE: 07/09/2023

To
The Principal,
PERI Institute of Technology,
Mannivakkam,
Vandalur,
Kancheepuram Dist.

Subject: Service Estimate for EEE Lab Kits

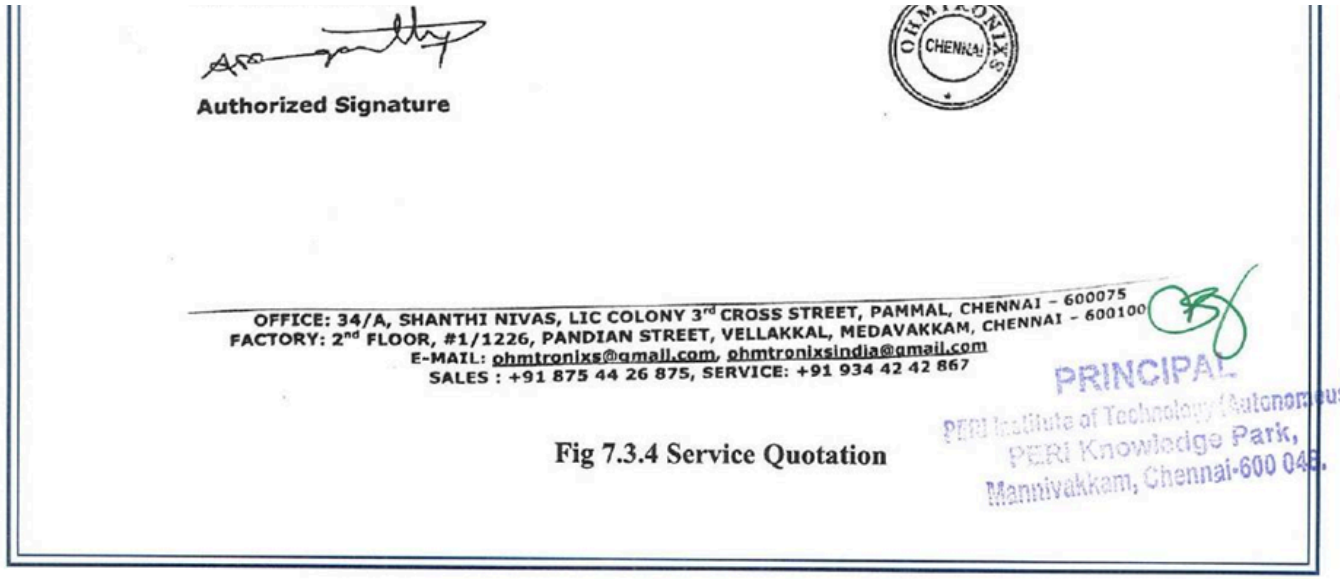
With reference to your service request received and inspected the kits on 05/09/23. We hereby enclose our service charges for varies Trainer Kits for your kind perusal.

Sr. No.	DESCRIPTION	QTY.	SERVICE CHARGE	TOTAL AMOUNT
1	Single Phase Half & Full Controlled Converter	1	900	900
2	VI Characteristics of MOSFET	1	630	630
3	Switched Mode Power Converter	1	720	720
			Sub Total	2,250
			ADD : GST@18%	405
			Grand Total	2,655

The above mentioned price Service charges & Components, Service Tax @18% extra as applicable.

Looking forward your written approval to proceed further.

For OHMTRONIXS



Authorized Signature

OHMTRONIXS CHENNAI

OFFICE: 34/A, SHANTHI NIVAS, LIC COLONY 3rd CROSS STREET, PAMMAL, CHENNAI - 600075
FACTORY: 2nd FLOOR, #1/1226, PANDIAN STREET, VELLAKKAL, MEDAVAKKAM, CHENNAI - 600100
E-MAIL: ohmtronixs@gmail.com, ohmtronixsindia@gmail.com
SALES : +91 875 44 26 875, SERVICE: +91 934 42 42 867

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

Fig 7.3.4 Service Quotation

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

OHMTRONIXS

OHMTRONIXS
The Complete Lab Solutions

GSTIN:33FPBPS9649Q1ZT

INVOICE

To The Principal, **Peri Educational &Charitable Trust,** No.4, 9th Avenue, Ashok Nagar, Chennai – 600045. **GSTIN:33AKKPR3897G2ZM**	BILL NO:OHM/23-24/SAL/152 DATE:19/10/2023 PO No.: PERIIT/28/2023 DATE:19/10/2023 MODE OF DISPATCH: By HAND
(For EEE Department)	WARRANTY:1YEAR

Sr. No.	DESCRIPTION	HSN /SAC	QTY	RATE RS.	RATE Ps.	AMOUNT Rs.	AMOUNT Ps.
01	Single phase half &fully controlled converter	9030	1	900	00	900	00
02	VI Characteristics of MOSFET	9030	1	630	00	630	00
03	Switched mode Power Converter	9030	1	720	00	720	00
(Rupees Two Thousand Six Hundred and Fifty Five Only)		SUB TOTAL				2250	00
		GST@18%				405	00
		Grand Total				2655	**00**

For OHMTRONIXS

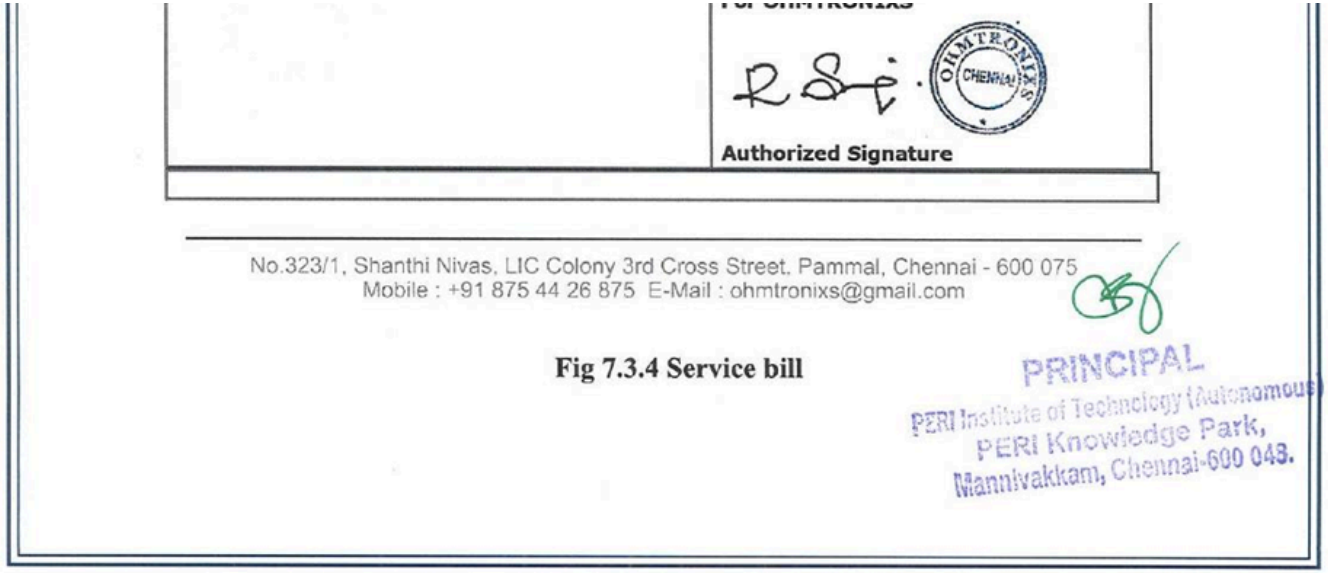


Fig 7.3.4 Service bill

- The Laboratory setup is well secured to students
- Laboratory notice boards also serve as a mode to disseminate the vision and mission of thedepartment, PEO's, PO's, and PSO's.
- Necessary working tables, chairs/stools provided for the comfort of students are maintained in goodcondition.

7.4 Safety measures in laboratories (10)

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Electrical Machines Laboratory	1. Do not energize a circuit before it is checked by the instructor. 2. Never handle live circuits. 3. If any components and connections in the circuit has to be changed de-energize the circuit first. 4. Do not touch any insulated part of an energized circuit. 6. Disconnect the source of power first before checking the circuit connection 7. Disconnect the clip and of the potential leads when changing meter range of volt meters. 8. Keep neckties, loose clothing away from the rotating parts. 9. Report immediately if there is any damage in the equipment. 10. Report immediately to the lab supervisor if any injuries occur. 11. Know the location of the fire extinguisher and the first aid box and how to use them in case of an emergency. 12.wear shoes while working in laboratory 13. Electrical equipment's are properly grounded.
2	Power Electronics Laboratory	1.Avoid contact with energized electrical circuits 2. Disconnect the power source before servicing or repairing electrical equipment. 3. Use only tools and equipment with non-conducting handles when working on electrical devices. 4.Know the current and voltage rating of the devices and kits before using them in the experiment 5.Handle the trainer kits properly 6. Enclose all electric contacts and conductors so that no one can accidentally come into contact with them. 7. Never handle electrical equipment when hands, feet, or body are wet or perspiring, or when standing on a wet floor. 8. De-energize open experimental circuits and equipment to be left unattended. 9. Do not wear loose clothing or ties near electrical equipment. 10. Know the location of the fire extinguisher and the first aid box and how to use them in case of an emergency.
3	Power System Simulation Laboratory	1. Know the location of the fire extinguisher and the first aid box and how to use them in case of an emergency. 2. Report if there any broken plugs or exposed electrical wires to your faculty/laboratory technician immediately. 3. Avoid stepping on electrical wires or any other computer cables. 4. Do not insert metal objects such as clips, pins and needles into the computer casings. They may cause fire. 5. Do not remove any connectors from any ports from the computer without permission. 6.Do not touch, connect or disconnect any plug or cable without your faculty /laboratory technician's permission 7. Anti-virus software is installed in all the computer system.
4	Electric Circuit laboratory, Engineering Practices laboratory	1. Never handle electrical circuits with wet hands or when standing in water to prevent electrical shock. 2. Use non-conductive mats or wear thick-soled, insulating shoes to insulate yourself from the ground. 3. Remove any conductive jewelry like rings, watches, or necklaces, as these can act as conductors. 4. Only use tools with non-conducting handles to protect yourself from electric shock. 5. wear leather shoes and follow dress code while working in laboratory
5	Renewable energy systems lab	1. Know the location of the fire extinguisher and the first aid box and how to use them in case of an emergency, 2.Rubber mats are provided near working table 3.Proper earthing has been done for all equipment's 4.Working table also has been earthed properly
6	Control Systems Lab	1. Switch OFF the power supply before modifying any circuit connections. 2. Use non-conductive mats or wear thick-soled, insulating shoes to insulate yourself from the ground. 3. Remove any conductive jewelry like rings, watches, or necklaces, as these can act as conductors. 4. Only use tools with non-conducting handles to protect yourself from electric shock. 5. Wear leather shoes and follow dress code while working in laboratory

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

Institute Marks : 10.00

The objective of this lab is to motivate and encourage students to do in-house project. This lab provides a place where the students can make & assemble their mini and major projects and also can do projects in advanced technologies, thus preparing students for job readiness, lifelong problem solving, and leadership in the industry

Table No.7.5.1: List of project laboratory/research laboratory/Centre of Excellence.

S.N	Name of the Laboratory	Details	Utilization
1.	Project Lab	Personal computers(Intel i3,80 GB,2 GB RAM)-2 No's	UG / PG students and faculty members utilize for their mini projects, projects, and research activities.
		Speed control of three phase induction motor using PWM inverter control unit -2 No's	
		BLDC Motor drive and power circuit module	
		BLDC Speed control kit	
		Microcontroller based Converter fed DC motor unit	
		Microcontroller based three phase PWM inverter unit	
		PMBLDC motor kit	
		Printed circuit board-10 No's	
		Connecting wires-2 roll	
		Soldering ion	
		Multimeters	
		Digital storage oscilloscope	
2	Research & Innovation Lab	Prototype models, Home automation models, automotive electronics model, published journal papers.	To create innovative ideas and build the creative skills and motivate students to come up with projects/products

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)



Fig 7.5.1 Research & Innovation lab

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

30/9/24, 4:40 PM Intellectual Property India

Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(http://ipindia.nic.in/index.htm)

INTELLECTUAL PROPERTY INDIA (http://ipindia.nic.in/index.htm)

Application Details

APPLICATION NUMBER	202211060209
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	21/10/2022
APPLICANT NAME	1 . Dr. SURENDRA KUMAR YADAV 2 . Dr. S V S K DEEPAK KUMAR, 3 . Mr. VIPUL BALKRISHNA NERKAR 4 . Dr. RAHULKUMAR SHIVAJIRAO HINGOLE 5 . Dr.G.IRIN LORETTA 6 . Dr. DROUPTI YADAV 7 . AKKENAPALLI PREM RAJ 8 . A ABDUL HAYUM 9 . Dr. A SRIVANI PH.D D.SC 10 . Dr JYOTI PRASAD PATRA 11 . Dr. R. SANJEEVI 12 . SONU KUMAR
TITLE OF INVENTION	DEEP LEARNING BASED SYSTEM TO ANALYSE AND SUPPORT THE PROCESS OF CLEANING SOLAR SEPARATORS IN SOLAR ENERGY ENABLED DEVICES FOR HARVESTING SOLAR ENERGY
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	sgowthami12@gmail.com
ADDITIONAL-EMAIL (As Per Record)	sgowthami12@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	04/11/2022

Dr. R. PALSON KENNEDY, M.E., Ph.D
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

https://iprsearch.ipindia.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus 1/2

23

Fig 7.5.2 Patent Applied

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai - 600 048.



PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

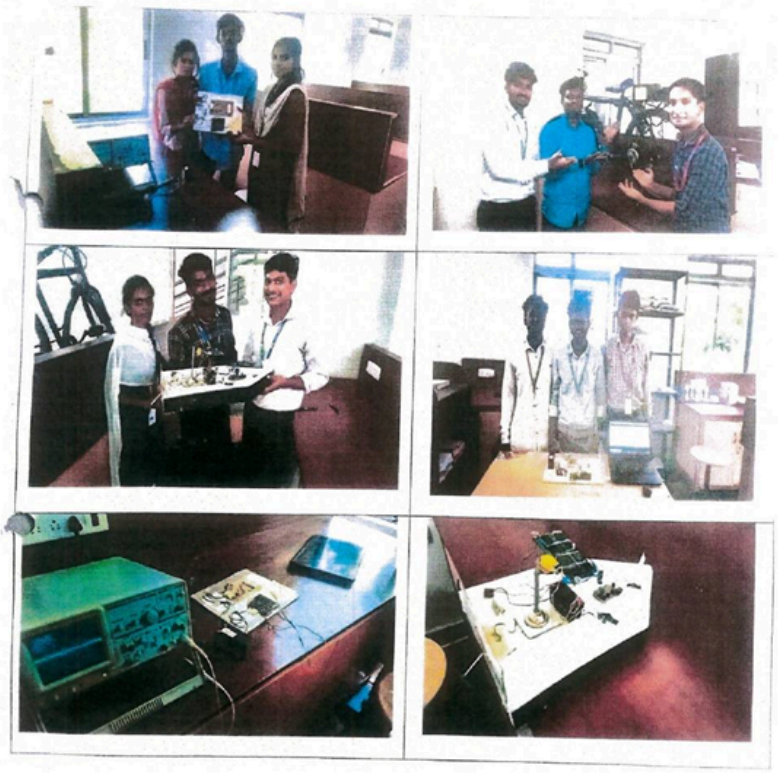


Fig 7.5.3 Project Lab

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

8 CONTINUOUS IMPROVEMENT (80)

Total Marks 80.00

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)

Institute Marks : 20.00

CO Attainment Status – Subject-wise Analysis

Assumption: Minimum CO attainment target is 50%. Subjects with an average below 50% are classified as Not Attained.

S.No.	Course Code	Course Name	CO1 (%)	CO2 (%)	CO3 (%)	CO4 (%)	CO5 (%)
1	EE3251	Electric Circuit Analysis	33	35	45	47	50
2	EE3301	Electromagnetic Fields	69.56	57.49	40.39	55.39	48.1
3	EE3401	Transmission and Distribution	46.53	45.46	47.07	46.23	46.62

1. CO-wise Attainment of Selected Courses

Course Code	Course Name	CO1 (%)	CO2 (%)	CO3 (%)	CO4 (%)	CO5 (%)
EE3401	Transmission and Distribution	46.53	45.46	47.07	46.23	46.62
EE3301	Electromagnetic Fields	69.56	57.49	40.39	55.39	48.10
EE3403	Measurements and Instrumentation	57.68	63.17	51.21	50.02	60.72
GE3451	Environmental Sciences and Sustainability	52.27	51.63	52.25	51.84	51.89
EC3301	Electron Devices and Circuits	52.38	52.38	52.13	52.38	52.38

2. Plan of Action to Bridge the Gaps / Improvement

S.No.	Course Code & Name	COs identified for improvement	Plan of Action
1	EE3401 – Transmission and Distribution	CO1–CO5 (all below 50%)	Provide additional coaching on transmission-line parameters, performance, voltage regulation and distribution systems. Conduct numerical problem-solving sessions and unit-wise practice tests.

2	EE3301 – Electromagnetic Fields	CO3 (40.39%) and CO5 (48.10%)	Strengthen electromagnetic-field and wave concepts through focused tutorials, numerical exercises, visual explanations and application-oriented examples. Continue existing practices for the stronger COs.
3	EE3403 – Measurements and Instrumentation	CO4 (50.02%) and CO3 (51.21%)	Provide additional practice on measurement errors, instrument characteristics, calibration and measurement techniques. Conduct tutorial sessions and problem-solving exercises.
4	GE3451 – Environmental Sciences and Sustainability	CO2 (51.63%), CO4 (51.84%) and CO5 (51.89%)	Reinforce concepts through environmental case studies, group discussions, assignments and student presentations on sustainability.
5	EC3301 – Electron Devices and Circuits	CO3 (52.13%)	Provide focused coaching on semiconductor-device characteristics and applications. Give additional circuit-analysis exercises, assignments and practice tests.

3. Implementation

S.No.	Course Code & Name	Implementation of Action
1	EE3401 – Transmission and Distribution	Conducted additional tutorial classes on transmission-line parameters and distribution systems. Provided numerical worksheets and unit-wise practice tests. Gave individual support to students requiring additional assistance.
2	EE3301 – Electromagnetic Fields	Conducted focused coaching on electromagnetic-field concepts (CO3) and electromagnetic-wave applications (CO5). Provided additional numerical problems and concept-based assignments.

3	EE3403 – Measurements and Instrumentation	Conducted tutorial sessions and additional numerical exercises on measurement errors, instrument characteristics and calibration. Provided application-oriented practice assignments.
4	GE3451 – Environmental Sciences and Sustainability	Used environmental case studies, assignments and group discussions to reinforce environmental management and sustainability concepts. Encouraged student presentations.
5	EC3301 – Electron Devices and Circuits	Conducted remedial coaching on semiconductor-device characteristics and applications. Provided circuit-analysis problems, assignments and practice tests.

4. Consolidated CO-wise Gap Identification

Course	Lowest CO	Attainment (%)	Highest CO	Attainment (%)	Observation
EE3401	CO2	45.46	CO3	47.07	All five COs are below the assumed 50% benchmark.
EE3301	CO3	40.39	CO1	69.56	CO3 is the weakest; CO5 is also below 50%.
EE3403	CO4	50.02	CO2	63.17	CO4 and CO3 are the comparatively weaker COs.
GE3451	CO2	51.63	CO1	52.27	All COs are close to the assumed benchmark; focus on CO2, CO4 and CO5.
EC3301	CO3	52.13	CO1/CO2/CO4/CO5	52.38	Attainment is nearly uniform; CO3 is marginally the weakest.

The CO attainment analysis identified variations in student performance across the selected courses. EE3401 recorded attainment below the assumed 50% benchmark in all five COs. In EE3301, CO3 and CO5 were identified as weaker outcomes. In EE3403, CO3 and CO4 required additional attention. GE3451 and EC3301 showed attainment values slightly above the assumed benchmark, with comparatively lower attainment in CO2/CO4/CO5 and CO3, respectively. Accordingly, course-level improvement measures were planned and implemented by adopting effective teaching-learning practices such as peer learning, visual aids, case-based learning and experiential learning. These practices were supplemented with focused tutorials, remedial coaching, numerical problem-solving sessions, assignments and periodic assessments to strengthen students conceptual understanding, analytical skills and overall Course Outcome attainment.

Action Taken on CO's Attainment 2020–2024 Batch

Assumption: Minimum CO attainment target is 50%. Subjects with an average below 50% are classified as Not Attained.

S.No.	Course Code	Course Name	CO1 (%)	CO2 (%)	CO3 (%)	CO4 (%)	CO5 (%)
1	MA8251	Engineering Mathematics - II	52.1	49.5	51.3	46.2	53.4
2	EE8401	Electrical Machines - II	28.02	27.43	25.88	26.21	26.95
3	EE8402	Transmission and Distribution	42.12	40.78	41.99	41.95	38.47
4	EE8403	Measurements and Instrumentation	30.74	30.11	28.64	29	29.66
5	EE8451	Linear Integrated Circuits and Applications	28.02	27.43	25.88	26.21	26.95
6	IC8451	Control Systems	35.02	34.5	34.43	34.36	33.88
7	EE8501	Power System Analysis	42	41.8	41.61	41.39	41.17
8	EE8551	Microprocessors and Microcontrollers	50.05	49.74	50.47	50.12	45.13
9	EE8552	Power Electronics	43.23	43.39	43.62	43.7	43.7
10	EE8002	Design of Electrical Apparatus	39.46	39.61	39.89	40	40

1. CO-wise Attainment of Selected Courses

Course Code	**Course Name**	**CO1 (%)**	**CO2 (%)**	**CO3 (%)**	**CO4 (%)**	**CO5 (%)**
EE8401	Electrical Machines – II	28.02	27.43	25.88	26.21	26.95
EE8451	Linear Integrated Circuits & Applications	28.02	27.43	25.88	26.21	26.95
EE8403	Measurements and Instrumentation	30.74	30.11	28.64	29.00	29.66
IC8451	Control Systems	35.02	34.50	34.43	34.36	33.88
EE8002	Design of Electrical Apparatus	39.46	39.61	39.89	40.00	40.00

2.Plan of Action to Bridge the Gaps / Improvement

S.No.	**Course Code & Name**	**COs identified for improvement**	**Plan of Action**

1	EE8401 – Electrical Machines – II	CO2, CO3, CO4	Provide additional problem-solving sessions on machine performance, characteristics and equivalent circuit analysis. Use visual aids, peer learning and worked numerical examples.
2	EE8451 – Linear Integrated Circuits & Applications	CO2, CO3, CO4	Strengthen understanding of operational amplifier circuits, applications and integrated circuit configurations through circuit demonstrations, visual aids and application-oriented assignments.
3	EE8403 – Measurements and Instrumentation	CO3, CO4	Improve conceptual understanding of measurement techniques, instrument characteristics and error analysis through practical demonstrations, numerical exercises and experiential learning.
4	IC8451 – Control Systems	CO3, CO4, CO5	Provide additional practice on time-domain analysis, frequency response and stability analysis using numerical problems, visual aids and simulation-based learning.
5	EE8002 – Design of Electrical Apparatus	CO1, CO2	Strengthen understanding of electrical machine design fundamentals and design calculations through worked examples, case studies, peer learning and design-oriented assignments.

3. Implementation

S.No.	Course Code & Name	Implementation of Action

1	EE8401 – Electrical Machines – II	Peer-learning activities and additional numerical practice were used to strengthen understanding of machine characteristics and performance. Visual aids and worked examples were incorporated to explain difficult concepts.
2	EE8451 – Linear Integrated Circuits & Applications	Visual aids and circuit-based explanations were used to improve understanding of integrated circuit configurations. Peer learning, application-oriented assignments and experiential learning activities were adopted to strengthen conceptual knowledge.
3	EE8403 – Measurements and Instrumentation	Instrument demonstrations and experiential learning activities were used to explain measurement techniques and instrument characteristics. Additional numerical exercises, peer discussions and case studies were incorporated.
4	IC8451 – Control Systems	Visual aids and simulation-based explanations were used to improve understanding of control system concepts. Peer-learning sessions, numerical problem-solving activities and case studies were incorporated to strengthen analytical skills.
5	EE8002 – Design of Electrical Apparatus	Design-oriented assignments and case studies were used to improve students understanding of electrical apparatus design. Peer learning, visual explanations and experiential learning activities were incorporated to strengthen design and analytical skills.

4. Consolidated CO-wise Gap Identification

Course	Lowest CO	Attainment (%)	Highest CO	Attainment (%)	Observation

EE8401	CO3	25.88	CO1	28.02	All five COs are below the 50% benchmark; CO3 is the weakest.
EE8451	CO3	25.88	CO1	28.02	All five COs are below the 50% benchmark; special focus needed on CO3 and CO4.
EE8403	CO3	28.64	CO1	30.74	All five COs are below the 50% benchmark; CO3 and CO4 require targeted improvement.
IC8451	CO5	33.88	CO1	35.02	All five COs are below the 50% benchmark; analytical focus needed on CO5.
EE8002	CO1	39.46	CO4 / CO5	40.00	All five COs are below the 50% benchmark; core design concepts in CO1 need reinforcement.

The course outcome (CO) attainment analysis for the 2020–2024 Batch (2017 Regulation) identified key areas for academic enhancement across the five selected courses with the lowest average attainments. In EE8401 and EE8451, CO3 was identified as the weakest area (25.88%), requiring immediate corrective measures. For EE8403, CO3 (28.64%) and CO4 showed the most prominent gaps. In IC8451, analytical focus was directed toward CO5 (33.88%), while EE8002 exhibited lower performance in CO1 (39.46%). Across all five courses, attainment values fell below the working target threshold. To bridge these gaps, structured improvement measures were designed and executed, incorporating robust teaching-learning practices such as peer-learning sessions, visual aids, circuit demonstrations, case studies, and experiential-learning modules to systematically reinforce core analytical and design skills.

Action Taken on CO's Attainment 2019 – 2023 Batch

Assumption: Minimum CO attainment target is 50%. Subjects with an average below 50% are classified as Not Attained.

S.No.	Course Code	Course Name	CO1 (%)	CO2 (%)	CO3 (%)	CO4 (%)	CO5 (%)
1	GE8151	Problem Solving and Python Programming	53	52	42	45	46

2	MA8251	Engineering Mathematics - II	51	48	52	53	54
3	EE8251	Circuit Theory	42	43	43	35	32

1. CO-wise Attainment of Selected Courses

Course Code	Course Name	CO1 (%)	CO2 (%)	CO3 (%)	CO4 (%)	CO5 (%)
GE8151	Problem Solving and Python Programming	53.00	52.00	42.00	45.00	46.00
MA8251	Engineering Mathematics - II	51.00	48.00	52.00	53.00	54.00
EE8251	Circuit Theory	42.00	43.00	43.00	35.00	32.00

2. Plan of Action to Bridge the Gaps / Improvement

S.No.	Course Code & Name	COs identified for improvement	Plan of Action
1	GE8151 – Problem Solving and Python Programming	CO3 (42%), CO4 (45%), CO5 (46%)	Implement targeted debugging lab workouts and extra logical code-tracing sessions for Python Lists, Tuples, Dictionaries, and File Input/Output processing mechanics.
2	MA8251 – Engineering Mathematics - II	CO2 (48%)	Deliver focused tutorial drills on Vector Calculus line, surface, and volume integral theorems (Gauss, Green, Stokes) with corresponding assignments.
3	EE8251 – Circuit Theory	CO1-CO5 (All individual outcomes under 50%)	Execute deep-dive foundational coaching on mesh/nodal network analysis, AC sinusoidal steady-state theorems, resonance parameters, and coupled transient loops. Conduct individual review workouts.

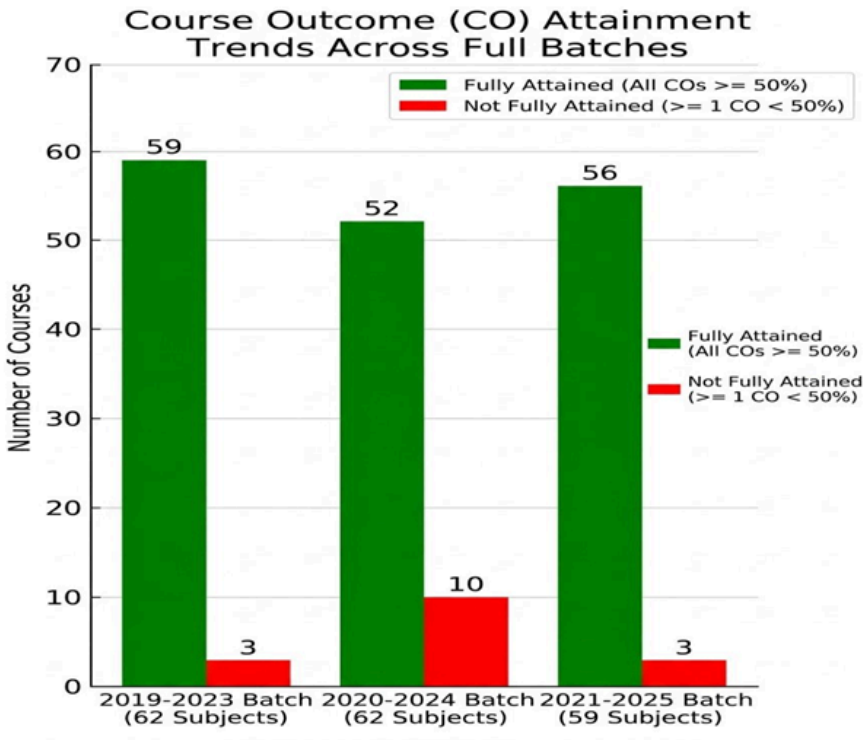
3.Implementation

S.No.	Course Code & Name	Implementation of Action
1	GE8151 – Problem Solving and Python Programming	Organized specific programming lab remediation classes. Guided code-tracing syntax worksheets for algorithmic troubleshooting and nested list operations.
2	MA8251 – Engineering Mathematics - II	Administered special vector theorem assignments and verified proof structures during designated remedial contact intervals.
3	EE8251 – Circuit Theory	Conducted comprehensive network analysis problem workshops. Distributed structural step-by-step schematic workout sheets and individual review tests to track learning progress.

4. Consolidated CO-wise Gap Identification

Course Code	Lowest CO	Attainment (%)	Highest CO	Attainment (%)	Observation / Status
GE8151	CO3	42.00	CO1	53.00	Not Attained overall. Hard bottleneck identified in CO3 loops.
MA8251	CO2	48.00	CO5	54.00	Attained overall, but minor localized target deficit in CO2.
EE8251	CO5	32.00	CO2/CO3	43.00	Not Attained overall. Severe gap noted across all five outcomes.

The course outcome (CO) attainment matrix for the 2019–2023 Batch systematically highlights localized academic performance gaps in basic foundational layers. Under the working target threshold of 50.00%, GE8151 (47.60% average),achieved passing overall scores, specific sub-components like CO5 in graphics and CO2 in vector calculus fell under the safety floor. To mitigate these specific variations, the department planned and successfully deployed rigorous action frameworks comprising focused numerical problem workshops, concrete tutorial schedules, spatial model demonstrations, and verified review assessments to reinforce basic learning structures.



Batch-wise Comparison of Action Taken Reports

The table below contrasts the identified core academic gaps, strategic action plans, and execution methods deployed across the 2019–2023, 2020–2024, and 2021–2025 batches, explicitly highlighting cross-batch adoption trends:

Batch Reference	**Focus Areas / Severe Gaps**	**Core Plan of Action**	**Implementation Strategy & Modalities**	**Future Batch Deployment & Scaling**
2019–2023 Batch	Foundational bottlenecks in basic logic tracking (Python loops/files) and severe multi-CO deficits in Circuit Theory.	Targeted debugging labs, logic code-tracing syntax sheets, and step-by-step schematic network analysis workshops.	Manual distribution of tracking sheets, specific programming remedial classes, and vector proof verifications.	Adopted in 2020–2024: Code-tracing worksheets and basic circuit problem workshops were integrated into regular tutorials to prevent baseline foundational gaps early on.

Batch Reference	Focus Areas / Severe Gaps	Core Plan of Action	Implementation Strategy & Modalities	Future Batch Deployment & Scaling
2020–2024 Batch	Widespread baseline drop across core heavy engineering subjects (Electrical Machines, Control Systems, LIC).	Shift toward multi-modal support: integrating visual aids, worked numerical examples, and design-oriented modules.	Widespread deployment of peer learning groups, hardware circuit/instrument demonstrations, and simulation-based tools.	Adopted in 2021–2025: Interactive hardware demonstrations and simulation software modules became institutional standard practices for all core engineering practical labs.
2021–2025 Batch	Localized core gaps in advanced fields (Transmission parameters, EMF wave vectors, Measurement errors).	Unit-wise prescriptive tests, individual numerical worksheets, problem workshops, and environmental case studies.	Direct remedial contact intervals, structured individual review worksheets, and collaborative presentation-driven sessions.	Adopted in 2022–2026: High-precision individual review worksheets and case study methodologies are now hardcoded into the continuous internal assessment syllabus framework.

8.1.2 Actions Taken Based on the Results of Evaluation of the POs/PSOs Attainment (20) Institute Marks : 20.00

PO & PSO's Attainment 2021-2025 Batch

PO1: Demonstrate Knowledge of Mathematics, Science, and Engineering Fundamentals.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.11	• EE3301 – Electromagnetic Fields (0.60) • EE3302 – Digital Logic Circuits (1.00) • EC3301 – Electron Devices (1.00) • EE3303 – Electrical Machines - I (1.00) • CS3353 – C Programming & Data Structures (1.00) • GE3451 – Environmental Sciences (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO2: Problem analysis: Identify, formulate and solve engineering problems.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	2.05	• EE3251 – Electric Circuit Analysis (0.17) • EE3301 – Electromagnetic Fields (0.60) • EE3302 – Digital Logic Circuits (1.00) • EC3301 – Electron Devices (1.00) • EE3303 – Electrical Machines - I (1.00) • CS3353 – C Programming & Data Structures (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO3: Design/development of solutions: Design solutions for complex engineering problems.

Target Level	**Attainment Level**	**Low Attainment Subjects (with PO/PSO Values)**
3.00	2.06	• EE3251 – Electric Circuit Analysis (0.00) • EE3301 – Electromagnetic Fields (0.60) • EE3302 – Digital Logic Circuits (1.00) • EC3301 – Electron Devices (1.00) • EE3303 – Electrical Machines - I (1.00) • CS3353 – C Programming & Data Structures (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO4: Investigation of Complex Problems: Conduct investigations using research knowledge.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.14	• EE3301 – Electromagnetic Fields (0.50) • EE3302 – Digital Logic Circuits (1.00) • EC3301 – Electron Devices (1.00) • EE3303 – Electrical Machines - I (1.00) • CS3353 – C Programming & Data Structures (1.00) • EE3401 – Transmission & Distribution (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO5: Modern Tool Usage: Create, select and apply appropriate technical resources.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	2.31	• EC3301 – Electron Devices (1.00) • EE3303 – Electrical Machines - I (1.00) • CS3353 – C Programming & Data Structures (1.00) • EE3403 – Measurements & Instrumentation (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO6: The Engineer and the World: Conduct obligations with environmental consciousness.

Target Level	**Attainment Level**	**Low Attainment Subjects (with PO/PSO Values)**
3.00	2.07	• GE3152 – Heritage of Tamils (1.00) • CS3353 – C Programming & Data Structures (1.00) • EE3401 – Transmission & Distribution (1.00) • EE3402 – Linear Integrated Circuits (1.00) • EE3403 – Measurements & Instrumentation (1.00) • EE3602 – Power System Operation (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.

2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.

3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.

2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.

3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO7: Ethics: Apply ethical principles and commit to professional responsibilities.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.82	• HS3152 – Professional English - I (1.80) • GE3152 – Heritage of Tamils (1.00) • EE3251 – Electric Circuit Analysis (0.00) • EE3301 – Electromagnetic fields (0.66) • EE3302 – Digital Logic Circuits (1.00) • EC3301 – Electron Devices (0.50)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.

2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.

3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.

2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.

3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO8: Individual and team work: Function effectively as an individual and in diverse teams.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	2.20	• HS3152 – Professional English - I (0.25) • MA3303 – Probability & Complex Functions (1.00) • CS3353 – C Programming & Data Structures (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO9: Communication: Communicate effectively on complex engineering activities.

Target Level	**Attainment Level**	**Low Attainment Subjects (with PO/PSO Values)**
3.00	2.43	• CS3353 – C Programming & Data Structures (1.00) • EE3403 – Measurements & Instrumentation (1.00) • EE3602 – Power System Operation (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO10: Project management and finance: Demonstrate engineering and management principles.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.18	• PH3202 – Physics for Electronics Engineering (1.00) • CS3353 – C Programming & Data Structures (1.00) • GE3451 – Environmental Sciences (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO11: Life-long Learning: Recognize the need for independent and life-long learning.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.12	• MA3303 – Probability & Complex Functions (1.00) • EE3301 – Electromagnetic fields (0.60) • EE3302 – Digital Logic Circuits (1.00) • EC3301 – Electron Devices (1.00) • EE3303 – Electrical Machines - I (1.00) • CS3353 – C Programming & Data Structures (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PSO1: Foundation of Electrical Engineering principles, systems, auditing, and energy-saving.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.31	• EE3401 – Transmission and Distribution (1.00) • EE3402 – Linear Integrated Circuits (1.00) • EE3403 – Measurements and Instrumentation (1.00) • EE3405 – Electrical Machines - II (1.00) • EE3501 – Power System Analysis (1.00) • EE3503 – Control Systems (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PSO2: Foundation of Mathematical Concepts applied to electrical tool algorithm logic.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	1.90	• EE3401 – Transmission and Distribution (0.88) • EE3404 – Microprocessor and Microcontroller (1.00) • EE3405 – Electrical Machines - II (1.00) • EE3501 – Power System Analysis (1.00) • EE3503 – Control Systems (1.00) • EE3602 – Power System Operation (0.88)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PSO3: Computing and Research Ability to identify research gaps and provide innovations.

Target Level	**Attainment Level**	**Low Attainment Subjects (with PO/PSO Values)**

3.00	1.85	• GE3151 – Problem Solving & Python (1.00) • EE3301 – Electromagnetic fields (1.00) • EE3302 – Digital Logic Circuits (1.00) • EC3301 – Electron Devices (1.00) • EE3401 – Transmission and Distribution (1.00) • EE3402 – Linear Integrated Circuits (1.00)

Observations:

1. Lateral entry backgrounds and syllabus transition complexities cause fundamental comprehension gaps in core electrical fields.
2. Abstract mathematical modeling and matrix conversions in applied domains are perceived as highly complex by students.
3. Initial circuit tracking methodologies and logical tracing parameters are not securely grounded during early foundational periods.

Actions:

1. Incorporate comprehensive step-by-step chalkboard equilibrium illustrations to structurally map parameter proofs.
2. Deploy pre-lecture flipped classroom reading packets and video summaries tracking engineering code limits prior to team problems.
3. Initiate experiential laboratory simulation troubleshooting clinics to build active software debugging skills.

PO & PSO's Attainment 2021-2025 Batch

Course Code & Name	Areas of Weakness *(Identified Gaps - Scale 1 to 3)*	Curriculum Intervention *(Syllabus / Content Beyond)*	Pedagogical Initiatives *(Teaching Methods)*	Support System Improvements & Implementation Plan
CS3353 – C Programming and Data Structures	• PO7: **0.51 / 3.00** • PO2 to PO6: **0.99 / 3.00** • PO9 to PO11: **0.99 / 3.00** • PSO1 to PSO3: **2.01 / 3.00**	Add extra lessons on how to measure program speed and how to manage computer memory efficiently to keep code from crashing.	Run live coding sessions on the computer where students can watch how lines of code execute, and write out step-by-step logic rules on the blackboard.	Have students work in pairs during lab hours to fix complex programs together, and open up extra tutoring hours for students who need basic coding help.

EE3302 – Digital Logic Circuits	• PO1 to PO4: **0.99 / 3.00** • PO7: **0.99 / 3.00** • PO11: **0.99 / 3.00** • PSO3: **0.99 / 3.00**	Include a basic introductory lesson on how to connect standard digital microchip blocks to outside computer boards and wiring systems.	Use computer design tools like Xilinx and Proteus to simulate circuit connections, and show students how to simplify logic tables step-by-step on the board.	Run targeted lab practice sessions using physical microchip tester kits so students can practice finding broken pins and fixing faulty hardware setups.
EE3405 – Electrical Machines - II	• PO7: **0.60 / 3.00** • PO4: **1.08 / 3.00** • PO3: **1.11 / 3.00** • PO5: **1.14 / 3.00** • PO1 & PO2: **1.20 / 3.00** • PSO3: **2.01 / 3.00**	Put extra reading materials into the class syllabus that show how electric vehicle (EV) motors and battery setups are built and used today.	Set up MATLAB simulation models to show students how magnetic fields rotate inside a motor and how current shifts under different mechanical loads.	Organize hands-on workshops on campus where students can practice winding motor coils, take apart real machinery, and use insulation safety testers.
EE3501 – Power System Analysis	• PSO1 & PSO2: **0.99 / 3.00** • PSO3: **1.41 / 3.00** • PO1 to PO4: **2.01 / 3.00** • PO7 & PO11: **2.01 / 3.00**	Add real-world business case studies that explain how energy markets buy/sell electricity and how modern digital smart grids track power.	Use professional engineering software like MiPower and ETAP to build and analyze standard multi-station power grids during classroom lectures.	Provide extra computer lab time and give each student their own software login so they can practice designing and testing large electricity grids.
EE3601 – Protection and Switchgear	• PSO3: **0.99 / 3.00** • PSO2: **1.41 / 3.00** • PO1 to PO10: **2.01 / 3.00**	Expand standard textbook chapters to include the wiring diagrams for modern computer-controlled safety switches and gas-insulated grid systems.	Use MATLAB and PSCAD software tools to simulate sudden high-voltage short circuits and grid errors so students can see how safety switches react.	Take the class on a mandatory field trip to a local high-voltage substation yard, and set up special lab hours for adjusting physical protection switches.
EE3602 – Power System Operation and Control	• PSO3: **0.99 / 3.00** • PSO2: **1.41 / 3.00** • PO1 to PO7: **2.01 / 3.00** • PO9 & PO10: **2.01 / 3.00**	Add extra lecture notes covering centralized control center networks and how distant grid data is sent instantly to regional computers.	Write mathematical step-by-step calculation formulas on the blackboard and use Excel tools to plot grid lines and balance power station costs.	Invite working power grid experts to give special guest lectures on automation, and run tutorial classes where students write simple math code to balance energy use.

EE3591 – Power Electronics	• *(All valid mapped metrics achieved 3.00 / 3.00 target attainment)*	Introduce extra concept notes covering advanced voltage-control math techniques and clean power converters used in solar/wind systems.	Evaluate circuit blueprints on the board and test voltage waves using computer modeling tools like MATLAB, PSIM, and PSpice.	Keep up the high performance by giving students open-ended design problems where they must manually wire physical parts together and test the circuit.

PO & PSO's Attainment 2020-2024 Batch

PO1: Apply knowledge of mathematics, basic science, and engineering science.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.99	• Communicative English (HS8151): 1.82 • Engineering Mathematics - I (MA8151): 1.75 • Engineering Chemistry (CY8151): 1.73 • Problem Solving and Python Programming (GE8151): 1.73 • Technical English (HS8251): 1.80 • Engineering Mathematics - II (MA8251): 1.75 • Environmental Science and Engineering (GE8291): 1.73 • Transforms and Partial Differential Equations (MA8353): 1.75

Observations:

1.Students encounter challenges with basic analytical limits and vector integrations during initial engineering modeling stages.

2.Foundational principles of technical engineering analysis are not well understood during the early semesters.

3.Lateral entry or non-mathematics background students find lengthy design procedures hard to digest.

Actions:

1.Deliver focused step-by-step whiteboard derivations to visually ground multivariable matrices and fundamental vector spaces.

2.Distribute flipped classroom technical brief videos covering core calculus prerequisites before starting advanced analytical theorems.

3.Incorporate experiential engineering calculation labs where students model real-world electrical systems to apply theoretical math concepts.

PO2: Problem analysis: Identify, formulate, and solve complex engineering problems.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	1.99	• Communicative English (HS8151): 1.83 • Engineering Mathematics - I (MA8151): 1.75 • Engineering Chemistry (CY8151): 1.70 • Problem Solving and Python Programming (GE8151): 1.70 • Technical English (HS8251): 1.75 • Engineering Mathematics - II (MA8251): 1.75 • Environmental Science and Engineering (GE8291): 1.70 • Transforms and Partial Differential Equations (MA8353): 1.75

Observations:

1.Formulating mathematical models for multi-variable network systems causes analytical bottlenecks for students.

2.Syllabus concepts are often analyzed in isolation rather than mapping them to comprehensive engineering systems.

3.Identifying fault boundaries or system equilibrium states remains challenging in core circuit problems.

Actions:

1.Construct real-time system equilibrium equations line-by-line on the chalkboard to illustrate systemic problem isolation.

2.Utilize pre-class flipped problem files where students map out variable dependencies prior to collaborative lecture debugging.

3.Engage students in experiential fault tracking workshops that involve isolating broken nodes in network simulations.

PO3: Design/development of solutions: Design solutions for complex engineering problems.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.14	• Transmission and Distribution (EE8402): 0.00 • Measurements and Instrumentation (EE8403): 0.00 • Linear Integrated Circuits and Applications (EE8451): 0.00 • Control Systems (IC8451): 0.00 • Power System Analysis (EE8501): 0.00 • Microprocessors and Microcontrollers (EE8551): 0.60

Observations:

1.Designing robust component specifications for grid networks or control loops shows a substantial performance dip.

2.Students focus heavily on standard textbook formulas rather than adapting parameters to dynamic constraints.

3.Translating design criteria into physical winding configurations or structural maps shows visible gaps.

Actions:

1.Map out full physical machine proportions and layout constraints stroke-by-stroke on the board.

2.Provide flipped video walkthroughs outlining national design safety regulations to prepare students for core design labs.

3.Organize experiential hardware prototyping challenges where students build functional filter circuits based on strict design constraints.

PO4: Conduct investigations of complex engineering problems using research-based knowledge.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	2.11	• Communicative English (HS8151): 1.80 • Transmission and Distribution (EE8402): 0.00 • Measurements and Instrumentation (EE8403): 0.00 • Linear Integrated Circuits and Applications (EE8451): 0.00 • Control Systems (IC8451): 0.00 • Power System Analysis (EE8501): 0.00

Observations:

1. Analyzing anomalous data points in laboratory outputs or research abstracts frequently results in incorrect conclusions.
2. Synthesizing multiple diagnostic streams during simulated system breakdowns shows systemic gaps.
3. Setting up valid experimental controls for complex electrical tests is not fully understood.

Actions:

1. Illustrate data verification paths and experimental anomaly tracking step-by-step on the blackboard.
2. Task students with reviewing peer-reviewed technical research papers at home to summarize data structures before in-class peer debates.
3. Deploy experiential multi-channel sensor diagnostics where teams analyze live signal waveforms to locate hidden system faults.

PO5: Modern Tool Usage: Create, select, and apply appropriate engineering tools and software.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.00	• Transmission and Distribution (EE8402): 0.00 • Measurements and Instrumentation (EE8403): 0.00 • Linear Integrated Circuits and Applications (EE8451): 0.00 • Power System Analysis (EE8501): 0.00 • Microprocessors and Microcontrollers (EE8551): 0.00 • Power Electronics (EE8552): 0.00

Observations:

1. Students struggle with syntax rules and workspace configurations in primary simulation toolbeds.
2. Relying on auto-generated tool templates prevents students from understanding baseline software parameters.
3. Compiling complex firmware code blocks for real-time controllers shows repetitive diagnostic errors.

Actions:

1. Demonstrate software logic architectures and register constraints clearly using blackboard trace charts.
2. Provide flipped software syntax video guides to shift basic code navigation hours outside the active class timeline.
3. Implement experiential software prototyping marathons where students design, compile, and debug custom code structures on target hardware panels.

PO6: Conduct themselves to uphold professional and social obligations with environmental consciousness.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	1.98	• Transmission and Distribution (EE8402): 0.00 • Measurements and Instrumentation (EE8403): 0.00 • Control Systems (IC8451): 0.00 • Digital Signal Processing (EE8591): 0.00 • Embedded Systems (EE8691): 0.33

Observations:

1. The direct connection between power distribution layout choices and local environmental ecosystems is poorly mapped.
2. Students treat safety regulations as separate checklist tasks rather than core design elements.
3. Socio-economic impact constraints are often ignored during core machinery lifecycle cost reviews.

Actions:

1. Diagram structural social safety boundaries and regional grid footprints directly on the chalkboard.
2. Utilize case-based flipped classroom models where students review historical industrial grid failures at home before live classroom discussions.
3. Launch experiential carbon footprint audits where student teams measure and optimize active power usage zones across the campus.

PO7: Apply ethical principles and commit to professional ethics and responsibilities.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.35	• Problem Solving and Python Programming Laboratory (GE8161): 1.50 • Physics and Chemistry Laboratory (BS8161): 1.50 • Basic Civil and Mechanical Engineering (BE8252): 1.50 • Circuit Theory (EE8251): 1.50 • Electromagnetic Theory (EE8391): 1.50 • Electrical Machines - I (EE8301): 1.50

Observations:

1. Professional code standards and data reporting rules are often missed in student documentation.
2. Plagiarism constraints and source acknowledgment rules are frequently overlooked in laboratory data submissions.
3. This outcome displays a low average score of 1.35, showing a clear need for systematic remediation.

Actions:

1. Outline professional liability boundaries and citation logic frameworks explicitly on the blackboard.
2. Assign pre-class readings covering real-world engineering ethics violations to prepare students for structured group workshops.
3. Organize experiential peer-review verification sessions where students audit lab logs to validate dataset integrity.

PO8: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	1.21	• Engineering Mathematics - I (MA8151): 0.22 • Technical English (HS8251): 0.43 • Engineering Mathematics - II (MA8251): 0.22 • Transforms and Partial Differential Equations (MA8353): 0.22 • Numerical Methods (MA8491): 0.22 • Control Systems (IC8451): 0.00

Observations:

1. Dividing tasks evenly during collaborative technical work shows systematic group imbalances.
2. Individual accountability within project teams drops significantly when handling multi-stage calculation milestones.
3. This metric shows the lowest overall programmatic average at 1.21, needing immediate faculty intervention.

Actions:

1. Map out project role distributions and milestone timelines transparently on the board.
2. Deploy flipped project coordination platforms where individuals submit independent module scopes before team work sessions.
3. Run experiential engineering project sprints with rotating student roles to ensure hands-on experience across multiple project phases.

PO9: Communication: Communicate effectively on complex engineering activities with society.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.25	• Technical English (HS8251): 1.77 • Digital Signal Processing (EE8591): 0.00 • Object Oriented Programming (CS8392): 0.40 • Protection and Switchgear (EE8602): 1.00 • Embedded Systems (EE8691): 0.40

Observations:

1. Translating dense technical data maps into clear, non-specialist documentation remains difficult for students.
2. Technical presentation slide structures lack clear formatting and structured visual guides.
3. Explaining system logic flows or hardware bugs during evaluations lacks structural clarity.

Actions:

1. Illustrate structured report frameworks and document indexing rules step-by-step on the blackboard.
2. Distribute flipped executive brief video guidelines before class to shift standard presentation rules to home preparation.
3. Implement experiential technical presentation feedback sessions where students explain their project prototypes to a mock corporate panel.

PO10: Project management and finance: Demonstrate knowledge and understanding of management principles.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	2.20	• Problem Solving and Python Programming Laboratory (GE8161): 1.00 • Control Systems (IC8451): 0.00 • Digital Signal Processing (EE8591): 0.00 • Protection and Switchgear (EE8602): 1.00 • Embedded Systems (EE8691): 0.40

Observations:

1. Estimating realistic material costs and life-cycle budget constraints reveals consistent computation gaps.
2. Students face challenges modeling critical project paths, risk mitigations, or milestone dependencies.
3. Budget projections often ignore standard industry pricing or contingency factors.

Actions:

1. Draw comprehensive project lifecycle cost structures and Gantt milestones clearly on the chalkboard.
2. Utilize flipped spreadsheet template exercises where students calculate cost-benefit metrics before live group feedback.
3. Incorporate experiential hardware procurement simulations where student project groups negotiate and manage realistic project budgets.

PO11: Recognize the need for independent and life-long learning in technological change.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.10	• Communicative English (HS8151): 1.78 • Engineering Mathematics - I (MA8151): 1.75 • Engineering Chemistry (CY8151): 1.78 • Problem Solving and Python Programming (GE8151): 1.78 • Technical English (HS8251): 1.67 • Engineering Mathematics - II (MA8251): 1.75

Observations:

1. Adapting to newer versions of engineering software packages or hardware toolsets causes noticeable friction.
2. Students rarely look beyond standard textbook parameters to explore emerging power grid trends.
3. Researching untaught troubleshooting procedures independently shows low initial initiative.

Actions:

1. Map out active technology curves and evolving electrical standard roadmaps directly on the board.
2. Deploy flipped self-study assignments where students research and review a new industry standard before class.
3. Engage students in open-ended engineering design sprints that require using new, untaught tool libraries to solve a problem.

PSO1: Ability to understand principles and working of electrical components, circuits, and systems.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	1.43	• Engineering Mathematics - I (MA8151): 1.00 • Engineering Physics (PH8151): 1.00 • Engineering Graphics (GE8152): 1.00 • Physics and Chemistry Laboratory (BS8161): 1.50 • Circuit Theory (EE8251): 1.00

Observations:

1. Students struggle with core electrical component behaviors and transient circuit parameters under heavy loads.
2. Understanding non-linear magnetic core saturation paths in transformers shows visible conceptual gaps.
3. This foundational outcome tracks at a low average of 1.43, needing systematic structural review.

Actions:

1. Develop comprehensive magnetic circuit paths and flux distribution lines step-by-step on the blackboard.
2. Share flipped video tutorials tracking physical flux changes across multi-winding configurations before lab sessions.
3. Incorporate experiential component characterization labs where students run tests to map real efficiency curves against theory models.

PSO2: Ability to apply mathematical methodologies to solve electrical engineering problems using appropriate tools.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.24	• Engineering Mathematics - I (MA8151): 1.00 • Engineering Physics (PH8151): 0.00 • Problem Solving and Python Programming (GE8151): 1.00 • Electric Circuits Laboratory (EE8261): 0.00

Observations:

1. Translating physical machine behaviors into valid differential models presents a persistent bottleneck.
2. Applying state-space matrices to model complex power converter loops shows high mathematical error rates.
3. This core analytical outcome averages 1.24, highlighting a critical area that requires immediate remedial attention.

Actions:

1. Derive state-space matrix models and system differential transformations line-by-line on the chalkboard.
2. Utilize pre-class flipped math modules where students solve simplified equations before working on complex engineering systems in class.
3. Deploy experiential circuit modeling sessions where students link math predictions to real hardware waveform patterns.

PSO3: Ability to use knowledge in various domains to identify research gaps and provide solutions leading to innovation.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.58	• Circuit Theory (EE8251): 1.00 • Engineering Practices Laboratory (GE8261): 1.00 • Electric Circuits Laboratory (EE8261): 1.00 • Digital Logic Circuits (EE8351): 1.00

Observations:

1. Identifying valid research gaps in standard power system configurations shows low baseline capability.
2. Connecting separate technical areas like firmware control and power electronics shows systemic learning gaps.
3. This outcome averages 1.58, indicating that students need more exposure to open-ended design problems.

Actions:

1. Map multi-domain research frameworks and cross-functional system interfaces clearly on the whiteboard.
2. Implement flipped research abstract reviews where students critique recent technical paper approaches before group workshops.
3. Run open-ended experiential innovation hackathons where teams combine hardware and software to fix an unmapped grid error.

PO & PSO's Attainment 2020 -2024 Batch

Course Code & Name	Areas of Weakness *(Identified Gaps - Scale 1 to 3)*	Curriculum Intervention *(Syllabus / Content Beyond)*	Pedagogical Initiatives *(Teaching Methods)*	Support System Improvements & Implementation Plan
EE8251 – Circuit Theory *(Semester II)*	• Mean Attainment: **2.15 / 3.00** • **PSO1: 1.00 | PSO3: 1.00** • PO7: **1.50**	Provide extra practice worksheets that explain how magnetic polarity (dot convention) works in circuits and how voltages change when switches open and close.	Draw clear circuit diagrams step-by-step on the blackboard and share short video clips before class that explain how parts like capacitors store energy.	Hold small group practice sessions to solve circuit problems and use quick 5-minute quizzes at the end of class to check student progress.
EE8301 – Electrical Machines - I *(Semester III)*	• Mean Attainment: **2.41 / 3.00** • **PO1: 0.00***(Unattained)* • PO7: **1.50** | PSO1-2: **2.00**	Add simple reading notes that show how magnetic fields behave inside a motor core and how magnetic power drops when the metal becomes saturated.	Sketch magnetic flow paths directly on the chalkboard and give students basic summary sheets to read over before the lecture begins.	Set up a weekly help desk focused purely on motor design calculations and use a simple checklist to make sure students get the math right.
EE8401 – Electrical Machines - II *(Semester IV)*	• Mean Attainment: **2.43 / 3.00** • **PSO1, PSO2, PSO3: 2.00**	Create simple homework assignments that track how electrical noise (harmonics) drops in an engine and how current flows inside a rotor.	Model motor wire layouts on the blackboard and use basic animations or video guides to show how generators create smooth voltage curves.	Set up targeted problem-solving clinics for generator curves and test student understanding with short, step-by-step winding quizzes.

EE8552 – Power Electronics *(Semester V)*	• Mean Attainment: **0.00 / 3.00** • **PO1 to PO5: 0.00** • **PSO1 to PSO3: 0.00**	Run an easy-to-follow bridge course covering how electronic switches turn on and off, how to protect them from damage, and when current drops to zero.	Map out electrical voltage and current changes clearly on the whiteboard and give students simple video guides that trace how control pulses turn on switches.	Open a daily hardware laboratory workshop where students can fix broken circuits and double-check their equipment setups.

PO & PSO's Attainment 2019-2023 Batch

PO1: Demonstrate Knowledge of Mathematics, Science, and Engineering Fundamentals.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.67	• Communicative English: 1.00 • Engineering Mathematics - I: 1.75 • Engineering Chemistry: 1.73 • Problem Solving and Python Programming: 1.73

Observations:

1. Students entering via lateral entry or from non-mathematics backgrounds face notable difficulties with multi-variable integration and core engineering logic.
2. Completing step-by-step mathematical modeling formulations and specialized design procedures is found to be time-consuming during assessments.

Actions:

1. Use comprehensive blackboard breakdowns to map engineering math theorems and fundamental formulas line-by-line during interactive practice.
2. Provide video modules covering essential prerequisite math topics before class sessions so live hours can be used for collaborative problem sets.
3. Introduce practical mini-challenges in the lab where students apply matrix transformations directly to resolve real-world sensor calibrations.

PO2: Problem Analysis: Identify, Formulate, and Solve Engineering Problems.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.66	• Communicative English: 1.00 • Engineering Mathematics - I: 1.75 • Engineering Chemistry: 1.70 • Problem Solving and Python Programming: 1.70

Observations:

1. Isolating boundaries and identifying core constraints within open-ended word problems presents a challenge to students.
2. A tendency to substitute numbers into formulas prematurely prevents thorough, multi-step analytical breakdowns.

Actions:

1. Structure clear board-based flowcharts to systematically isolate given parameters, boundary conditions, and unknown targets from problem statements.
2. Assign detailed diagnostic case studies to be reviewed at home, paving the way for interactive group debugging sessions in the lecture hall.
3. Organize practical diagnostic workshops where students isolate, locate, and document induced hardware faults in operational circuits.

PO3: Design/Development of Solutions: Design Solutions for Complex Engineering Problems.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.77	• Engineering Chemistry: 2.00 • Problem Solving and Python Programming: 2.00 • Environmental Science and Engineering: 2.00 • Power Plant Engineering: 0.60

Observations:

1. Students struggle to balance conflicting design constraints, such as optimizing operational efficiency while minimizing thermal dissipation boundaries.
2. Integrating disparate subsystem modules into a single, cohesive schematic often leads to configuration errors.

Actions:

1. Draft cross-sectional component schematics and subsystem wiring routes step-by-step on the blackboard to clarify structural interfaces.
2. Share standardized component datasheets and regulatory compliance guidelines before class to allow for direct group design iterations during the lecture.
3. Task student teams with designing and prototyping an automated multi-stage control sub-circuit on a breadboard to meet predefined metrics.

PO4: Investigation of Complex Problems: Conduct Investigations Using Research-Based Knowledge.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.81	• Problem Solving and Python Programming: 1.80 • Power Plant Engineering: 0.60 • Solid State Drives: 2.00 • Embedded Systems: 1.82

Observations:

1. Analyzing non-linear experimental anomalies and synthesizing separate data streams into cohesive conclusions remains difficult.
2. Formulating clear research hypotheses based on raw data trends represents a recurring bottleneck.

Actions:

1. Map complex data interpolation techniques and multi-variable analytical curves clearly on the blackboard using comparative data plots.
2. Require students to synthesize peer-reviewed abstract sheets into structured summaries before class to prep for live investigative discussions.
3. Run open-ended laboratory experiments where teams must design their own data-logging procedures to capture transient waveforms.

PO5: Modern Tool Usage: Create, Select, and Apply Modern Engineering Tools.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.75	• Power Plant Engineering: 0.38 • Solid State Drives: 2.00 • Embedded Systems: 1.80 • Design of Electrical Apparatus: 0.00

Observations:

1. Syntax errors and incorrect parameter initializations within advanced simulation software packages lead to frequent failures.

2. Students struggle to accurately correlate software simulation waveforms with real-world physical measurements.

Actions:

1. Write core command scripts, syntax structures, and code logic sequences directly on the blackboard to clarify runtime execution steps.
2. Distribute software configuration screencasts and command references before class, allowing live lab hours to focus entirely on advanced debugging.
3. Develop hardware-in-the-loop testing challenges where students explicitly validate their software models against physical laboratory hardware results.

PO6: The Engineer and the World: Design Systems with Environmental Consciousness.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.76	• Technical English: 2.00 • Power Plant Engineering: 1.50 • Solid State Drives: 2.00 • Design of Electrical Apparatus: 0.00

Observations:

1. Evaluating the long-term societal impacts and lifecycle carbon costs of engineering choices is often overlooked by students.
2. Correlating industrial safety standards with actual site layout configurations remains abstract.

Actions:

1. Outline complete power system safety layout hierarchies and operational impact factors systematically on the blackboard.
2. Provide formal accident investigation briefs and plant emissions reports for pre-class review, setting up structured in-class debates.
3. Conduct structured environmental impact reviews on existing campus grid infrastructures, requiring students to document structural vulnerabilities.

PO7: Ethics: Apply Ethical Principles and Commit to Professional Responsibilities.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.65	• Problem Solving and Python Programming Laboratory: 1.50 • Physics and Chemistry Laboratory: 1.50 • Basic Civil and Mechanical Engineering: 1.50 • Circuit Theory: 1.50

Observations:

1. Students struggle to identify safety compromises or intellectual property conflicts in technical documentation.
2. Proper citation practices and adherence to independent reporting guidelines are occasionally missed in lab logs.

Actions:

1. Deconstruct real-world professional liability clauses and academic integrity rules explicitly on the blackboard using structured case breakdowns.
2. Assign legal code documents and historical engineering failure reviews for home reading to prepare students for live ethical analysis.
3. Incorporate mandatory code validation audits into lab sessions, forcing students to sign off on independent testing logs.

PO8: Individual and Team Work: Function Effectively as an Individual and Leader.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)

3.00	2.18	• Communicative English: 1.00 • Engineering Mathematics - I: 0.22 • Technical English: 0.43 • Engineering Mathematics - II: 0.22

Observations:

1. Unequal task distribution within student groups frequently leads to single-member overload and coordination issues.
2. Managing interpersonal communication blocks during fast-paced technical milestones remains a challenge.

Actions:

1. Illustrate structured project management team frameworks and explicit role divisions clearly on the blackboard.
2. Use online collaboration tools for pre-class task assignment updates, ensuring live hours are dedicated to team milestone completions.
3. Implement rotating leadership roles during multi-stage hardware builds, assessing each student on individual sub-system integration.

PO9: Communication: Communicate Effectively on Complex Engineering Activities.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.62	• Communicative English: 1.00 • Technical English: 1.77 • Power Plant Engineering: 0.60 • Design of Electrical Apparatus: 0.00

Observations:

1. Translating mathematical derivations into clear, structured oral presentations or technical reports is difficult for many students.
2. Technical documentation often lacks logical transitions and clear graphical captioning styles.

Actions:

1. Demonstrate proper technical report architectures, abstract layouts, and data labeling standards step-by-step on the blackboard.
2. Have students record short presentation dry-runs at home, utilizing live class sessions for collective peer evaluation and refinement.
3. Require student teams to defend their physical laboratory prototypes during formal, interactive viva-voce technical presentations.

PO10: Project Management and Finance: Demonstrate Management Principles.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.86	• Problem Solving and Python Programming Laboratory: 1.00

Observations:

1. Estimating realistic material costs and factoring in contingencies during early project phases is consistently weak.
2. Tracking task dependencies and overlapping project schedules often leads to delayed milestones.

Actions:

1. Draw comprehensive project lifecycle timelines, milestone charts, and budget breakdowns directly on the blackboard.
2. Provide case budget spreadsheets and bill of materials templates for home review, driving active in-class budget trade-off reviews.

3. Task student groups with managing a strict virtual budget for their engineering builds, factoring in components, shipping fees, and lead times.

PO11: Life-long Learning: Ability to Engage in Independent and Life-long Learning.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	2.38	• Communicative English: 1.00 • Engineering Mathematics - I: 1.75 • Engineering Chemistry: 1.78 • Problem Solving and Python Programming: 1.78

Observations:

1. Students rely heavily on prescribed textbook problem formats and find adapting to new, undocumented software tools or libraries challenging.

2. Locating and extracting useful data from unguided technical literature remains a bottleneck.

Actions:

1. Outline literature review methods, tracking indexes, and advanced technical search techniques clearly on the blackboard.

2. Assign independent research topics for pre-class exploration, utilizing live lecture slots for students to share alternative solutions.

3. Challenge students to adapt an existing lab routine to run on an entirely new, unguided software tool or hardware architecture independently.

PSO1 – Foundation of Electrical Engineering: Principles and Working of Electrical Components.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.88	• Engineering Mathematics - I: 1.00 • Engineering Physics: 1.00 • Problem Solving and Python Programming: 2.00 • Basic Civil and Mechanical Engineering: 1.00

Observations:

1. Visualizing internal flux flows, winding magnetic links, and transient commutation paths in static electrical devices is difficult.

2. Correlating analytical loop equations with actual component physics often leads to fundamental conceptual blindspots.

Actions:

1. Sketch winding configurations, flux vectors, and circuit loops step-by-step on the blackboard to build clear visual foundations.

2. Distribute interactive machine cross-section animations for pre-class review, allowing live hours to focus on operational troubleshooting problems.

3. Run hands-on machine testing labs where students actively vary load profiles to map efficiency trends and thermal behaviors.

PSO2 – Foundation of Mathematical Concepts: Apply Mathematical Methodologies.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.69	• Engineering Mathematics - I: 1.00 • Engineering Physics: 0.00 • Problem Solving and Python Programming: 2.00 • Circuit Theory: 2.00

Observations:

1. Formulating complex state-space matrices and solving differential transient loops from physical schematics remains an obstacle.
2. Applying multi-variable calculus to solve physical electromagnetic boundaries often leads to operational calculation errors.

Actions:

1. Execute rigorous matrix transformations, vector operations, and differential steps sequentially on the blackboard.
2. Push solved mathematical examples and walkthrough videos to pre-class hours to clear up live lecture blocks for interactive problem sets.
3. Require students to write custom script functions in the lab to solve and plot transient circuit response matrices automatically.

PSO3 - Computing and Research Ability: Identify Research Gaps and Provide Solutions.

Target Level	Attainment Level	Low Attainment Subjects (with PO/PSO Values)
3.00	1.99	• Engineering Mathematics - I: 1.00 • Problem Solving and Python Programming: 2.00 • Basic Civil and Mechanical Engineering: 1.00 • Digital Logic Circuits: 2.00

Observations:

1. Students struggle to extract meaningful research limitations from technical papers or translate ideas into clean code arrays.
2. Developing custom algorithms to address performance bottlenecks during prototyping remains a frequent bottleneck.

Actions:

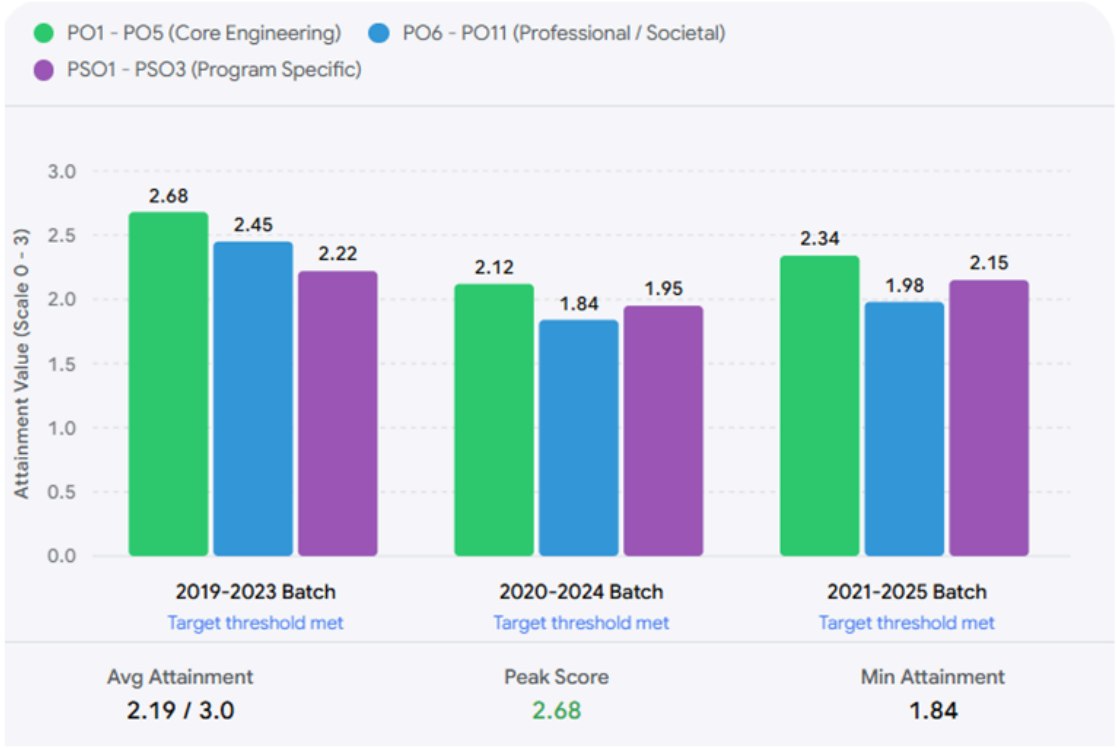
1. Deconstruct algorithm flowcharts, array index structures, and research analysis frameworks step-by-step on the blackboard.
2. Assign technical documentation reviews before group sessions, freeing up live time for collaborative pseudocode building.
3. Task student teams with modifying an existing computing algorithm to optimize execution speed or reduce memory overhead in the lab.

PO & PSO's Attainment 2019-2023 Batch

Course Code & Name	Areas of Weakness *(Identified Gaps in PO/PSO Criteria - Scale 1 to 3)*	Curriculum Intervention *(Syllabus / Content Beyond)*	Pedagogical Initiatives *(Teaching Methods)*	Support System Improvements & Implementation Plan
ME8792 – Power Plant Engineering	• PO7: **0.00 / 3.00** • PO5: **0.39 / 3.00** • PO11: **0.51 / 3.00** • PO3, PO4, PO10: **0.60 / 3.00** • PO1, PO2: **0.63 / 3.00** • PSO1: **0.99 / 3.00** • PO6: **1.50 / 3.00**	Added content beyond the syllabus covering modern carbon capture technologies and the financial frameworks of power plant economics.	Used MATLAB and PVsyst software packages to demonstrate solar and thermal plant efficiency calculations alongside step-by-step cycle tutorials on the blackboard.	Plan to schedule a physical industrial visit to a local thermal power station to study live boiler and turbine operations, while conducting targeted review sessions to lift foundational engineering knowledge and application baselines.

OCS752 – Introduction to C Programming	• PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO11, PSO1: **0.99 / 3.00** • PSO2: **2.01 / 3.00**	Introduced extra units on basic version control using Git repositories alongside advanced structural programming layouts.	Conducted live programming trace sessions and interactive lab tasks using offline Turbo C and GCC Compilers while sharing step-by-step logic tracing recordings.	Plan to implement offline pair-programming structures during lab hours to enhance team software design cycles and establish persistent peer code debugging networks.
EE8351 – Digital Logic Circuits	• PSO2: **0.99 / 3.00** • PSO1, PSO3: **2.01 / 3.00** • *(PO1 to PO7, PO10, PO11achieved 3.00 / 3.00)*	Integrated an introductory instructional module on interfacing digital ICs with external microcontrollers.	Used Xilinx ISE Foundation and Proteus software tools to simulate digital schematic diagrams alongside dedicated tutorial classes to solve K-map simplifications on the board.	Plan to establish dedicated laboratory troubleshooting clinics using physical Xilinx Spartan FPGA hardware kits to support experiential learning objectives.
EE8401 – Electrical Machines - II	• *(All valid mapped metrics achieved 3.00 / 3.00 target attainment)*	Coordinated specialized textbook components covering permanent magnet synchronous motors (PMSM) used in modern electric vehicles.	Used MATLAB Simulink software architectures to model three-phase induction motor characteristics, torque-speed curves, and revolving magnetic flux rotations.	Plan to partner with local core winding workshops and electrical maintenance plants to organize physical student internships and hands-on maintenance exposure.
EE8501 – Power System Analysis	• PSO1, PSO2: **2.01 / 3.00** • *(PO1 to PO6, PO10, PSO3achieved 3.00 / 3.00)*	Injected modern power industry case studies detailing deregulation patterns in commercial power markets and smart grid architectures.	Used MiPower and ETAP software packages to build, simulate, and test standard IEEE bus network models during lectures and design assignments.	Plan to organize intensive software simulation laboratory hours on standard IEEE bus systems using local network analyzers to improve analytical accuracy.
EE8602 – Protection & Switchgear	• PSO1: **0.99 / 3.00** • PSO2: **1.80 / 3.00** • PSO3: **2.01 / 3.00** • *(PO1 to PO10achieved 3.00 / 3.00)*	Supplemented textbook units with real-world case layouts of numerical relay configurations and gas-insulated switchgear (GIS) architectures.	Used MATLAB and PSCAD software environments to simulate overcurrent and earth fault circuit transients alongside dedicated question-solving tutorial sheets.	Plan to organize an industrial visit to an operational 110kV/230kV electrical substation to see live circuit breakers, bus bars, and protection system layouts.

EE8702 – Power System Operation & Control	• PO8: **0.99 / 3.00** • PSO1, PSO2: **2.01 / 3.00** • *(PO1 to PO7, PO10, PSO3achieved 3.00/ 3.00)*	Included supplementary syllabus notes tracking automatic generation control (AGC) strategies in high-renewable grid operations.	Used MATLAB and Excel solver frameworks to graph load dispatch curves and manually solve economic load dispatch algorithms on the chalkboard.	Plan to organize specialized value-added training modules on standard Energy Management System (EMS) frameworks and modern SCADA topologies.



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

Institute Marks : 15.00

PERI Institute of Technology adopts an Academic and Administrative Audit (AAA) framework coordinated by the Internal Quality Assurance Cell (IQAC) to review academic processes, verify their implementation and identify opportunities for continuous improvement. The framework examines academic planning, curriculum delivery, teaching–learning, assessment, outcome-based education, student support and the administrative systems that support academic performance.

The audit is designed as an evidence-based review of implementation and effectiveness. Its guiding principles include impartial verification, confidentiality, traceability of findings, clear responsibility and documented follow-up. The first audit under the framework establishes a baseline for subsequent reviews, enabling the institution to assess progress and address recurring gaps.

1.Initiation, proposal and approval

IQAC initiates the audit process by preparing a proposal specifying the objectives, scope, departments and units to be covered, proposed auditors, schedule, required records and institutional support. The proposal is submitted to the Governing Council and the Principal for consideration and approval.

Following approval, IQAC coordinates the constitution of the audit team and the issue of the audit office order and schedule. The Principal provides institutional direction, while IQAC coordinates implementation and follow-up. The Lead Auditor consolidates findings; auditors verify evidence; and Heads of Departments and unit heads facilitate access to records and undertake the actions assigned to their units.

2.Communication to auditors and departments

IQAC communicates the audit invitation, approved scope, schedule, departmental coverage and reporting requirements to the auditors. The audit manual, checklists and relevant institutional information are shared in advance to support a consistent review.

Departments and administrative units receive instructions on the records to be presented and complete a self-assessment before the audit. This records the audit area, implementation status, available evidence, identified gaps, proposed action and responsible person. The self-assessment encourages departments to examine their own practices and supports focused verification by auditors.

3.Scope and parameters of the audit

The AAA manual organises the audit into nine areas, covering academic activities and their supporting institutional systems.

Audit area	Major aspects examined
A1. Governance and Administration	Organisational structure, reporting relationships, statutory and institutional committees, roles and responsibilities, institutional policies, implementation of Governing Council decisions, Academic Council and Board of Studies functioning, budgeting, institutional planning and delegation of authority.
A2. Academic Planning and Curriculum	Approved academic calendar, departmental academic plans, course allocation, faculty workload, course files, course outcomes, curriculum implementation and revision, value-added courses, academic flexibility under autonomy and academic monitoring by HoDs.
A3. Teaching–Learning and Student Engagement	Lesson plans, syllabus coverage, attendance monitoring, student participation, innovative teaching practices, ICT-enabled teaching, laboratory instruction, tutorials, remedial support, advanced learner activities, mentoring and academic counselling.
A4. Assessment and Examination	Internal assessment regulations, Continuous Internal Evaluation schedules, question paper preparation and moderation, assessment transparency, valuation and records, semester-end examinations, confidentiality, result publication and analysis, assessment grievances and examination committee functioning.
A5. OBE and Continuous Improvement	Programme Educational Objectives, Programme Outcomes, Programme Specific Outcomes, Course Outcomes, CO–PO/PSO mapping, assessment tools and rubrics, direct and indirect assessment, attainment calculations, gap identification, corrective action and verification of its effectiveness.

A6. Faculty Development, Student Support and Progression	Faculty qualifications, workload, appraisal, professional development, research contributions, institutional responsibilities, mentoring, scholarships, counselling, grievance redressal, career guidance, placements, internships, higher education, entrepreneurship, clubs, alumni engagement and student progression.
A7. Research, Industry and Extension	Research policy, publications, sponsored research, consultancy, innovation and intellectual property, industry MoUs and their outcomes, industry interaction, industrial visits, extension and community engagement.
A8. Infrastructure and Learning Resources	Classrooms, laboratories, equipment, maintenance, calibration where applicable, safety, computing facilities, software, internet connectivity, library resources, e-resources and applicable campus support facilities.
A9. IQAC and Quality Assurance	IQAC constitution and meetings, annual quality initiatives, stakeholder feedback collection and analysis, action taken, audits, quality improvement outcomes, accreditation compliance, institutional data management, document control and continuous improvement monitoring.

4. Conduct of the audit and verification of evidence

The audit begins with an opening meeting to explain the objectives, coverage and review procedure. Auditors examine departmental and institutional records, interact with faculty and administrative personnel, and undertake physical verification wherever required.

Evidence may include approved policies, committee proceedings, academic calendars, course files, lesson plans, attendance records, assessment documents, result analysis, attainment calculations, feedback reports, mentoring records, laboratory records and previous action taken reports. The review checks whether approved practices are implemented and whether their effectiveness is supported by evidence.

The manual provides an evidence index recording the document or record, academic year, location or file number, verifier and verification date. Evidence categories include mandatory, supporting, department-generated, university-controlled, physical-verification and analysis/OBE records, along with records required where applicable. These categories support traceability between an audit observation and the evidence examined.

Each audit parameter is assigned one of the following statuses:

Status	Interpretation
Compliant (C)	The requirement is fully implemented and adequate evidence is available.
Partially Compliant (PC)	Implementation is partial, or the evidence needs strengthening.
Non-Compliant (NC)	The requirement is not implemented, or the required evidence is unavailable.
Not Applicable (NA)	The requirement does not apply to the audit period; justification is recorded.

For each parameter, auditors record the evidence verified, status, observation, gap, action required, responsibility and target date.

5.Consolidation and preparation of the audit report

The Lead Auditor, in coordination with IQAC, consolidates the observations into department-wise and institution-level summaries. The audit summary records the number of compliant, partially compliant, non-compliant and not-applicable parameters across the nine areas, together with key strengths and priority gaps.

Findings are classified to distinguish their significance and the response required:

Finding	Purpose
Major Non-Conformity	Significant failure requiring immediate institutional attention.

Minor Non-Conformity	Limited non-compliance requiring corrective action.
Observation	A condition requiring monitoring or improvement.
Opportunity for Improvement	An area where effectiveness can be strengthened.
Good Practice	An effective practice that may be shared.
Best Practice	A sustained and replicable practice supported by evidence.

The consolidated report includes an executive summary, objectives and scope, audit team and schedule, units covered, strengths, major gaps, department-wise observations, corrective and preventive action plan, management decisions, and follow-up and closure status.

6.Discussion of findings and identification of causes

IQAC places the consolidated report before the Principal and discusses the findings with auditors, HoDs and concerned unit heads. The review considers strengths, deviations, academic risks, recurring issues and opportunities for improvement.

The Gap Analysis Register records the finding, gap, root cause, required action, responsibility, target date and current status. Identifying the root cause helps the institution address the reason for a deficiency and reduce its recurrence.

The management review records priority actions approved, persons responsible, target dates, resources required and the next follow-up date. Significant findings requiring institutional decisions are prepared for consideration by the Governing Council.

7.Corrective and preventive measures

Departments and units prepare and implement corrective and preventive actions in response to the reviewed findings. The Corrective Action and Preventive Action (CAPA) Register links each gap with the immediate corrective action, preventive or system-level action, responsible person, target date, evidence of completion and verification.

Depending on the findings, measures may include revision of course plans, additional tutorials, changes in teaching methods, faculty training, improved assessment rubrics, strengthening of CO–PO/PSO mapping, enhanced mentoring, equipment maintenance or improvements in record management. These measures are selected according to the verified gap and its cause.

Immediate corrections address the identified deficiency, while preventive measures strengthen the underlying procedure. For example, an incomplete course file may require completion of missing records, supported by a standard checklist and periodic departmental verification to prevent recurrence.

8.Proposal of relevant changes to the Governing Council

Following discussion and formulation of corrective measures, IQAC submits significant recommendations to the Governing Council through the Principal. These may concern institutional policies, resource allocation, infrastructure, faculty development, academic monitoring or administrative procedures.

Proposals are supported by the audit finding, root-cause analysis, action already taken, justification for the change, resources required and expected improvement. Matters concerning curriculum or academic regulations are routed through the Board of Studies and Academic Council, as applicable.

Governing Council decisions are recorded with responsibilities and implementation timelines. IQAC monitors the implementation of approved changes and reports progress through subsequent reviews.

9.Follow-up verification and closure

IQAC coordinates follow-up verification to establish whether the assigned actions have been completed and whether they have resolved the original gap. The follow-up record captures the original finding, action taken, evidence verified, effectiveness, closure status, verifier and date.

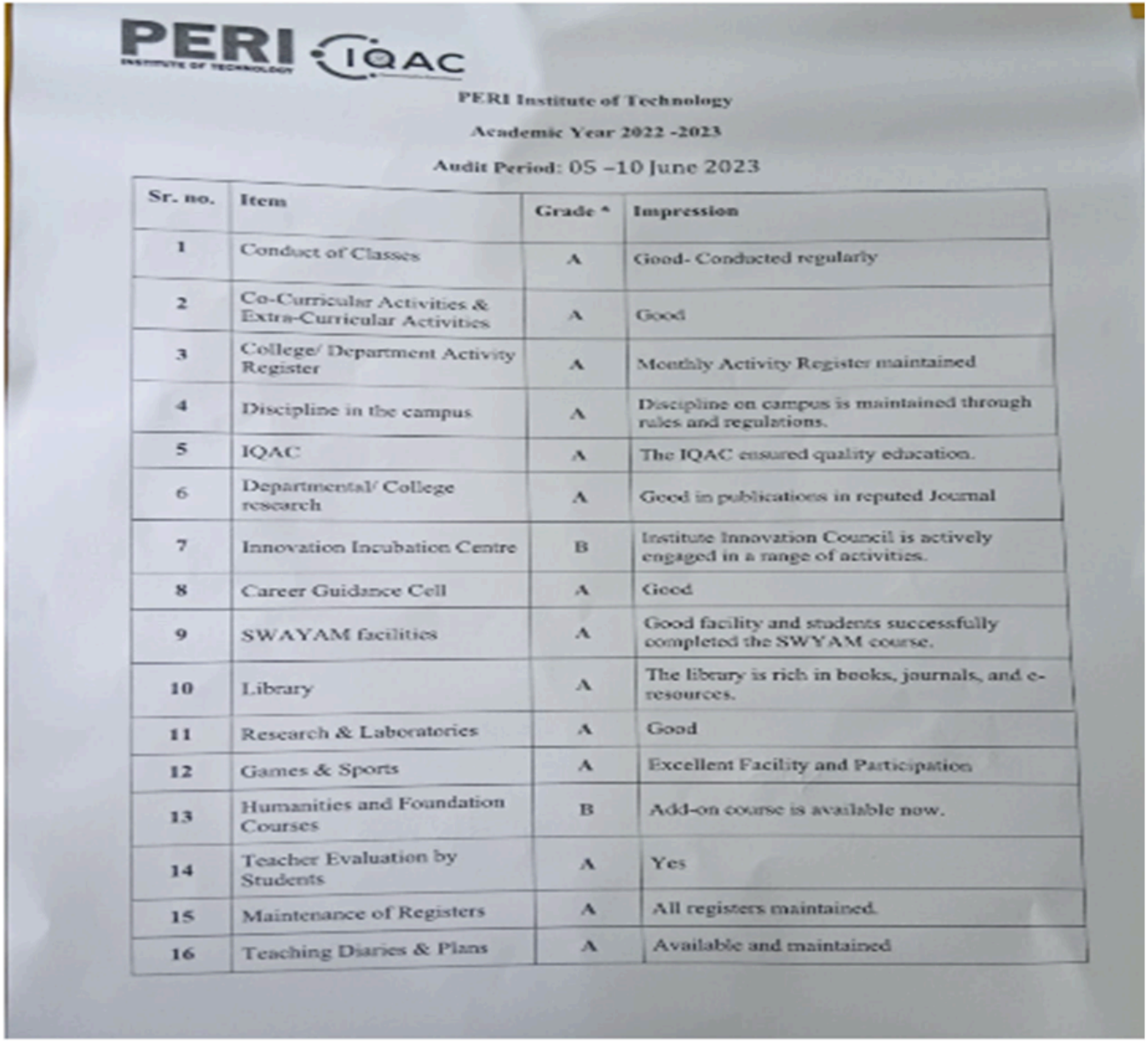
An action is closed after verification of completion and effectiveness. Actions requiring further intervention remain open and are reviewed again. The institutional closure record consolidates total findings, major and minor non-conformities closed, observations and improvement opportunities addressed, completed CAPA, pending actions and the next follow-up date.

10.Linkage with continuous improvement

The audit connects institutional review with decisions, implementation and verification. Academic and assessment data identify gaps; discussion establishes their causes; corrective measures address them; and subsequent evidence determines whether improvement has occurred.

For programmes preparing for NBA accreditation, the manual includes a supplementary review of PEOs, POs, PSOs, CO mapping, assessment rubrics, attainment, gap analysis, corrective action and its effectiveness. This supplement strengthens programme-level review while retaining the broader institutional AAA framework.

Continuous improvement is demonstrated by comparing the baseline and subsequent audit evidence, examining recurring findings, verifying improvements in academic practices and documenting the outcomes of approved changes. Effective practices can then be shared across departments, while unresolved issues inform the next audit plan.



PERI INSTITUTE OF TECHNOLOGY IQAC

PERI Institute of Technology

Academic Year 2022 -2023

Audit Period: 05 –10 June 2023

Sr. no.	Item	Grade *	Impression
1	Conduct of Classes	A	Good- Conducted regularly
2	Co-Curricular Activities & Extra-Curricular Activities	A	Good
3	College/ Department Activity Register	A	Monthly Activity Register maintained
4	Discipline in the campus	A	Discipline on campus is maintained through rules and regulations.
5	IQAC	A	The IQAC ensured quality education.
6	Departmental/ College research	A	Good in publications in reputed Journal
7	Innovation Incubation Centre	B	Institute Innovation Council is actively engaged in a range of activities.
8	Career Guidance Cell	A	Good
9	SWAYAM facilities	A	Good facility and students successfully completed the SWYAM course.
10	Library	A	The library is rich in books, journals, and e-resources.
11	Research & Laboratories	A	Good
12	Games & Sports	A	Excellent Facility and Participation
13	Humanities and Foundation Courses	B	Add-on course is available now.
14	Teacher Evaluation by Students	A	Yes
15	Maintenance of Registers	A	All registers maintained.
16	Teaching Diaries & Plans	A	Available and maintained

PERI INSTITUTE OF TECHNOLOGY IQAC

17	NCC / NSS	A	Good
18	Women Empowerment Cell	A	activities were conducted.
19	Professional Club	B	Available.
20	Sanitation & drinking water	A	Safe and potable drinking water is available. Adequate waste management systems are in place.
21	Cleanliness	A	Cleanliness is maintained.
22	Functioning of Teachers	A	Good
23	Mentoring	B	The institution is currently utilizing a manual mentoring process; however, this system is being transitioned and integrated into the college's digital campus platform (**iGuru Portal**) to streamline student tracking and record management.
24	Over All Impression on the Department/ College	A	The college has a strong reputation for academic excellence, innovative teaching methods and a supportive learning environment.
24	Any other observation:		Good.

Grade Legend: A (Good) | B (Satisfactory) | C (Poor)

Signatures of Academic Auditors:

Name & Designation	Mr.K.K. Vinoth Kumar	Dr.S.Elango	Dr.V.Balaji
Designation:	Assistant Professor	Professor & Head	Assistant Professor
Name of Organization	Mohamed Sathak A.J. College of Engineering	Arunai Engineering College	B.S.abdur rahman Crescent Institute of Science and Technology
Area of expertise	Mechanical Engineering	Electronics and Communication Engineering	CSE
Signature	K.K.V		

Principal
PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

IQAC Coordinator
Co-ordinator
Internal Quality Assurance Cell
PERI Institute of Technology



8.3 Improvement in Faculty Qualification/Contribution (15)

Institute Marks : 10.00

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
No. of faculty members with Ph.D. degree	6.00	8.00	4.00
No. of publications in peer reviewed journals	2.00	2.00	0.00
No. of publications in conferences	4.00	3.00	3.00

8.4 Improvement in Academic Performance (10)

Institute Marks : 15.00

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
Academic Performance Index (API) of the First-Year Students in the Program (Refer to section 4.3)	6.48	5.17	5.24
Academic Performance Index (API) of the Second-Year Students in the Program (Refer to section 4.4)	6.37	3.55	7.37

9 STUDENT SUPPORT AND GOVERNANCE (120)

Total Marks 115.00

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

Institute Marks : 0.00

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 Associated is 'No')
Dr.T.N.Balaji	AONPB0859B	Ph.D	No	04/12/2004	Chemistry	Professor	27/05/2019	Yes	Regular	
Ms.G.Ruby	DKVPG9676N	M.Phil	No	23/07/2013	Chemistry	Assistant Professor	16/08/2023	Yes	Regular	
Mr.G.Pugazhg	DIXPG1931A	M.Phil	No	14/07/2017	Physics	Assistant Professor	01/09/2022	Yes	Regular	
Dr.A.Govindara	AFEPG3658M	Ph.D	No	16/06/1995	Maths	Professor	14/02/2024	Yes	Regular	
Ms.M.Rajeswa	BKCPR4766F	M.Phil	No	02/07/2014	Maths	Assistant Professor	19/08/2024	Yes	Regular	
Dr.A.Mohamed	DQLPM8810E	Ph.D	No	10/07/2023	Engish	Assistant Professor	17/07/2023	Yes	Regular	
Mr.Anbumani K	BHCPA8404Q	M.Phil	No	05/07/2023	English	Assistant Professor	05/06/2024	Yes	Regular	
Mrs.S.Abirami	BPNPA8781F	M.Phil	No	18/01/2019	English	Assistant Professor	07/06/2023	Yes	Regular	
Mrs.M.Shinika	HASPS3690P	M.Phil	No	03/07/2023	English	Assistant Professor	19/09/2024	Yes	Regular	
Dr.A.Rajini	DVWPR2513D	Ph.D	No	13/08/2012	Tamil	Assistant Professor	15/07/2024	Yes	Regular	
Dr.S.Stalin Sath	JNHPS4494H	Ph.D	No	20/06/2013	Tamil	Assistant Professor	09/08/2021	Yes	Regular	
Mrs.G.Kanagar	ENPPK9652E	M.Phil	No	01/06/2022	Tamil	Assistant Professor	20/06/2023	Yes	Regular	
Mr.M.Ramesh	ASIPR2152C	M.Phil	Yes	04/02/2004	Maths	Associate Professor	02/06/2020	Yes	Regular	
Ms.V.Lakshmi	AHTPL5650K	M.Phil	Yes	27/05/2019	Maths	Assistant Professor	02/06/2020	Yes	Regular	
Ms.S.Nivedha	AHTPL5650K	M.Phil	Yes	01/06/2005	Maths	Assistant Professor	02/06/2020	Yes	Regular	
Mrs.V.Jeeva	BNVPJ3929E	M.Phil	No	12/03/2009	Engish	Assistant Professor	06/10/2023	Yes	Regular	
Ms.R.Meenu	HEXPR4210H	M.Phil	Yes	01/06/2022	English	Assistant Professor	21/06/2023	Yes	Regular	

Ms.T.Thanga s	AYBPT9781G	M.Phil	No	04/09/2012	Chemistry	Assistant Professor	04/11/2024	Yes	Regular	

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)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage=((NS1*0.8) + (NS2*0.2))/RF
2022-23(CAYm2)	300	15	2	3	23
2023-24(CAYm1)	480	24	7	4	34
2024-25(CAY)	600	30	12	4	41
				Average Percentage	32.50

9.2 Mentoring system (5)

Institute Marks : 5.00

PERI Institute of Technology implements a mentoring system covering professional guidance, career advancement, course-specific support, and all-round development. Students are allotted to faculty mentors, and a dedicated Mentor Hour is included in the timetable. Structured reviews are conducted after **CAT I, CAT II, the Model Examination** and publication of semester results, with additional interactions based on individual needs.

During the first and second years, mentoring primarily focuses on emotional well-being, adjustment to college life, academic performance and learning habits. Mentors identify difficulties in coursework and laboratory learning and facilitate appropriate support. Academic concerns requiring further intervention are reported to the Head of the Department, who coordinates a discussion with the student and concerned faculty to identify suitable improvement measures. The mentor subsequently monitors progress through interactions and assessment results.

During the third and final years, mentoring places greater emphasis on professional exposure and career mapping while continuing academic and personal support. Mentors review certification courses completed, training undertaken, areas of interest and career aspirations. Students seeking employment are referred to the Placement Department, those pursuing higher education to the Centre for Higher Studies, and those interested in entrepreneurship to the relevant institutional support unit.

Students requiring additional personal or psychological assistance are identified by faculty mentors and referred to the designated campus counselling professional, through whom weekly support sessions are available. Sensitive matters are handled confidentially. Physical mentoring interactions are supported by attendance and assessment information available through iGURU. Any online mentoring consultations should be reported separately based on documented practice.

The implementation and effectiveness of mentoring are consolidated using the following indicators:

Table: 9.1 Indicators

Indicator	2022–23	2023–24	2024–25
Number of faculty mentors	68	68	71
Number of students allotted to mentors	1104	1142	1314
Average number of students per mentor	16	16	17
Number of academic cases receiving support	37	24	21
Number of personal cases receiving support or referral	4	5	4

The mentoring system expanded its coverage from 1,104 students in 2022–23 to 1,314 students in 2024–25, supported by an increase in faculty mentors from 68 to 71. Academic cases requiring support declined from 37 to 21 during this period. Continued support and referral for personal concerns demonstrate the institution’s attention to students’ academic progress and emotional well-being.

Effectiveness is demonstrated through anonymised impact studies documenting the initial concern, support provided, follow-up and observed outcome. Academic impact is assessed through comparable assessment results, attendance improvement and targeted arrear clearance. Career development is reviewed through completion of agreed certifications and training and access to the relevant career support services. Personal support is assessed through access to counselling and referral follow-up. Repeated interactions concerning the same issue are recorded as follow-ups rather than new cases.

PERI INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



Mentor-Mentee Report Form

NAME OF THE MENTOR : Lorenta Irvin

I. Information of Mentee

A. PERSONAL DETAILS

NAME :M.Durairaj

DEGREE DEPARTMENT :B.E EEE BATCH:A

ACADEMIC YEAR OF ADMISSION : 2019

ADMISSION NO :191064 REGISTER NO: 411519105005

QUOTA OF ADMISSION : ☐ Management ☐ Counselling:yes

DATE OF BIRTH :21/08/2002

CONTACT NO : 8668175959 EMAIL ID : durairaj70097@gmail.com

RELIGION COMMUNITY CASTE :Hindu/Hindu pallan/Sc

DAYSCHOLAR HOSTELLER :DAYSCHOLAR

(MENTION IF THERE IS ANY CHANGE)

MODE OF TRANSPORT : government bus

(MENTION IF THERE IS ANY CHANGE)

ROUTE NUMBER, IF TAKING COLLEGE BUS : no BOARDING POINT no

LANGUAGES KNOWN : TAMIL,ENGLISH

AADHAAR NO :873231901541

BANK NAME &A/C NUMBER : Union Bank/Acc:606102010008209

B. FAMILY DETAILS

PARENTS' GUARDIAN'S DETAILS :

Relation	Name	Occupation	Contact No	Sign
Father	Murugan.D	Driver	7339257166	D.Murugan
Mother	Parameshwari.M	Home maker	8056535379	M.Parameshwari
Guardian	-	-	-	-

ADDRESS FOR COMMUNICATION :

No 45,annai Indira Gandhi Nagar,kundrumedu,west Tambaram, Chennai 600045.	

PERI INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Mentor-Mentee Report Form

NAME OF THE MENTOR : GOKUL SURENDRA KUMAR G



I. Information of Mentee

A. PERSONAL DETAILS

NAME : Gowtham S

DEGREE / DEPARTMENT : ECE BATCH : 2024

ACADEMIC YEAR OF ADMISSION : 2020-2024

ADMISSION NO : 201421 REGISTER NO : 411520106017

QUOTA OF ADMISSION : ☐ Management ☐ Counselling

DATE OF BIRTH : 19-06-2003

CONTACT NO : 9629240217 EMAIL ID : gowthamsamaraj@gmail.com

RELIGION / COMMUNITY / CASTE : MBC

DAYSCHOLAR / HOSTELLER (Mention if there is any change) : HOSTELLER

MODE OF TRANSPORT (Mention if there is any change) : NIL

ROUTE NUMBER, IF TAKING COLLEGE BUS : NO BOARDING POINT : NIL

LANGUAGES KNOWN : Tamil, English

AADHAAR NO : 4216 0669 7933

BANK NAME & A/C NUMBER : Union Bank of India & 333802120002903

B. FAMILY DETAILS

PARENTS' / GUARDIAN'S DETAILS :

Relation	Name	Occupation	Contact No	Sign
Father	Samaraj K	Farmar	-	-
Mother	Bhuvaneshwari S	-	-	-

Guardian				

ADDRESS FOR COMMUNICATION :

4/893, GowravaranVattam, Nayanacheruvu, Natrampalli, Thirupatur(dt)-635852

PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

Mentor-Mentee Report Form



NAME OF THE MENTOR : S.S. VASANTHA RAJA

I. Information of Mentee

A. PERSONAL DETAILS

NAME : Kamalesh B

DEGREE / DEPARTMENT : BE(CSE) BATCH : 2024

ACADEMIC YEAR OF ADMISSION : 2020

ADMISSION NO : 201371 REGISTER NO : 411520104038

QUOTA OF ADMISSION : ☐ Management ☑ Counselling

DATE OF BIRTH : 19/11/2002

CONTACT NO : 8754258591 EMAIL ID : bkamalesh.191@gmail.com

RELIGION / COMMUNITY / CASTE : Hindu / SC / Adi-Dravida

DAYSCHOLAR / HOSTELLER (Mention if there is any change) : Hosteller

MODE OF TRANSPORT (Mention if there is any change) : Nil

ROUTE NUMBER, IF TAKING COLLEGE BUS : No BOARDING POINT : Nil

LANGUAGES KNOWN : Tamil, English

AADHAAR NO : 7777 7775 4429

BANK NAME & A/C NUMBER : Indian Bank / 6723105590

B. FAMILY DETAILS

PARENTS' / GUARDIAN'S DETAILS :

Relation	Name	Occupation	Contact No	Sign
Father	Balraj V	Building Supervisior	9754258591	Balraj V
Mother	Kalaivani R	House wife	9042466739	Kalaivani R

Guardian				

ADDRESS FOR COMMUNICATION :

No 3, Mari Amman Kovil Street , Pulichapplam post, Pulichapplam , vanur TK, Villupuram Dt - 605109

9.3 Feedback Analysis (10)

9.3.1 Feedback on Teaching and Learning Process and Corrective Measures Taken, if any (10)

Institute Marks : 10.00

The institute collects student feedback every semester through mid-semester online feedback, end-semester feedback, course-end surveys and two Class Committee Meetings. These mechanisms enable students to provide confidential ratings and share suggestions on the teaching–learning process, academic support and institutional facilities.

a. Mid-Semester Online Feedback

Students submit feedback confidentially through the online link provided in the iGURU student application. The questionnaire comprises 5 items covering the following areas:

Academic and Teaching–Learning Aspects

1. Effectiveness of academic administration and quality of teaching.
2. Opportunities for experiential learning through projects, mini-projects and hackathons.
3. Effectiveness of activities organised by student support centres, including CHS, CTEE and EDC.
4. Opportunities for knowledge enhancement through internships, workshops, seminars and guest lectures.
5. Support for self-learning, peer learning, tutorials and coaching classes.

Responses are recorded using a numerical rating system. The iGURU application stores the responses and provides downloadable summaries for consolidation and analysis.

b. End-Semester Feedback

End-semester feedback is collected manually using a structured form containing 10 aspects of effective teaching and learning. Students record their responses on a five-point rating scale (1–5). The completed forms are compiled, and the ratings are consolidated for further analysis.

c. Course-End Survey

A course-end survey is conducted every semester to obtain students' views on:

1. Learning value in terms of knowledge, concepts, skills and analytical ability.
2. Applicability and relevance of the course.
3. Depth of course content.
4. Extent of syllabus coverage.
5. Level of effort required from students.
6. Relevance and value of course-related project work.

d. Class Committee Meetings

Two Class Committee Meetings are conducted each semester to obtain qualitative feedback through discussion with student representatives. Students share their observations, difficulties and suggestions concerning course delivery, learning support, assessment and other academic matters. The feedback is documented in the meeting minutes for review and follow-up.

The consolidated feedback data, survey summaries and Class Committee Meeting records are submitted to the Internal Quality Assurance Cell (IQAC) for further analysis and coordination of appropriate action with the concerned departments and administrative units.

The institute also collects feedback from alumni, employers, parents and faculty members on teaching–learning practices, institutional facilities, student support services and systems that promote student development and empowerment. Feedback is obtained through Parent–Teacher Association (PTA) meetings, alumni meetings, placement conclaves and faculty interactions, as applicable.

The observations and suggestions are documented, consolidated and submitted to **IQAC** for analysis and coordination of appropriate action with the concerned departments and administrative units.

The institute analysed student feedback for **2022–23, 2023–24 and 2024–25** to assess participation and course-wise satisfaction with the teaching–learning process. **A cumulative feedback score below 3.00 on a five-point scale**is classified as**below satisfactory,** while a score of **3.00 or above** meets the institutional benchmark.

Table: 9.3.1

Academic year	Eligible students	Students participated	Participation (%)	Courses assessed	Courses scoring below 3.00	Below-satisfactory courses (%)
2022–23	1016	861	84.80	238	11	4.62
2023–24	1066	927	86.95	235	17	7.23
2024–25	1240	1124	90.67	235	10	4.25
Assessment-period total	**3,320**	**2912**	**87.47**	**708**	**38**	**5.36**

Student participation increased consistently from 84.80**% in 2022–23 to90.67 % in 2024–25,** an improvement **of 3.72percentage points**. The overall participation rate, calculated by dividing total annual participants by total eligible students across the assessment period, was 87.47**%,** indicating broad student involvement.`

The proportion of courses recording below-satisfactory scores increased from **4.62% in 2022–23 to 7.23% in 2023–24**, indicating a greater need for course-level review in that year. It subsequently declined to **4.25% in 2024–25**, an improvement of **2.98 percentage points** over the preceding year. Across the assessment period, **38 out of 708 annual courseassessments (5.36%)** fell below the benchmark, while **94.64% met the institutional standard.**

The consolidated findings are submitted to **IQAC** for further analysis and coordination of appropriate action with the concerned departments. Courses scoring below 3.00 are identified for detailed examination of individual feedback parameters and student observations to determine areas requiring improvement. In 2024–25, fewer courses were rated under the student satisfaction benchmark, reflecting an improvement in student feedback. Action-taken reports and follow-up feedback can help establish how specific corrective measures contributed to this improvement.

Rewards and Corrective Measures

Student feedback forms an integral part of faculty performance appraisal and continuous improvement of the teaching–learning process. Feedback scores carry a weightage of 10% in faculty appraisal. Faculty members demonstrating commendable performance are encouraged through awards and recognition by the Management.

For courses recording a cumulative feedback score below 3.00 on a five-point scale, the Head of the Department meets the concerned faculty member to identify the reasons and determine appropriate corrective measures.

For mid-semester feedback, corrective measures are implemented during the ongoing semester. Their effectiveness is monitored through subsequent interactions with faculty members and students.

For end-semester feedback, the course plan and teaching methods are reviewed for improvement in subsequent delivery. The concerned faculty members are advised to attend relevant Faculty Development Programmes (FDPs) and MOOCs to strengthen their subject knowledge and pedagogical skills. Additional tutorials and experiential learning activities are incorporated according to the identified needs.

9.3.2 Feedback on Academic Facilities (10) Institute Marks : 10.00

The institution follows a systematic feedback mechanism to assess the adequacy and quality of institutional facilities and support services. During the assessment period, 2022–23 to 2024–25, feedback was collected from students, faculty members, alumni and parents. The findings were reviewed by the Internal Quality Assurance Cell (IQAC) to identify areas requiring improvement and initiate corrective action.

Collection Process

Student feedback on facilities was collected through the mid-semester online feedback process using the iGURU student application. The facilities section of the questionnaire covered the following aspects:

1. Adequacy and advancement of academic infrastructure, including ICT, laboratory and internet facilities.
2. Availability of sports, recreation and extracurricular facilities.
3. Adequacy of textbooks, reference books, journals and library e-resources.
4. Availability of clean drinking water, hygienic food and convenient transport.
5. Cleanliness, maintenance, safety and security on campus.

udent participation during the assessment period is presented below

Table: 9.3.2.1

Academic year	Students participated	Total students	Participation (%)
2022–23	861	1,016	84.80
2023–24	927	1,066	86.95
2024–25	1,124	1,240	90.67

Feedback from faculty members, alumni and parents was collected through a comprehensive questionnaire covering administrative services, infrastructure and institutional support facilities. The responses were consolidated and submitted to the IQAC for analysis.

Feedback Analysis on Academic Facilities

Student responses were analysed question-wise against the institutional satisfaction benchmark of 80%. Items recording satisfaction below 80% were identified as areas requiring improvement. The IQAC reviewed these findings with the departments and administrative units concerned to identify the reasons for dissatisfaction and recommend corrective measures.

During 2022–23, the following areas recorded satisfaction below the prescribed benchmark:

1. Availability of sports, recreation and extracurricular facilities.
2. Availability of clean drinking water, hygienic food and convenient transport.
3. Campus cleanliness, maintenance, safety and security.

The concerns were documented and referred to the responsible departments. Matters requiring institutional decisions, financial allocation or infrastructure development were placed before the Governing Council for consideration and approval.

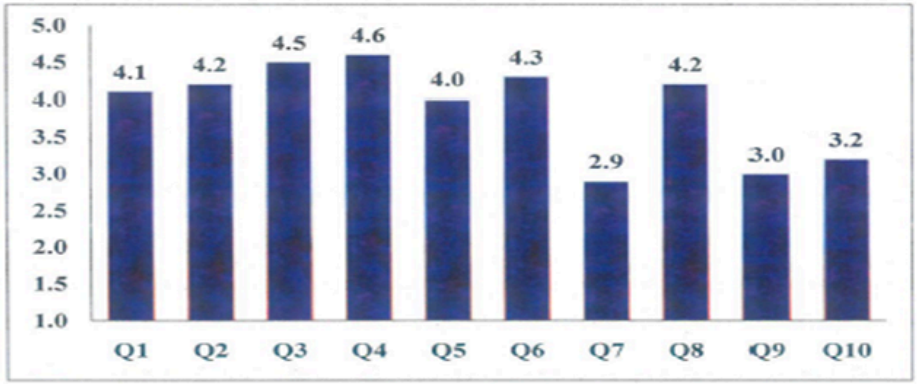
Corrective Actions Taken

The concerns identified during 2022–23 were reviewed by the IQAC and subsequently placed before the Governing Council. Corrective measures addressing the identified facility and service concerns were implemented by the responsible departments, and improvements were recorded through follow-up review.

The IQAC monitored the implementation of corrective measures and maintained feedback analysis reports, action taken reports and review records to support continuous improvement

PERI INSTITUTE OF TECHNOLOGY									
Chennai-600048									
STUDENTS FEEDBACK ANALYSIS									
ACADEMIC YEAR 2022-2023									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4.1	4.2	4.5	4.6	4.0	4.3	2.9	4.2	3.0	3.2

Q1. Effectiveness of Academic administration and quality of teaching
Q2. Opportunities for experiential learning offered through Projects, Mini projects, Hackathons
Q3. Efficacy of activities conducted through student support centres(CHS, CTEE, EDC, etc.,)
Q4. Opportunities for knowledge enhancement through Internships, Workshops, Seminars and Guest lectures
Q5. Practices followed towards Self learning, Peer learning, Tutorial and Coaching classes
Q6. Advancement of academic infrastructure including ICT, Laboratory and Internet facilities
Q7. Availability of facilities for sports, recreation and extracurricular activities in the campus
Q8. Adequacy of Text and Reference books, Journals, and e-resources in Library
Q9. Availability of clean water, hygienic food and convenient transport facility in the college
Q10. Opinion on cleanliness, maintenance, safety and security measures in the campus



Coordinator

Principal

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mo...vakkam, Chennai - 600 048.

Sample feedback Analysis

PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)

STUDENT FEEDBACK – ACTION TAKEN REPORT

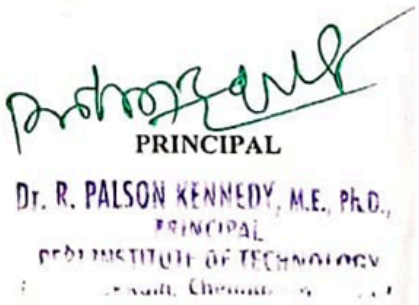
Academic Year : 2022 – 2023

Number of Respondents : 1023

Number of Questions : 10

S.No.	Question Number	Attained percentage (%)	Feedback Question	Action Taken Report
1	7	58	Availability of facilities for sports, recreation and extracurricular activities in the campus	The existing Kabaddi ground has been renovated and elevated for the cost of 5.5 Lakhs.
2	9	60	Availability of clean water, hygienic food and convenient transport facility in the college	Transport has been arranged for special class students usually exist at 5.15 pm
3	10	64	Opinion on cleanliness, maintenance, safety and security measures in the campus	Security system has been Improved arranged with 2 guards on duty 24/7. The restrooms are cleaned 3 times per day. The security has been improved by providing an additional gate (Gate 2) and assigning two guards on duty 24/7.


IQAC COORDINATOR
Co-ordinator
Internal Quality Assurance Cell
PERI Institute of Technology
Mannivakkam, Chennai-600 048


PRINCIPAL
Dr. R. PALSON KENNEDY, M.E., Ph.D.,
PRINCIPAL

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University

Accredited by NAAC | Recognized by UGC with 2(F)

KABADDI COURT







Dr. R. PALSON KENNEDY, M.E., Ph.D.,
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

66

9.4 Training and Placement Support (10)

Institute Marks : 10.00

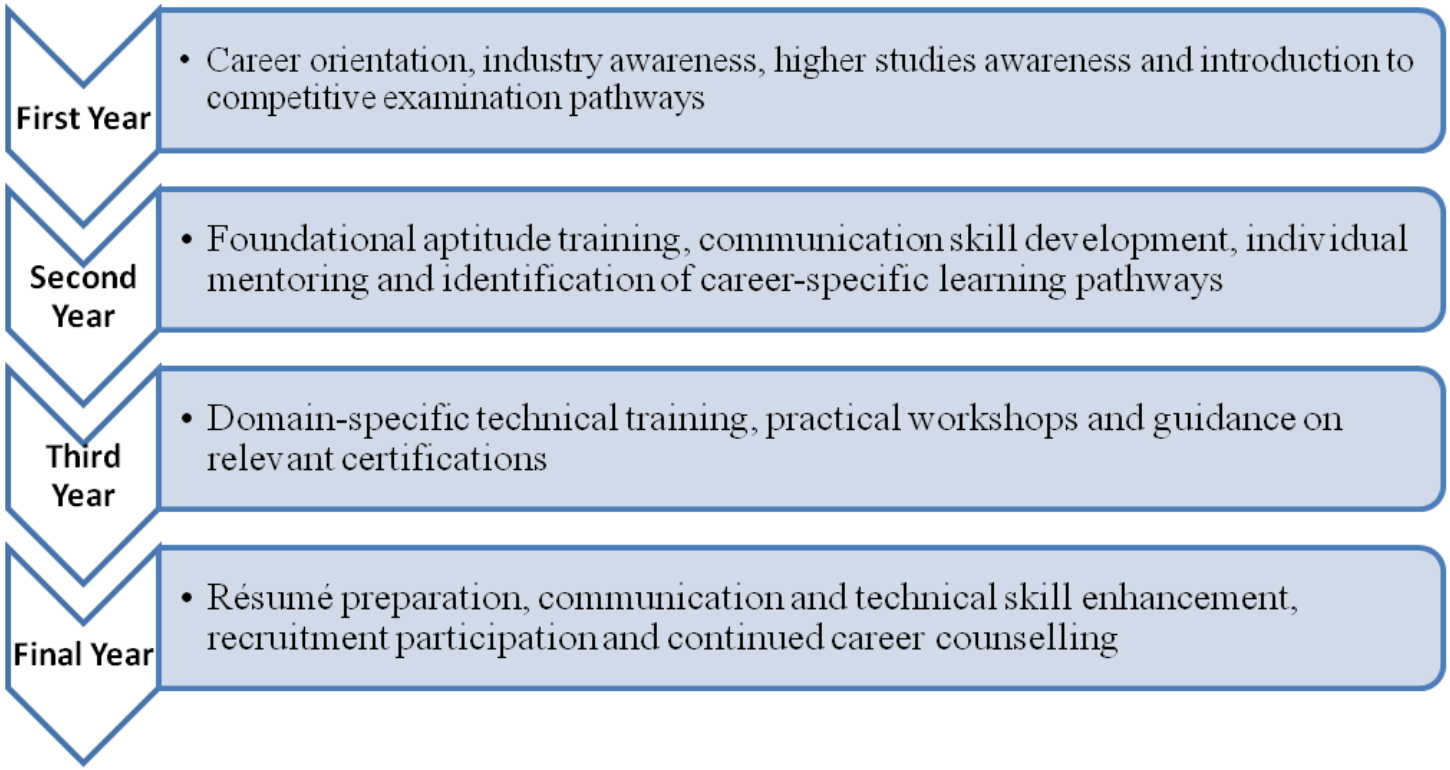
PERI Institute of Technology follows a structured, progressive approach to career guidance, skill development and placement preparation from the first year onwards. Faculty mentors, the Training and Placement Department and the Centre for Higher Studies work together to guide students towards employment, higher education and competitive examinations

1. **Career awareness and individual mentoring**

- First-year students participate in career awareness programmes covering industry opportunities, higher studies, government examinations and competitive examinations. Industry experts and corporate representatives introduce students to different career domains, emerging technologies and professional expectations.
- During the second year, faculty mentors interact with students to identify their interests, strengths and career aspirations. Based on these interactions, students receive guidance towards suitable career pathways. For students choosing placement, the mentor and placement officer recommend relevant courses, certifications and technical skills aligned with their preferred roles, such as full-stack development or cyber security.

2. **Progressive training and placement preparation**

The institution adopts the following framework to develop career readiness.



Aptitude training is provided through SMART, FACE Prep and in-house trainers. Specialised training includes Java Full Stack, DS, Salesforce, AWS, Microsoft Azure, application development and Advanced Python. External providers reported for these programmes include FACE Prep, Touchmark, Interview Desk, Techforce, Wizard Lens and Edmies.

1. **Year-wise department-specific technical training**

- During the academic years 2021–22 to 2024–25, PERI Institute of Technology conducted 32 department-specific technical training programmes across Civil Engineering, Mechanical Engineering, Electrical and Electronics Engineering, and Electronics and Communication Engineering.
- Nine programmes were conducted in 2021–22, seven in 2022–23, nine in 2023–24 and seven in 2024–25. Department-wise, Civil Engineering offered five programmes, Mechanical Engineering eight, EEE nine and ECE ten.
- All four departments conducted technical training in each academic year, demonstrating sustained institutional commitment to industry-oriented skill development and career readiness. The programmes combined core engineering applications with emerging technologies to strengthen students' technical competencies and support their preparation for internships and placement.

Table 9.4.1: 2024-25

Department	Industry-oriented technical training
Civil Engineering	Technical Skill Enhancement in Revit, Primavera and MS Project; Revit Architecture
Mechanical Engineering	SOLIDWORKS; Heating, Ventilation and Air-Conditioning (HVAC)
Electrical and Electronics Engineering	Embedded C Workshop
Electronics and Communication Engineering	Python for VLSI; Embedded C for Microcontrollers
Computer Science and Engineering	Technical Skill Enhancement in Java Full Stack, Data Structures, Python and Salesforce

Table 9.4.2:2023–2024

Department	Industry-oriented technical training
Civil Engineering	Non-Destructive Testing and Quality Assurance/Quality Control (QA/QC)
Mechanical Engineering	ANSYS; HVAC
Electrical and Electronics Engineering	MATLAB for Electric Vehicle Technology; Embedded Internet of Things for Smart Sensing Applications; PLC and SCADA; Java Programming
Electronics and Communication Engineering	VLSI Chip Design; 5G Technology
Computer Science and Engineering	Technical Skill Enhancement in Advanced Java , Python , Data Structures, SQL

Table 9.4.3:2022–2023

Department	Industry-oriented technical training
Civil Engineering	AutoCAD
Mechanical Engineering	AutoCAD; CATIA

Electrical and Electronics Engineering	Embedded C — Add-on Course
Electronics and Communication Engineering	Ethical Hacking; Advanced Java Programming; Robotics and Its Applications
Computer Science and Engineering	Advanced Java Programming, Python Programming, Web Development, SQL

Table 9.4.4:2021–2022

Department	Industry-oriented technical training
Civil Engineering	Building Planning Fundamentals
Mechanical Engineering	AutoCAD Basics; SOLIDWORKS
Electrical and Electronics Engineering	Design Thinking and Electrical Design; Electric Vehicle Technology; Basics of Electrical Wiring
Electronics and Communication Engineering	Microprocessors and Microcontrollers; Cloud Computing and Distributed Systems; Cybersecurity and Web Designing
Computer Science and Engineering	Java Programming, Python Programming, Data Structures, Web Development, SQL

The training portfolio demonstrates continuous departmental involvement in skill development, with an average of eight programmes per academic year across the four departments. It combines core engineering applications with emerging technologies, supporting students in developing competencies relevant to their chosen career domains.

4. **Industry interaction and recruitment exposure**

- The institution organises placement conclaves, job fairs and interactions with human resource professionals and technical experts. These activities familiarise students with employer expectations, recruitment procedures, technical requirements and workplace practices.
- Students have opportunities to participate in two job fairs during their course of study. This provides direct exposure to employer interactions and selection procedures and helps students understand the recruitment process before attending placement drives.
- The Training and Placement Department guides students in résumé preparation, communication skill development and technical preparation. Domain-specific training also strengthens the technical foundation required for pursuing relevant internship opportunities.

5. **Higher studies and competitive examination support**

- Students interested in higher education are guided by the Centre for Higher Studies. The Centre provides awareness of postgraduate opportunities in India and abroad, organises on-campus sessions with external service providers and directs students to relevant higher education events outside the institution.
- Students aspiring to appear for GATE, government recruitment and other competitive examinations receive guidance and encouragement to prepare for and attend these examinations. Career awareness sessions help clarify doubts and support informed decision-making.

6. **Effectiveness of career guidance and training**

- The institution’s career guidance framework connects early career awareness with individual mentoring, foundational skill development, specialised technical training and recruitment preparation. The provision of training in all four departments during each of the four academic years demonstrates continuity in institutional career development practices.
- ECE recorded 599 programme participations across 10 training programmes. These included 156 participations in 2021–22, 139 in 2022–23, 162 in 2023–24 and 142 in 2024–25. These figures represent programme participations, as individual students may have attended multiple programmes.

- Civil Engineering documented 96 training hours across Building Planning Fundamentals, AutoCAD, and Non-Destructive Testing and QA/QC, in addition to the Revit and project management software programmes for which durations were not provided. Mechanical Engineering maintained two technical programmes annually, while EEE training covered electrical fundamentals, electric vehicles, embedded systems and industrial automation.

7. **Outcomes of Centre for Higher Studies Activities**

- The Centre for Higher Studies (CHS) supports students through higher education awareness programmes, competitive examination guidance and interaction with academic experts, education counsellors and government professionals.
- During 2021–22 to 2024–25, CHS organised 29 career guidance and higher education events. The programmes covered postgraduate opportunities in India and abroad, GATE/JAM, CAT, GRE, civil services, TNPSC examinations and careers in research, defence, government, IT and core industries.
- Experts from IIT Madras, IDP Education, T.I.M.E., KC Overseas Education, civil services academies, government departments and research organisations provided guidance on educational pathways, examination preparation and career opportunities. These interactions helped students explore suitable options and understand the preparation required for their chosen pathways.
- Institutional records document 14 students progressing to higher studies during this period, pursuing programmes in engineering, technology, management and research in abroad. Including 2020–21, the five-year record comprises 33 higher studies admissions.
- These sustained training, career guidance and industry interaction initiatives have contributed to students securing placements, pursuing higher studies in India and abroad, and obtaining internship opportunities. The institution’s structured approach supports informed career choices, strengthens industry readiness and facilitates students’ progression towards their professional and academic goals.

9.5 Start-up and Entrepreneurship Activities (5)

Institute Marks : 5.00

PERI Institute of Technology promotes innovation and entrepreneurship through its Entrepreneurship Development Cell (EDC), incubation and start-up facilities, and MSME Centre. These initiatives encourage students to identify societal problems, develop practical solutions and explore entrepreneurship as a career pathway. The institution supports students from initial awareness and idea generation to project development, incubation and preparation for enterprise creation.

1. **Entrepreneurship awareness and student participation**

- The Entrepreneurship Development Cell conducts entrepreneurship awareness camps, courses, interactive sessions, pitch fests and project exhibitions. These activities introduce students to entrepreneurial opportunities and help them develop initiative, creativity, problem-solving, communication and decision-making skills.
- Students interested in entrepreneurship are encouraged to register with the EDC. The Cell identifies their interests and connects them with suitable programmes, faculty guidance and external opportunities. Continued participation enables students to explore business ideas and understand the steps involved in developing an enterprise.

2. **Association with Anna University and Wadhwani Foundation**

- PERIIT has been an active member of the Centre for Entrepreneurship Development, Anna University, since 2017. Through this association, the institution encourages students to participate in entrepreneurship awareness programmes, workshops, competitions and other developmental activities organised through Anna University.
- This sustained engagement provides students with opportunities to interact with the wider entrepreneurial community, understand enterprise development and gain exposure beyond the institution. Relevant opportunities are communicated to students through the EDC, and interested students are encouraged to participate.
- Students have also attended entrepreneurship courses offered through the Wadhwani Foundation. These courses complement institutional activities by providing structured exposure to entrepreneurial thinking, opportunity identification and business development. Participation helps students consider the practical aspects of transforming an idea into a viable venture.

3. **Innovation through societal problem identification**

- The institution encourages students to interact with communities, observe real-life challenges and identify problems that can be addressed through engineering and technology. Students examine user needs, explore possible solutions and develop ideas into projects, working models or prototypes.
- Faculty members guide students in refining concepts, selecting appropriate technical approaches and improving project feasibility. This process connects classroom learning with practical applications and encourages students to consider the usefulness, affordability and social relevance of their solutions.
- The emphasis on societal problems also develops teamwork, responsibility and an understanding of the contribution that engineering innovation can make to communities.

4. **Pitch fests and project exhibitions**

- Pitch fests and project expos provide platforms for students to present ideas, demonstrate prototypes and explain their proposed applications. Students describe the problem, the intended users, the solution and its potential value.
- Feedback received during these activities helps students identify limitations and improve their projects. Presentations also strengthen their ability to communicate technical ideas, respond to questions and explain the practical relevance of their work.
- Promising ideas are encouraged for further development through mentoring and incubation support. These platforms therefore connect project-based learning with opportunities for innovation and entrepreneurship.

5. **Incubation and start-up facilities and their utilisation**

- PERIIT provides incubation and start-up facilities that are open to students interested in developing innovative projects and entrepreneurial ideas. Students can approach the EDC to explore available support and obtain guidance on progressing their concepts.
- A small number of interested students are currently utilising these facilities to refine ideas, develop projects and explore their entrepreneurial potential. This utilisation provides a foundation for expanding student participation and encouraging more project teams to continue their work beyond academic requirements.
- Faculty guidance and institutional support help students review technical feasibility, improve prototypes and prepare for demonstrations and presentations. The facilities provide an enabling environment in which students can explore entrepreneurship while continuing their academic studies.

6. **Role of the MSME Centre**

- PERIIT also functions as an MSME Centre, complementing the activities of the EDC and incubation facilities. The Centre strengthens awareness of micro, small and medium enterprise opportunities and introduces students to relevant government schemes and enterprise development pathways.
- Students are encouraged to understand how their technical knowledge and innovations may address market or community needs. Awareness of MSME opportunities helps them explore small enterprise formation and consider the support available for developing entrepreneurial initiatives.

7. **Intellectual property and enterprise formation**

- Students developing innovative projects are encouraged to explore appropriate intellectual property protection, including patent filing where applicable. This creates awareness of originality, documentation and the importance of protecting eligible innovations.
- Students with projects showing entrepreneurial potential are guided to consider further development, possible commercialisation and company registration when appropriate. They are also encouraged to explore relevant government support schemes according to the nature and stage of their projects.
- These activities introduce students to the transition from an academic project to a potential enterprise, including the need to consider users, feasibility and implementation requirements.

8. **Effectiveness of the initiatives**

- The institution’s entrepreneurship framework connects awareness, structured learning and practical participation. EDC programmes introduce entrepreneurial pathways; Anna University engagement broadens exposure; and Wadhwani Foundation courses provide additional learning opportunities.
- Societal problem identification, pitch fests and project exhibitions enable students to apply their knowledge and improve their solutions. The use of incubation and start-up facilities by interested students demonstrates initial engagement with the support available on campus.
- Together, these initiatives strengthen students’ confidence in presenting ideas, developing prototypes and exploring enterprise opportunities. Through its EDC, MSME Centre, incubation facilities and external associations, PERI Institute of Technology nurtures an entrepreneurial culture and supports students in progressing from innovative thinking towards practical solutions and potential ventures.

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

Table 9.6.1.1 GOVERNING BODY

S. No	Name and Designation of the Member	Internal member / External member / Trust Nominee	Signature
1	Mr.SaravananPeriasamy	Founder &Chairman PERI	Trust Nominee
2	Mr. K. Periasamy	Managing Director PERI Educational and Charitable Trust	Trust Nominee
3	Mr. S. Rajendran	Secretary / Member PERI Educational and Charitable Trust	Trust Nominee
4	Mr.SasiVeerarajan	Chief Operating Officer	Trust Nominee
5	Dr. R. Palson Kennedy	Principal	Member Secretary
6	Mr. K. Prabhakaran.	Additional Director – Exams (FAC) Directorate of Technical Education Chennai	State Government Nominee
7	Dr.SivabalanArumugam	Head Security Engineering, Tokyo, Japan	Member Industry Nominee
8	Mr. S. Balaji	Engineer – Product Planning Designer	Member Industry Nominee
9	Dr. S. Nanjundan	Professor of Chemistry Anna University, Chennai	Member AU Nominee
10	Mr. B. Magesh	Vice Principal PERI Institute of Technology	Member Trust Nominee
11	Dr. Moorthy Veerasamy	Controller of Examinations PERI Institute of Technology	Member
12	Dr. R. Varadharajan	Academic Advisor	Member

Key Responsibilities of the Governing Body

- Provide strategic direction and approve institutional development plans aligned with the institution’s vision and mission.
- Review academic and administrative performance and recommend measures for continuous improvement.
- Consider recommendations of the Academic Council, Finance Committee and IQAC, and approve matters within its authority.
- Approve annual budgets, major expenditure and resource allocation for infrastructure, laboratories, learning resources and institutional development.
- Approve institutional policies, service rules and delegation of responsibilities in accordance with applicable regulations.
- Review faculty and staff requirements, recruitment proposals and professional development initiatives.
- Monitor compliance with applicable AICTE, UGC, affiliating university and government requirements, and review NAAC and NBA accreditation progress.
- Review research, consultancy, industry collaboration, placement, higher studies and student welfare initiatives.
- Examine audit findings and significant institutional concerns, and monitor corrective actions.

Review the implementation of previous resolutions through Action Taken Reports and ensure accountability for approved decisions.

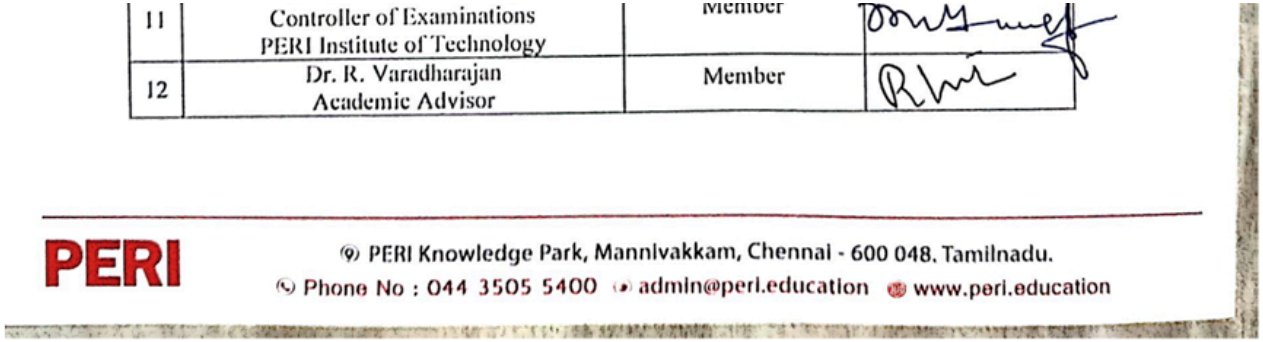
PERI
INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)

Approved by AICTE and Anna University
Accredited by NAAC | Recognized by UGC with 2(F)
AICTE Permanent ID Number : 1-5937291

21st GOVERNING COUNCIL MEETING

Date: 20.01.2025

S. No	Name and Designation of the Member	Internal member / External member / Trust Nominee	Signature
1	Mr.Saravanan Periasamy Founder & Chairman, PERI	Trust Nominee	
2	Mr. K. Periasamy Managing Director PERI Educational and Charitable Trust	Trust Nominee	
3	Mr. S. Rajendran Secretary / Member PERI Educational and Charitable Trust	Trust Nominee	
4	Mr.Sasi Veerarajan Chief Operating Officer PERI Institute of Technology	Trust Nominee	
5	Dr. R. Palson Kennedy Principal PERI Institute of Technology	Member Secretary	
6	Mr. K. Prabhakaran Additional Director – Exams (FAC) Directorate of Technical Education Chennai.	State Government Nominee	—
7	Dr. Sivabalan Arumugam Head Security Engineering, Tokyo, Japan	Member Industry Nominee	
8	Mr.S.Balaji Engineer – Product Planning Designer	Member Industry Nominee	
9	Dr. S. Nanjundan Professor of Chemistry Anna University, Chennai	Member AU Nominee	
10	Mr. B. Magesh Vice Principal PERI Institute of Technology	Member Trust Nominee	
	Dr.Moorthy Veerasamy		



11	Controller of Examinations PERI Institute of Technology	Member	
12	Dr. R. Varadharajan Academic Advisor	Member	

PERI PERI Knowledge Park, Mannivakkam, Chennai - 600 048, Tamilnadu.
Phone No : 044 3505 5400 admin@peri.education www.peri.education

Table 9.6.1.2 IQAC Committee Members

S.No	Name	Designation	Position
1.	Dr. P. Palson Kennedy	Principal	Chairperson
2.	Dr. B. Magesh	Vice Principal	Head in-charge
3.	Dr.A.V.Maya Kannan	Professor / ECE	Coordinator
4.	Mr. A. Saroja	VAO	Member
5.	Dr. S. Krishnankumar	SRO, Ex - office industrialists	Member
6.	Mr. M. Rama subramanian	Estate discipline officer	Member
7.	Dr. R.M. Sathyamoorthy	Associate Professor / Mech	Member
8.	Ms. S. L.Sreedevi	AP / EEE	Member
9.	Ms. R. S.Abbirami	AP / CSE	Member
10.	Ms. C. Lavanya	AP / Civil	Member
11.	Dr.S.SeyalMurugan	AP / Maths	Member
12.	Mr. M.Vignesh Kumar	AP / Mech	Member
13.	Ms. M. Sathiyapriya	Alumnus	Member
14.	Mr. K. Surendharakumar	Civil	Student Coordinator
15.	Ms. R. Roopavathi	CSE	Student Coordinator

Key Responsibilities of the IQAC Members

- Coordinate the preparation, approval and circulation of the institutional academic calendar, ensure alignment with departmental calendars, and monitor its implementation.
- Develop and implement quality benchmarks for academic and administrative activities to promote continuous institutional improvement.
- Prepare, communicate and monitor the annual quality assurance plan in coordination with academic departments and administrative units.

- Collect and analyse stakeholder feedback on curriculum, teaching–learning, outcome attainment, infrastructure and support services, and monitor the resulting improvement actions.
- Organise workshops, seminars and faculty development programmes on quality assurance, outcome-based education, innovative teaching practices and accreditation requirements.
- Coordinate the preparation and submission of the Annual Quality Assurance Report (AQAR) in accordance with applicable NAAC guidelines.
- Conduct internal academic audits once every semester to review academic planning, curriculum delivery, assessment practices and teaching–learning effectiveness.
- Coordinate the annual Academic and Administrative Audit (AAA), consolidate findings and monitor corrective actions and closure.
- Coordinate institutional preparedness for NAAC accreditation and support departments in NBA accreditation, including self-assessment reports, evidence verification and follow-up on recommendations.
- Monitor outcome-based education practices, including CO–PO/PSO mapping, attainment analysis and documented continuous improvement.
- Recommend academic and administrative improvements, policy revisions, resource requirements and training needs to the Principal and Governing Council.
- Coordinate the annual faculty appraisal process with the academic leadership and HR team, and facilitate mentoring and professional development based on identified needs.

PERI
INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)

Approved by AICTE and Anna University
Accredited by NAAC | Recognized by UGC with 2(F)
AICTE Permanent ID Number : 1-5937291

MEETING ATTENDANCE

Date: 03.01.2025

S. NO.	NAME	DESIGNATION	SIGNATURE
1	Dr. R. PALSON KENNEDY	PRINCIPAL	
2	Mr. B. MAGESH	IQAC HEAD COORDINATOR	
3	Mr. B. RAJESH KUMAR	BUSINESS DEVELOPMENT PERI SOFTWARE SOLUTIONS	
4	Dr. A. V. MAYAKKANNAN	PROFESSOR - ECE	
5	Dr. R. RAJESWARI	ASSOCIATE PROFESSOR - ECE	
6	Ms. S. L. SREEDEVI	ASSISTANT PROFESSOR - EEE	
7	Dr. V. ABILASH	ASSISTANT PROFESSOR - MECH	
8	Dr. R. KANTHIMATHI	ASSISTANT PROFESSOR - EEE	
9	Dr. K. RAJMOHAN	ASSISTANT PROFESSOR - ECE	
10	Ms. C. LAVANYA	ASSISTANT PROFESSOR – CIVIL	
11	Mr. R. TAMILAMUTHAN	ASSISTANT PROFESSOR - EEE	
12	Mr. B. BALAJI	ASSISTANT PROFESSOR - ECE	
13	Mr. M. VIGNESH KUMAR	ASSISTANT PROFESSOR – MECH	
14	Ms. M. SATHIYAPRIYA	ALUMNUS	
15	Mr. S. GOKUL CHANDRAN	STUDENT – CIVIL	

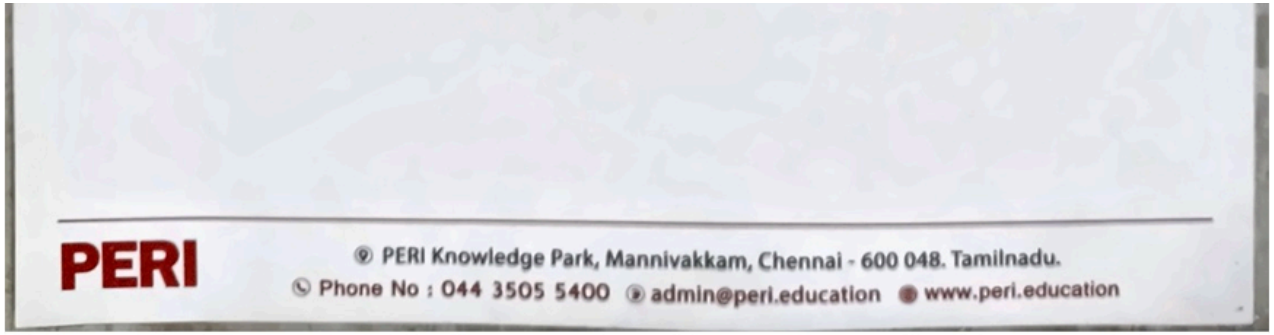


Table 9.6.1.3 Members of Admission committee

S.No	Name	Designation	Position
1.	Mr. SasikumarVeerarajan	Chief Operating Officer	Head in-charge
2.	Dr. P. Palson Kennedy	Principal	Coordinator
3.	Dr. B. Magesh	Vice Principal	Additional Coordinator
4.	Mrs. P. Bhuvaneshwari	Admission officer	Member
5.	Mrs. K. S. Thirupurasundari	Assistant Admission officer	Member
6.	Ms. P. Sreeseetha	Admission Executive	Member
7.	Ms. J. Nandhini	Admission Executive	Member
8.	Mr. S. Muthubaskar	Admission Executive	Member
9.	Mr. N. Vignesh	Admission Executive	Member

Key Responsibilities of the Members of Admission committee

- Coordinate the issue, receipt, verification and closure of student applications according to the approved admission schedule.
- Organise admission review meetings to monitor applications, counselling, seat allotment and enrolment against the approved intake.
- Verify applicants' eligibility, certificates and admission particulars in accordance with applicable AICTE, Anna University and Directorate of Technical Education (DoTE) requirements.
- Coordinate institutional registration, student data entry, document submission and admission approval processes through the applicable DoTE and counselling portals.
- Communicate and implement the approved fee structure, scholarship provisions and fee concessions in coordination with management and the accounts department.
- Guide eligible students in applying for government and institutional scholarships, verify supporting documents and coordinate application submission, renewal and follow-up with the designated scholarship officer.
- Maintain student admission records and certificate repositories securely, and provide verified documents and data for university registration, regulatory approval and institutional reporting.
- Provide students and parents with clear information on programmes, eligibility, counselling procedures, fees, scholarships and institutional facilities.

Table 9.6.1.4 Members of Anti-Ragging Committee

S.No	Name	Designation	Position
1.	Dr. P. Palson Kennedy	Principal	Head in-charge
2.	Mr. B. Magesh	Vice Principal	Member
3	Mrs. S. L. Sreedevi	HOD / EEE	Coordinator
4.	Dr.R.Rajeshwari	HOD / ECE	Member
5.	Mrs. K.Varalakshi	HOD / CSE	Member
6.	Mr. Anilkumar	HOD / Mech	Member
7	Mr. M. PitchiRajan	HOD / Civil	Member
8	Mr. S. S. Vasantharaja	AP / CSE	Member
9	Ms. C Lavanya	AP / Civil	Member
10.	Mr. R. Balaji	EEE	Student Coordinator
11.	Ms. A. Nishanthi	CSE	Student Coordinator
12.	Mr. H. Harish Babu	ECE	Student Coordinator

Key Responsibilities of the Members of Anti-Ragging Committee

- Communicate anti-ragging policies, prohibited activities, reporting procedures and consequences through orientation programmes, institutional publications, the website and campus displays.
- Display anti-ragging notices and contact details of designated authorities at prominent locations, including classrooms, laboratories, hostels, transport areas and student gathering spaces.
- Organise awareness and counselling sessions for newly admitted students and parents during admission and induction, explaining student rights, responsibilities and available support.
- Coordinate the collection and maintenance of prescribed anti-ragging undertakings from students and parents or guardians through the designated institutional process.
- Oversee the Anti-Ragging Squad, review its monitoring reports and recommend preventive measures for vulnerable locations and periods.
- Provide accessible and confidential reporting channels, encourage students to report concerns without fear, and take measures to protect students from intimidation or retaliation.
- Ensure that reported incidents receive prompt attention, coordinate fact-finding through the prescribed procedure and submit findings and recommendations to the Principal or competent authority for appropriate action.
- Coordinate counselling, academic assistance and other necessary support for affected students while ensuring fairness and confidentiality in handling complaints.
- Review preventive arrangements in hostels, transport facilities, common areas and other student interaction spaces in coordination with the responsible authorities.
- Maintain constitution orders, meeting notices, agenda, attendance, minutes, monitoring reports and confidential incident records, and submit reports to the affiliating university and other authorities according to applicable requirements.

PERI
INSTITUTE OF TECHNOLOGY

Mannivakkam, Chennai – 600 048

(Approved by AICTE,ANNA University &Accredited by NAAC)

Anti-Ragging Committee Annual Report

June 2023 to May 2024

S. No.	Month	No Issues reported	Action taken and status
1	June 2023	Nil	—
2	July 2023	Nil	—
3	August 2023	Nil	—
4	September 2023	Nil	—
5	October 2023	Nil	\
6	November 2023	Nil	—
7	December 2023	Nil	—
8	January 2024	Nil	—
9	February 2024	Nil	—
10	March 2024	1	Case reference, action taken and status submitted to Principal office
11	April 2024	1	Case reference, action taken and status submitted to Principal office
12	May 2024	Nil	—
	Annual total	**2**	

VICE PRINCIPAL

VICE PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
PERI KNOWLEDGE PARK
Mannivakkam,Chennai-600 048.

PRINCIPAL

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

Table 9.6.1.5 Members of Woman Empowerment Cell

S. No	Name	Designation	Position
1.	Mrs. K. Varalakshmi	HOD/ CSE	Coordinator
2.	Dr. P. Yamuna	Associate Professor / EEE	Member
3.	Dr.Neelima	Professor / ECE	Member
4.	Ms. S. Dhivyabharathi	AP / ECE	Member
5.	Ms. M. Saranya	AP / Civil	Member
6.	Ms. M. Divya	AP / CSE	Member
7.	Ms. P. Lekha	AP / CSE	Member
8.	Dr.J.Subashini	ASP/Physics	Member
9.	Ms. R. Keerthi	ECE	Student Coordinator
10.	Ms. P. T. Swetha	CSE	Student Coordinator
11.	Ms. S. Ramya	EEE	Student Coordinator

Key Responsibilities of the Women Empowerment Cell

- Organise awareness programmes on women’s rights, gender equality, dignity, health, hygiene and available institutional support.
- Conduct safety programmes covering self-defence, personal safety, cyber safety and safe travel.
- Arrange talks, workshops and mentoring sessions to strengthen confidence, leadership, communication, career development and entrepreneurship.
- Coordinate health check-ups and awareness sessions on menstrual health, nutrition and emotional well-being.
- Monitor the availability, cleanliness, privacy and maintenance of women’s restrooms and common rooms, including water supply, lighting, sanitary disposal facilities and essential amenities.
- Assign a designated woman faculty member for each department or block to monitor these facilities, receive concerns and coordinate prompt action with housekeeping and maintenance personnel.
- Display the contact details of designated faculty members and relevant support committees at accessible locations.
- Provide a supportive environment for women students and employees to communicate concerns confidentially and obtain guidance.
- Refer complaints involving sexual harassment to the Internal Complaints Committee and coordinate referrals to other appropriate authorities.
- Review safety concerns in classrooms, laboratories, hostels and common areas, and recommend improvements to the competent authority.
- Encourage women’s participation in technical activities, sports, institutional committees and leadership opportunities.
- Maintain records of programmes, participation, feedback, facility inspections and action taken, and submit periodic reports to the Principal.

Table 9.6.1.6 Examination Cell Committee

S.No	Name	Designation	Position
1.	Dr. R. Palsonkennedy	Principal	Chief Superintendent
2.	Dr.V.Moorthy	Prof / EEE	Controller of Examination

3	Mr.Maniraj	AP/CSE	Member
4.	Mr. P. Dhilipkumar	AP / Mech	Member
5.	Mr.G.Gokul Surendra Kumar	AP / ECE	Member
6	Ms.Ezhilarasi	AP / Civil	Member
7.	Mr.M.Ramesh	AP/S&H	Member

Responsibilities of the Examination Cell

- Coordinate UG and PG examinations under the autonomous system through the Office of the Controller of Examinations, in accordance with approved academic regulations, and manage Anna University examinations for applicable affiliated batches.
- Prepare and circulate examination schedules for theory, practical, project and viva voce examinations in alignment with the academic calendar.
- Coordinate examination registration, fee payment, eligibility verification and issue of hall tickets through the prescribed procedures.
- Facilitate the appointment of question paper setters, moderators, examiners and evaluators through the competent authority, ensuring appropriate expertise and confidentiality.
- Coordinate secure question paper preparation, moderation, printing, storage and distribution under the supervision of the Controller of Examinations.
- Arrange examination halls, seating plans, invigilation duties and facilities required for the fair and orderly conduct of examinations.
- Coordinate internal assessment mark submission and verification, attendance records and consolidation of marks in accordance with approved assessment schemes.
- Facilitate central valuation, scrutiny, moderation and processing of results, and place results before the designated approving body prior to publication.
- Process applications for scrutiny, photocopies of answer scripts, revaluation and other review mechanisms permitted under the applicable regulations.
- Receive and route examination-related grievances, discrepancies and malpractice cases to the designated authority or committee, and communicate decisions through the prescribed procedure.
- Coordinate the preparation and issue of grade sheets, consolidated statements, transcripts and other examination records within the institution’s authority, and facilitate university-issued provisional and degree certificates.
- Coordinate faculty nominations for Anna University valuation and other university examination duties wherever applicable.
- Maintain secure examination records, question paper banks, answer scripts, marks, result proceedings and digital backups according to approved retention and access procedures.
- Prepare semester-wise result analyses and share relevant findings with departments and IQAC to support academic review and continuous improvement.
- Conduct periodic reviews of examination procedures and recommend improvements in transparency, accuracy, security and timely delivery of examination services.

Table 9.6.1.7 Internal Compliance Committee

S.No	Name	Designation	Position
1	Dr. M. Ramkumar Prabhu	HOD / ECE	Coordinator
2	Dr. M. Durairaj	Associate Professor / ECE	Member
3	Dr.R.Rajeshwari	Associate Professor / ECE	Member
4.	Dr. P. Yamuna	Associate Professor / EEE	Member
5.	Dr L. Rekha	Professor / ECE	Member

6.	Mr. V. Dharmaprakash	AP / CSE	Member
7.	Dr. R. Sureshkumar	Professor / CSE	Member
8.	Dr. R.M. Sathyamoorthy	Associate Professor / Mech	Member

Responsibilities of the Internal Compliance Committee

- Promote a safe, respectful and inclusive institutional environment through awareness programmes on the prevention of sexual harassment.
- Communicate the institution’s policy, complaint procedures and committee contact details to students, faculty and staff.
- Receive Compliance of sexual harassment within its jurisdiction and provide appropriate assistance to Compliance in submitting their concerns.
- Conduct inquiries impartially and confidentially, providing the parties concerned a fair opportunity to present their statements and supporting evidence.
- Recommend appropriate interim support or protective measures to the competent authority, where necessary and permitted under applicable provisions.
- Submit inquiry findings and recommendations to the competent authority and monitor the implementation of approved action.
- Facilitate access to counselling and other appropriate support, and address concerns regarding intimidation or retaliation.
- Maintain confidential Compliance records, inquiry proceedings and action taken reports with restricted access.
- Prepare and submit periodic and annual reports as required, while protecting the identities and privacy of the persons involved.
- Review preventive measures and recommend improvements to institutional policies, awareness activities and reporting mechanisms

PERI
INSTITUTE OF TECHNOLOGY

Mannivakkam, Chennai – 600 048
(Approved by AICTE,ANNA University & Accredited by NAAC)

Internal Compliance Committee Register

June 2022 to May 2023

S. No.	Month	Event count	Action taken and status
1	June 2022	—	—
2	July 2022	—	—
3	August 2022	3	Compliance Closed after the Enquiry
4	September 2022	—	—
5	October 2022	1	Compliance Closed after the Enquiry
6	November 2022	1	Compliance Closed after the Enquiry
7	December 2022	—	—
8	January 2023	2	Compliance Closed after the Enquiry
9	February 2023	1	Compliance Closed after the Enquiry
10	March 2023	1	Compliance Closed after the Enquiry
11	April 2023	2	Compliance Closed after the Enquiry
12	May 2023	—	—
	Annual total	**11**	

VICE PRINCIPAL

VICE PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
PERI KNOWLEDGE PARK
Mannivakkam,Chennai-600 04

PRINCIPAL

PRINCIPAL
PERI Institute of Technology (Autonomous)
PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

Table 9.6.1.8 Members of Training and Placement Cell

S.No	Name	Designation	Position
1	Mr. B. Vikranth	Placement officer	Coordinator
2	Mr. S. S. Vasantharaja	AP / CSE	Member
3	Mrs. K. Lakshmipriya	AP / ECE	Member

4	Mr. D. Prabhakaran	AP / Mech	Member
5	Mr. T. Rajapandian	AP / ECE	Member
6	Ms. M. Saranya	AP / Civil	Member
7.	Mrs. R.S. Abbirami	AP / CSE	Member
8.	Mrs. A. Vijayalakshmi	AP / EEE	Member
9.	Ms. J. Ashwini	ECE	Student Coordinator
10.	Ms. DalishPrinca William	CSE	Student Coordinator
11.	Ms. L. Mohanashri	EEE	Student Coordinator

Responsibilities of the Members of Training and Placement Cell

- Scheduling soft skill training, technical training, aptitude training, personality development programs and placement training classes for the students.
- Coordinating with the industries for providing the vocational training courses, in-plant training, internships and industrial visits to students in consultation with HODs.
- Conducting mock interview and aptitude test for the students before the company recruitment process.
- Interact with the corporate people for internship and project.
- Coordinating with the different industries for on-campus and off-campus interviews of the meritorious students for providing suitable jobs in their organizations.
- Providing the information regarding students pursing higher studies in abroad.

Table 9.6.1.9 Members ofSports and cultural committee

S.No	Name	Designation	Position
1	Mr. Anilkumar	HOD / Mech	Coordinator - Sports
2	Mrs. C. N. Vidhyalakshmi	AP / English	Coordinator - Cultural
3	Mr. G. Loganathanan	AP / Mech	Member
4	Mrs. M. Saranya	AP / Civil	Member
5	Mr. S. S. Vasantharaja	AP / CSE	Member
6	Ms. R. Pooja	AP / English	Member
7	Ms. Kavitha	ECE	Student Coordinator - Sports
8	Mr. J. Jainulabdeen	Mech	Student Coordinator - Sports
9	Ms. K .Vikshara	CSE	Student Coordinator - Cultural
10	Mr. S. Nagacharan	Mech	Student Coordinator - Cultural

Responsibilities of the Members of Sports and cultural committee

- Organizing regular sports events for students to practice state and national level competition.
- Promoting team sprit by making healthy competition.
- Arranging sufficient indoor and outdoor games to the students.
- Giving practice to the students every day from 4 to 5 pm.
- Arranging practice session to the student for Anna University Zonal meet.
- Students are encouraged to take part in cultural events and show their talents.

Table 9.6.1.10Members ofGrievance Redressal Committee

S.No	Name	Designation	Position
1	Dr. P. Palson Kennedy	Principal	Coordinator
2	Mr. B. Magesh	Vice Principal	Additional Coordinator
3	Dr.R.Rajeshwari	HOD / ECE	Member
4	Mrs. K.Varalakshi	HOD / CSE	Member
5	Mr. Anilkumar	HOD / Mech	Member
6	Mrs. S. L.Sreedevi	HOD / EEE	Member
7	Mr. M. PitchiRajan	HOD / Civil	Member
8	Mr. S. Vignesh	CSE	Student Coordinator
9	Mr. R. Indiran	ECE	Student Coordinator

Responsibilities of the Members of Grievance Redressal Committee

- Provide an accessible mechanism for students to submit grievances through designated offline and online channels.
- Communicate the grievance procedure, committee contact details and available appeal mechanisms.
- Receive and examine grievances relating to academic matters, institutional services, facilities and other concerns within its approved jurisdiction.
- Review complaints impartially, verify relevant records and provide the parties concerned a fair opportunity to present their views.
- Maintain confidentiality and protect complainants from intimidation or retaliation.
- Recommend appropriate remedial measures to the competent authority and communicate decisions within the prescribed timelines.
- Refer matters such as sexual harassment, ragging and examination appeals to the designated committee or authority.

1. Publish the procedure

Share offline and online submission channels,
committee contacts and appeal options.

↓

2. Receive and log the grievance

Record the submission and identify the concern.

↓

3. Is the grievance within the committee's jurisdiction?

Check whether it concerns academics, services, facilities or another approved area.

↓ **Yes**

4. Review impartially

Verify relevant records and give all parties a fair opportunity to present their views.

↓

5. Recommend remedial action

Submit recommendations to the competent authority.

↓

6. Communicate the decision

Notify the parties within the prescribed timeline and explain any applicable appeal route.

No →

Refer to the designated body

Route sexual harassment, ragging and examination appeals to the designated committee or authority.

Table 9.6.1.11 Members of Discipline committee

S. No	Name	Designation	Position
1	Dr. P. Palson Kennedy	Principal	Head in-charge
2	Mr. Anilkumar	HOD / Mech	Coordinator
3	Mr. B. Magesh	Vice Principal	Additional Coordinator
4	Dr.R.Rajeshwari	HOD / ECE	Member
5	Mrs. K. Varalakshi	HOD / CSE	Member
6	Mr. N. Vignesh	Admission Officer	Member
7	Mrs. S. L. Sreedevi	HOD / EEE	Member
8	Mr. M. PitchiRajan	HOD / Civil	Member
9	MrK.S .Senthil kumar	AP / ECE	Member
10	Mr. R. Balaji	EEE	Student Coordinator
11	Ms. V. Durga	CSE	Student Coordinator
12	Mr. C. Akash	ECE	Student Coordinator

Responsibilities

- Implement the institution’s code of conduct and disciplinary procedures consistently and fairly.
- Promote responsible behaviour, punctuality, mutual respect and adherence to institutional rules among students.
- Monitor compliance with requirements relating to identity cards, dress code, attendance and timely reporting to classes.
- Conduct campus rounds during breaks, lunch hours and other designated periods to maintain orderly conduct and timely return to classes.
- Examine reported disciplinary incidents, verify relevant information and provide students concerned an opportunity to explain their conduct.
- Recommend appropriate corrective measures to the competent authority in accordance with approved procedures.

ServiceRules, Recruitment procedures and Promotion Policies

PERI Institute of Technology follows a framework of service rules, academic procedures and delegated responsibilities to support transparent and accountable administration. These provisions cover recruitment, faculty appraisal, professional development, leave, student-related processes and financial administration.
The General Service Rules apply to temporary and permanent employees and take effect from the date of approval by the Governing Council.

1. **Institutional governance and policy approval**

   The Management and Governing Council provide institutional direction and approve policies within their respective authority. The Principal coordinates academic and administrative implementation, supported by the Vice Principal, Heads of Departments, IQAC, committee coordinators and administrative officers.

   Policies and procedures are implemented through the organisational structure and committee system. Matters requiring higher approval are forwarded through the appropriate authority, while departments and committees carry out activities within their assigned responsibilities. This arrangement supports decentralisation, participative management and accountability.

2. **Recruitment and selection procedures**

   Recruitment to teaching positions is undertaken through direct recruitment or promotion, subject to eligibility requirements, institutional needs and approval by the competent authority.

   Vacancies are advertised through leading newspapers and faculty recruitment platforms. Applications are scrutinised discipline-wise, and eligible candidates are shortlisted for interview. The institutional selection committee includes the Chairman, Chief Operating Officer, Principal, Vice Principal and relevant Heads of Departments, with additional representation wherever required under applicable provisions.

   Candidates deliver a technical presentation of approximately ten minutes to demonstrate subject knowledge, communication and teaching ability. A personal interview assesses technical competence and suitability for the position. The committee prepares a merit-based panel for consideration and appointment by the competent authority.

3. **Service records and recognition of experience**

   The institution maintains a service book for each employee. It records appointment particulars, previous experience, increments, promotions, awards, disciplinary actions and other service-related information. Entries are verified and attested by the authorised officer.

   Previous experience is considered according to the approved service rules. The supplied policy recognises service in engineering colleges and provides for consideration of 50% of service in affiliated Arts and Science Colleges for entry-level appointments in Science and Humanities. Recognition of experience remains subject to verification and applicable eligibility requirements.

4. **Faculty performance appraisal increments and promotion**

   Faculty appraisal is conducted annually during July–August. Faculty members submit their performance details and supporting documents covering teaching, academic results, research, professional development and additional responsibilities.

   The HoD verifies the submissions and records observations. Assessments from the academic leadership, IQAC and HR are consolidated, and the submitted information is validated during August. One-to-one meetings provide feedback, recognise contributions and identify improvement needs. The completed records are subsequently handled by HR for processing and implementation of approved decisions.

Appraisal scores form a basis for annual increments in accordance with institutional policy. Increment eligibility is also considered with reference to qualifying service and the applicable review date. Promotion is considered against the qualifications, experience, performance and other conditions prescribed for the higher position; completion of one year alone does not establish eligibility for promotion.

Faculty members requiring improvement receive mentoring from senior academicians, the HoD or Academic Head. Development measures may include FDPs, NPTEL/MOOC courses, improved teaching practices and greater research participation. Progress is reviewed through subsequent academic monitoring and appraisal.

5. **Leave vacation and on-duty procedures**

Faculty members are eligible for one day of casual leave for each completed month of service under the supplied rules. Leave is normally availed with prior approval through the HoD and institutional authority.

In emergencies, the faculty member informs the HoD promptly and coordinates necessary workload arrangements. The leave application and relevant supporting documents are submitted immediately upon resuming duty. Summer and winter vacation are governed by the approved institutional schedule and service conditions.

On-duty permission may be granted for university examination duties and approved FDPs, workshops, conferences, seminars and similar professional activities. Prior approval is required, and attendance or participation evidence is submitted upon return.

6. **Resignation and relieving procedures**

Resignation is processed according to the approved service rules and appointment conditions. The employee submits written notice, completes the required academic and administrative work, hands over records and institutional property, and obtains departmental and administrative clearance. Applicable notice period, notice-pay provisions and outstanding responsibilities before the competent authority approves relieving. The process is coordinated to maintain continuity of teaching and other institutional activities.

7. **Policies and procedures relating to students**

Student-related procedures cover admission, eligibility verification, registration, scholarships, fees, attendance, assessment, examinations, conduct and grievance redressal.

The Admission Committee coordinates applications, document verification, applicable DoTE and university processes, and implementation of the approved fee structure. Eligible students receive guidance on scholarship applications, renewals and supporting documents.

Academic activities follow the approved regulations and institutional academic calendar. The Examination Cell and Office of the Controller of Examinations coordinate autonomous examination procedures, while university procedures apply to relevant affiliated batches.

Student concerns are addressed through designated mechanisms, including the Grievance Redressal Committee, Anti-Ragging Committee, Internal Complaints Committee and Discipline Committee. Mentoring, class committee meetings and career guidance provide additional academic and personal support.

9.6.2 Transparency (5)

Institute Marks : 5.00

Availability and Dissemination of Institutional Information

PERI Institute of Technology disseminates information on institutional policies, rules and procedures through its website and official communication channels. The purpose is to ensure that faculty, staff, students, parents and other stakeholders can access relevant information and understand their responsibilities and available services.

1. **Information available on the institutional website**

The website provides access to institutional information relating to governance, academic administration, faculty and student support. The disclosures should include:

a) Institutional vision, mission, organisational structure and responsibilities of governing and administrative bodies.

b) Service rules, recruitment and promotion policies, faculty appraisal procedures, leave provisions and professional development support.

c) Academic regulations, curricula, academic calendars, attendance requirements, assessment procedures and examination-related information.

d) Admission procedures, approved fee details, scholarship opportunities and student support services.

e) Policies and procedures relating to grievance redressal, anti-ragging, prevention of sexual harassment, student conduct and equal opportunity.

f) The approved delegation of administrative and financial powers, identifying the competent authorities, scope of authority and applicable financial limits.

g) Committee constitutions, memberships, responsibilities and official contact details, wherever public disclosure is applicable.

The relevant website links, publication dates and latest revision details are maintained as supporting evidence.

2. **Disclosure of governance proceedings**

Meeting agendas and approved minutes of the Governing Body and Academic Council are uploaded under the relevant governance section of the website. Senate proceedings are included only where a Senate forms part of the institution’s governance structure.

These disclosures enable stakeholders to understand major institutional decisions, academic developments and approved improvement measures. Action Taken Reports may also be published to demonstrate implementation and follow-up. Confidential personal information and protected proceedings are handled according to applicable requirements.

3. **Dissemination to stakeholders**

Website publication is supplemented by communication through institutional circulars, official email, the iGURU platform, orientation programmes and meetings.

Faculty and staff are informed about service conditions, academic responsibilities, appraisal and administrative procedures through induction and departmental meetings. Students receive information on academic regulations, examinations, conduct, scholarships, grievance mechanisms and career support through induction, mentoring and class committee meetings. Parents receive relevant information through parent–teacher interactions and official communications.

Revised policies and important decisions are circulated to the stakeholders concerned, with reference to the updated website document.

4. **Extent of stakeholder awareness**

Stakeholder awareness is assessed through orientation participation, faculty and student interactions, class committee discussions, parent–teacher meetings and feedback on access to institutional information.

The assessment considers whether stakeholders know where to find relevant documents, whom to contact and how to use procedures such as grievance submission, scholarship applications, examination review and leave approval.

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 2024-25

Total Income 219868928				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
198704884	21164044	0	0	127430122	1238	102932.25

Table 2 - CFYm1 2023-24

Total Income 70546815				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
50660176	19886639	0	0	110821577	1068	103765.52

Table 3 - CFYm2 2022-23

Total Income 110043178				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
21329017	33012953	0	55701208	93699491	1029	91058.79

Table 4 - CFYm3 2021-22

Total Income				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			

Items	**Budgeted in 2024-25**	**Actual Expenses in 2024-25 till**	**Budgeted in 2023-24**	**Actual Expenses in 2023-24 till**	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**
Infrastructure Built-Up	340000(	3336278	1450000	1348133	620000(	6175781	150000(	140050(

Library	395000(	388058(	550000(	545819(	530000	539831	120000(	1104381
Laboratory equipment	387000(	373668(	230000(	225179(	330000(	324180(	0	0
Teaching and non-teaching stal	455000(	454603(	530000(	526064(	450000(	444050(	450000(	441238(
Outreach Programs	400000	386224	140000(	138282(	140000(	131526(	0	0
R&D	600000	592534	160000	151834	70000	60000	0	0
Training, Placement and Indust	120000(	1188384	1100000	103216(	430000(	422915(	650000	631414
SDGs	15000	14500	110000	105000	28000	27605	0	0
Entrepreneurship	150000	147841	75000	72000	730000	721216	0	0
Others, specify	600000(	579912(	250000(	249905(	330000(	329838(	380000(	3703237
Total	**129885000**	**127430122**	**113045000**	**110821577**	**94558000**	**93699491**	**99850000**	**96896975**

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 2024-25

Total Budget 2981250		Actual expenditure (till…): 2900793.63		Total No. Of Students 66
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
2981250	2981250	2900793.63	97.3	43951.42

Table 2 :: CFYm1 2023-24

Total Budget 1924000		Actual expenditure (till…): 1870739		Total No. Of Students 79
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
1924000	1924000	1870739	97.2	23680.24

Table 3 :: CFYm2 2022-23

Total Budget 1478600		Actual expenditure (till…): 1461540		Total No. Of Students 82
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
1478600	1478600	1461540	98.8	17823.66

Table 4 :: CFYm3 2021-22

Total Budget 184000		Actual expenditure (till…): 179272		Total No. Of Students 118
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
184000	184000	179272	97.4	1519.25

Items	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Laboratory equipment	967500	934171	460000	450358	660000	648361	0	0
Software	300000	2899564	225000	224915	165000	164719	57000	55548
SDGs	3750	3625	22000	21000	5600	5521	0	0

Support for faculty developmen	480000	463930	375000	374858	330000	329838	76000	74064
R & D	150000	1481335	32000	30367	14000	12000	0	0
Industrial Training, Industry exp	720000	713030	660000	619298	172000	169166	13000	12628
Miscellaneous Expenses*	360000	3479477	150000	149943	132000	131935	38000	37032
Total	**2981250**	**2900793.63**	**1924000**	**1870739**	**1478600**	**1461540**	**184000**	**179272**

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

Institute Marks : 5.00

PERI Institute of Technology provides library resources and digital learning facilities to support curriculum requirements, independent study, project work and knowledge enhancement. Printed books, journals, DELNET resources and an NPTEL video repository enable students to extend their learning beyond classroom instruction.

1. **Availability of books and journals**

The departmental library inventory reports **5,611 book titles and a total collection of 20,940 books.** The collection covers Science and Humanities, Civil Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Mechanical Engineering and emerging disciplines, including Information Technology, Artificial Intelligence, Data Science and Cybersecurity.

The library supports students through textbooks and reference materials relevant to their courses, assignments and projects. **The addition of 640 books during 2025–26 reflects** continued strengthening of the collection.

The journal summary records 26 national and 14 international journals. These resources provide exposure to developments in engineering, technology and related disciplines and support literature reviews, seminars and project preparation.

2. **Electronic resources and digital learning facilities**

The institution provides online access to DELNET, with the submitted library record listing access to 1,120 e-journals. Students can use the available electronic resources to supplement textbook learning, explore technical topics and identify literature relevant to their academic work.

Students are provided unlimited online access to the resources available through the institution’s DELNET membership, subject to the subscribed access arrangements. Access to electronic books and other materials is governed by the collections available through the service.

An NPTEL video repository is also available for independent learning. Students can revisit concepts taught in class, study difficult topics at their own pace and explore subjects beyond the prescribed syllabus. The repository supports supplementary learning and preparation for relevant online courses and certifications.

3. **Accessibility of learning resources**

The library provides students with access to printed learning materials for reference and borrowing according to institutional library procedures. Library personnel assist students in locating books, identifying relevant resources and using available electronic services.

One library hour is included in the weekly timetable to encourage regular utilisation. This scheduled period gives students an opportunity to consult reference materials, read journals, gather information for assignments and develop independent reading habits.

Online resources complement physical library access by enabling students to consult available digital materials beyond the scheduled library hour. DELNET access and the NPTEL repository provide additional opportunities for learning according to individual interests and academic needs.

4. **Support for self-learning activities**

The institution encourages students to use library and electronic resources for assignments, seminars, projects and independent exploration. Faculty members guide students towards relevant reference books, journal literature and NPTEL lectures to strengthen their understanding of course concepts.

The weekly library hour supports purposeful reading and information gathering. Students are encouraged to compare explanations from different sources, prepare notes and explore applications of the concepts studied in class.

NPTEL videos support self-paced learning through repeated viewing and topic-wise study. Students requiring additional support can revisit foundational concepts, while advanced learners can explore specialised subjects and emerging technologies.

Journal access supports the development of literature review and technical reading skills. Students can use relevant publications to understand existing approaches, identify project ideas and relate their work to developments in their discipline. Library assistance and faculty guidance help students select suitable materials and use information responsibly.

5. **Contribution to student learning**

The combination of printed resources, journals, online access, a dedicated weekly library hour and the NPTEL video repository creates opportunities for sustained independent learning. These provisions support subject understanding, preparation of assignments and projects, technical exploration and the development of lifelong learning habits.

By integrating scheduled library use with access to digital resources, PERI Institute of Technology encourages students to take greater responsibility for their learning and extend their knowledge beyond the classroom.

9.10 E-Governance (5)

Institute Marks : 5.00

E-governance initiatives, sustainable academic management and campus-wide computing resources

PERI Institute of Technology integrates e-governance, digital academic management and computing infrastructure to support academic and professional activities for students and faculty. Separate portals for Admissions, Academics, the Controller of Examinations (COE) and Human Resources (HR) support systematic management of institutional functions. These facilities improve access to information, facilitate academic monitoring and reduce dependence on paper-based records.

E-governance in academic and administrative processes

The institution operates a dedicated admission portal to manage the admission process from application to completion. Maintaining admission information digitally facilitates systematic processing, retrieval of student particulars and coordination of admission-related activities. A separate HR portal supports human resource management.

The academic portal supports student attendance monitoring, lesson planning, preparation of learning notes and creation of mentoring reports. Digital lesson plans help faculty organise course delivery, while electronically maintained notes support the preparation of teaching materials. Mentoring reports provide a structured record of student guidance and follow-up, supporting continuity in academic support.

Students have separate mobile access to verify their attendance. This enables them to monitor their attendance regularly and take timely steps to address shortages. Digital attendance records also facilitate departmental monitoring and identification of students requiring guidance.

Student feedback collected through the iGURU application supports confidential participation, consolidated analysis and follow-up action. Academic information maintained through the platform assists institutional review and coordination among faculty, departments and administrators.

Digital examination management

The dedicated COE portal supports examination activities, including question paper uploading, end-semester question paper setting, marks uploading, result preparation and processing. Bringing these activities within a digital system facilitates organised submission, compilation and processing of examination information.

Digital maintenance of examination records supports their retrieval and review and reduces repeated manual compilation. The separate COE portal provides a structured mechanism for coordinating examination work across departments.

Campus-wide computing resources and connectivity

The institution provides 240 computer systems across seven laboratories to support practical instruction and academic activities. These facilities enable students to undertake programming, assignments, technical presentations, engineering applications and project development. Faculty members use computing facilities for teaching preparation, academic documentation, examination work, research and professional development.

A 1,000 Mbps network supports connectivity for academic and institutional activities. Wi-Fi is available in hostels and at selected academically important locations on campus, extending connectivity beyond the computer laboratories. These arrangements support access to digital academic platforms and online activities in the designated areas.

Laboratory schedules and departmental coordination facilitate access to computing facilities for practical classes and academic work. Technical personnel support the functioning and maintenance of computers, software and network connectivity.

ICT-enabled teaching and learning

4 Smart boards and 15 projectors support ICT-enabled teaching. Faculty members use these facilities to explain concepts through presentations, visual illustrations, demonstrations and other digital teaching materials.

The combination of ICT teaching facilities, computer laboratories and network connectivity supports classroom instruction and practical learning. It also provides infrastructure for student project work, technical activities and faculty academic preparation.

Sustainable practices in academic and learning management

Digital maintenance of attendance, lesson plans, learning notes, mentoring reports, admission information and examination records reduces dependence on printed registers, repeated photocopying and duplicate documents. The use of iGURU and the dedicated institutional portals therefore contributes to reduced paper consumption and paper waste while improving record organisation and retrieval.

The institutional website and official digital communication channels disseminate academic calendars, examination information, circulars and updates, further reducing the need for printed communication. Faculty, students and administrative personnel are encouraged to avoid unnecessary printing and reuse suitable paper.

Responsible use of computers, projectors, smart boards and other electrical equipment supports energy conservation. The institution conducts an annual energy audit through an approved external agency and reviews its recommendations to identify opportunities for reducing energy consumption. These practices connect digital academic management with efficient use of institutional resources.

Together, the dedicated portals, student mobile access, computing laboratories, network connectivity and ICT teaching facilities support accessible academic services, systematic institutional management and sustainable teaching–learning practices.

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

Institute Marks : 10.00

Sustainable Development Goals Addressed at PERI Institute of Technology and Relevant Activities

Sustainable Development Goal	Relevant institutional activities
SDG 4 Quality Education	Environmental Science courses for all students; sustainability-focused assignments and engineering projects; faculty guidance for SDG-oriented projects; evaluation weightage for SDG relevance; outreach activities that develop environmental awareness and social responsibility.
SDG 6 Clean Water and Sanitation	Bacteria-based wastewater treatment and reuse for gardening; sprinkler irrigation; push taps to minimise water wastage; suitable RO reject water reused for gardening; community awareness on water conservation and cleanliness.
SDG 7 Affordable and Clean Energy	Solar-powered street and hostel lighting; solar energy for designated motor operations; LED lighting; annual energy audits by an approved external agency; implementation of conservation measures and awareness on responsible electricity use.
SDG 12 Responsible Consumption and Production	Segregation of biodegradable and non-biodegradable waste; composting garden trimmings and organic materials; recycling paper, plastic, glass and metal through vendors; digital records through institutional portals to reduce paper waste; reuse of suitable paper and computer components; cartridge refilling where feasible; e-waste disposal through authorised vendors.
SDG 13 Climate Action	Tree planting and campus greenery maintenance; renewable energy adoption and energy conservation; pedestrian-only areas and electric vehicle use; reduced paper consumption; student projects and community outreach addressing environmental protection and climate awareness.

PERI Institute of Technology promotes sustainable development through academic practices, renewable energy adoption, energy conservation, water management, waste reduction, reuse and recycling, and community participation. These initiatives support SDG 4—Quality Education, SDG 6—Clean Water and Sanitation, SDG 7—Affordable and Clean Energy, SDG 12—Responsible Consumption and Production, and SDG 13—Climate Action.

Green energy and energy conservation

The institution conducts an annual energy audit through an approved external agency to assess energy consumption, identify inefficiencies and recommend conservation measures. Audit findings are reviewed to guide maintenance, operational improvements and phased measures to reduce energy usage.

Energy conservation initiatives include LED lighting, solar-powered lighting for campus streets and hostel areas, and solar energy for designated motor operations. Students, faculty and staff are encouraged to switch off lights, fans, computers and other equipment when not required. These practices support renewable energy utilisation and responsible electricity consumption.

Water conservation and reuse

Campus wastewater is treated through a bacteria-based recycling system, and the treated water is reused for gardening, reducing freshwater demand for maintaining campus greenery.

Sprinkler irrigation supports controlled water application, while push taps help minimise wastage. RO reject water is also used for gardening where its quality is suitable. These arrangements promote water conservation and productive reuse of available water resources.

Waste management, reduction, reuse and recycling

Separate bins are provided for biodegradable and non-biodegradable waste to facilitate segregation at source. Garden trimmings and suitable organic materials are composted, and the resulting manure is used for campus gardening.

Paper, plastic, glass and metal waste are segregated and handed over to recycling vendors. Digital academic and administrative record maintenance through iGURU and the institutional portals reduces the need for printed registers, duplicate documents and repeated photocopying, thereby reducing paper consumption and paper waste.

Reuse of suitable paper, recovery of serviceable computer components and refilling of printer cartridges, wherever feasible, extend the useful life of materials. Obsolete computers, monitors, printers and accessories are segregated and stored in a designated area before disposal through authorised vendors.

Green campus and efforts towards lower emissions

Tree planting, landscape maintenance, pedestrian-only areas and the use of electric vehicles support an environmentally responsible campus. Reuse of treated wastewater for irrigation connects campus greening with water conservation.

Renewable energy adoption, energy-efficient lighting, responsible equipment usage, reduced paper consumption and sustainable mobility support efforts to lower the institution’s environmental footprint. These measures represent progressive steps towards lower emissions; achievement of net zero has not been established through the information presented here.

Environmental education in the curriculum

Environmental Science is included in the curriculum for all students to develop awareness of natural resources, ecosystems, biodiversity, pollution prevention, waste management and sustainable development. The course helps students understand the relationship between technological development, environmental protection and responsible resource utilisation.

Environmental education provides a foundation for considering sustainability in engineering decisions. Students are encouraged to apply this understanding in assignments, laboratory activities and projects involving environmental and societal challenges.

SDG-oriented student projects and evaluation

Students are encouraged to select problems related to the Sustainable Development Goals for mini-projects, applied engineering projects and final-year projects. Suggested areas include renewable energy, energy efficiency, water conservation, wastewater management, waste segregation, recycling, sustainable construction and solutions addressing community needs.

Faculty guides support students in identifying relevant problems, examining feasibility, developing solutions and assessing their potential environmental and societal benefits. This approach connects engineering knowledge with practical sustainability challenges.

Weightage is given to SDG-oriented projects during project evaluation to encourage sustainability in problem selection, design and implementation. The project evaluation process recognises the relevance of the problem to the SDGs, the technical approach and the potential contribution to environmental protection or societal improvement.

Research, innovation and entrepreneurial opportunities

Sustainability-related student projects provide opportunities for further research, prototype development and innovation. Promising ideas can be considered for additional testing, interdisciplinary development and entrepreneurial support according to their feasibility and stage of development.

Evidence of contributions in this area should identify the actual research or innovation undertaken, its connection to the relevant SDGs and its outcomes. Publications, patents, prototypes, funded projects and entrepreneurial activities should be reported according to their documented status.

SDG-based outreach and community engagement

The institution organises outreach activities around SDG-related themes to extend environmental awareness and social responsibility beyond the campus. These activities address environmental protection, water and energy conservation, waste segregation, cleanliness and responsible consumption.

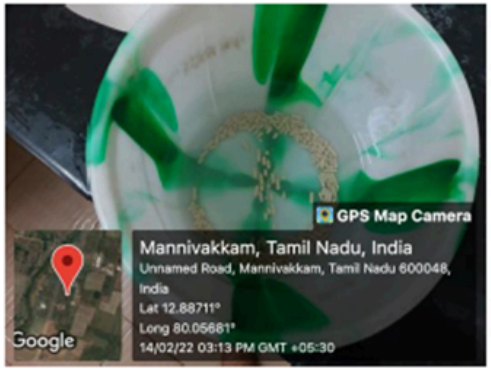
Student participation connects classroom learning with community needs and provides opportunities to practise communication, teamwork and problem-solving. Outreach activities also encourage students to understand local challenges and contribute to community-oriented sustainability efforts.

Monitoring and continuous improvement

Annual energy audit findings and available electricity consumption, water management and waste disposal records provide a basis for reviewing campus sustainability practices. Academic implementation is supported through curriculum records, project guidelines, evaluation rubrics and project review documentation.

PERI INSTITUTE OF TECHNOLOGY

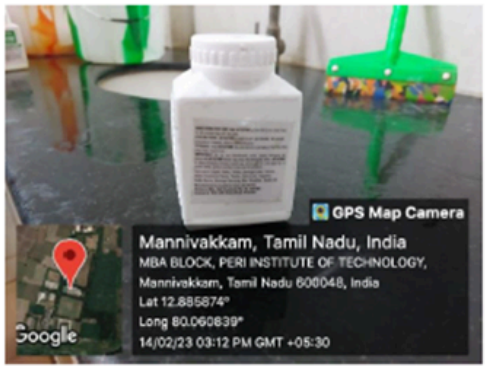
Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)
AICTE Permanent ID Number : 1-5937291





Waste Water recycling using Bacteria based method





Waste Water recycling using Bacteria based method

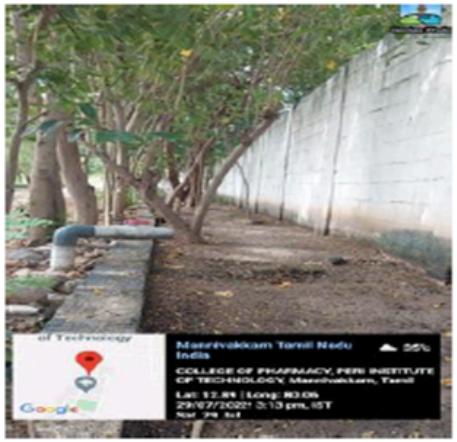
PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)
AICTE Permanent ID Number : 1-5937291





Water Sprinklers



Recycled Waste Water Distribution to trees

9.12 Innovative Educational Initiatives and Implementation (5)

Institute Marks : 5.00

PERI Institute of Technology supports student mobility, flexible learning and holistic development through the Academic Bank of Credits, value-based education, interdisciplinary and multidisciplinary courses, and the integration of Indian knowledge and cultural heritage. Policies on women empowerment and gender equality, accessible infrastructure, financial assistance and academic support promote equitable participation in education.

Student mobility and Academic Bank of Credits

As an institution affiliated to Anna University, opportunities for student exchange are governed by the applicable university framework. Within this framework, student transfers between Anna University-affiliated institutions are facilitated in accordance with prescribed procedures and eligibility requirements.

The institution has initiated the implementation of the Academic Bank of Credits (ABC) and encourages students to create their accounts and maintain digital academic credit records. More than 50% of students have created ABC accounts and have had their academic credits uploaded to these accounts. Efforts continue to extend registration and credit uploading to the remaining students.

These initiatives establish a foundation for credit accumulation, academic flexibility and mobility, subject to applicable university regulations.

Holistic education and human values

The institution integrates human values, ethical responsibility and personal development into engineering education. Under the Anna University Regulation 2021 curriculum, courses such as Universal Human Values and Professional Ethics develop students' understanding of ethical conduct, respect for others, social responsibility and professional accountability.

Additional courses, including Personal and Professional Competencies for Engineers and Holistic Personality Development and Behavioural Skills, strengthen communication, teamwork, self-awareness, interpersonal relationships and responsible behaviour. These courses complement technical learning and prepare students to participate constructively in professional, family and social life.

Interdisciplinary and multidisciplinary learning

Open electives and professional electives provide opportunities for students to broaden their knowledge within the applicable curriculum framework. Interdisciplinary courses connect core engineering subjects with emerging technologies and applications in other fields.

Examples include Artificial Intelligence in Agriculture, Embedded C Programming, Artificial Intelligence and Machine Learning for Mechanical Engineers, and Internet of Things for Electrical Engineers. Python programming is introduced to students in core engineering disciplines to strengthen programming skills and computational thinking.

Courses such as Hospital Management, Human–Computer Interaction and Organisational Relationship expose students to the connections between engineering, management, human behaviour and service systems. The institution also encourages multidisciplinary projects, enabling students to combine knowledge from different domains to address practical problems.

Indian Knowledge System and Indian language learning

Following Anna University's curricular framework, the institution offers Heritage of Tamils and Tamils and Technology. These courses introduce students to Tamil cultural heritage, indigenous knowledge and historical technological contributions. They help students appreciate the relationship between traditional knowledge, culture and contemporary engineering.

The institution also takes initiatives to organise guest lectures on Indian Knowledge System themes to supplement curricular learning. Courses relating to Tamil heritage and technology contribute to regional language and cultural education and strengthen students' awareness of local knowledge traditions.

Inclusivity, gender equality and accessible infrastructure

The institution has policies on women empowerment and gender equality to promote equal opportunities, respectful participation and an inclusive educational environment. These policies provide a framework for supporting women students and faculty and encouraging equitable participation in academic and institutional activities.

The campus is developed as a disabled-friendly environment. Lift facilities are available in all buildings to support movement between floors and improve access for persons with mobility difficulties. Accessible infrastructure supports the participation of students, faculty and other campus users in academic and institutional activities.

Financial assistance and educational continuity

The institution facilitates access to government financial assistance for eligible engineering students, including the Tamil Nadu First Graduate tuition fee concession and post-matric scholarships. These benefits help reduce financial barriers and support students from eligible social and economic backgrounds.

The Chairman Scholarship provides institutional fee support to eligible students facing financial hardship, including students who lose their parents during their studies. This assistance helps affected students continue their education despite difficult family circumstances.

Identification and support of slow learners

The institution follows a continuous process for identifying and supporting students who require additional academic assistance. After every Continuous Assessment Test (CAT), students who have failed in individual subjects are identified through a review of their results. Students who underperform in university examinations are also included for academic support.

Subject-wise special classes are scheduled to address learning gaps, clarify difficult concepts and provide additional practice. Faculty members guide students in improving their understanding of the subject and preparing for subsequent assessments.

Mentors provide individual guidance and follow up on students' academic progress. Where necessary, parents are informed and discussions are held regarding performance, learning difficulties and the support required. This coordination among subject faculty, mentors and parents helps sustain students' participation in improvement activities.

Performance in subsequent CAT examinations and university examinations is reviewed to assess progress and identify students who require continued support. Through special classes, mentoring and parental involvement, the institution makes sustained efforts to improve learning and academic performance.

Together, these initiatives support flexible academic progression, holistic development and equitable access, while providing targeted assistance to students facing financial, physical or academic challenges

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

Institute Marks : 10.00

PERI Institute of Technology follows a structured annual performance appraisal system to assess faculty contributions to teaching, research, professional development, student support and institutional administration. The system combines evidence-based self-assessment with evaluation by the Head of the Department, Principal/Vice Principal, IQAC and Human Resources Department. Appraisal outcomes are linked to increments, recognition, mentoring and continuous professional development.

1. **Annual appraisal process**

The appraisal exercise is conducted annually during July–August. Appraisal forms are distributed to faculty members, who record their contributions for the prescribed assessment period and submit supporting documents.

During August, the submitted information and documentary evidence are validated by the respective authorities. The HoD verifies academic results, research contributions and professional development activities. Departmental, institutional, IQAC and HR assessments are subsequently consolidated.

Following validation, one-to-one meetings are conducted to discuss individual performance, recognise contributions and identify areas requiring improvement. After these meetings, the consolidated appraisal records are handed over to HR for processing, maintenance and implementation of approved appraisal-related decisions.

2. **Assessment components and weightage**

Faculty performance is assessed on a 100-point scale across five components.

Assessment component	**Maximum score**
Self-analysis, verified by the HoD	30
Head of the Department's assessment	15
Principal/Vice Principal's assessment	15
IQAC assessment	30
HR assessment	10
Total	100

This framework recognises academic achievement, quality of teaching, professional cooperation, institutional responsibilities and compliance with established procedures.

3. **Teaching performance and academic results**

Academic results carry 10 marks. The appraisal form specifies differentiated pass-percentage targets: above 80% for problem-oriented courses, above 90% for theoretical courses and 100% for laboratory courses. Performance is assessed against the targets for the courses handled.

The HoD evaluates content preparation, content delivery, implementation of modern teaching tools and dedication to student development. IQAC further assesses academic delivery through class audits and compliance with prescribed iGURU procedures, including tests and attendance. These measures connect appraisal with effective curriculum delivery and academic accountability.

4. **Research and professional development**

Research contribution carries 10 marks and includes journal publications, books, book chapters and patent publications. Faculty members submit documentary evidence identifying the author and institutional affiliation. Publications are evaluated according to the scoring and equivalence provisions specified in the appraisal form.

Academic improvement carries an additional 10 marks. The criteria recognise doctoral pursuit, NPTEL courses, FDP participation and applications for funded or consultancy projects, as applicable. These provisions encourage faculty members to update their knowledge, strengthen research capabilities and develop expertise relevant to teaching and industry requirements.

5. **Departmental and institutional contributions**

The HoD's assessment carries 15 marks, covering departmental responsibilities and professional performance. Recognised responsibilities include examination coordination, research and development, mentoring, industrial visits, placement and admissions. Assessment also considers timely execution of tasks, cooperation with colleagues, responsiveness and accuracy of information.

The Principal/Vice Principal's assessment carries 15 marks. It recognises institutional responsibilities associated with research, entrepreneurship development, higher studies support, IQAC, NSS, YRC, cultural activities, sports and admissions. Commitment, willingness to accept responsibilities, execution of tasks, cooperation and crisis management are also assessed.

6. **Quality assurance and student feedback**

IQAC assessment carries 30 marks, distributed equally among academic delivery through class audits, adherence to iGURU procedures and student feedback recorded in Class Committee Meetings. Student feedback therefore contributes 10% of the overall appraisal score.

Identified concerns are discussed with the faculty member to determine suitable corrective measures. These may include revision of course plans, improvement in teaching methods, additional tutorials, experiential learning activities and participation in relevant FDPs or MOOCs. Subsequent academic monitoring and student feedback support follow-up review.

7. **Professional conduct and HR compliance**

HR assessment carries 10 marks and covers compliance with leave policies, prior permission for leave, biometric attendance, attendance records and prescribed reporting procedures. This component reinforces professional responsibility and adherence to institutional policies.

8. **Appraisal of laboratory support staff**

A separate 50-point appraisal system is followed for laboratory assistants. It covers academic activities, laboratory performance, departmental and institutional responsibilities, and HR compliance.

The criteria include punctuality, involvement in conducting experiments, knowledge of experiments, maintenance of laboratory equipment and documents, timely completion of tasks and cooperation. This complementary assessment supports the effective delivery of practical instruction.

9. **Effectiveness and follow-up**

The appraisal system links performance scores with annual increments in accordance with institutional policy. It also provides a basis for recognising faculty contributions and assigning suitable academic or administrative responsibilities.

One-to-one appraisal meetings provide individual feedback and identify professional development needs. Faculty members requiring improvement receive mentoring from senior academicians, the HoD or the Academic Head. Mentoring addresses specific needs in teaching, student engagement, research and execution of assigned responsibilities.

Faculty members are guided to attend relevant FDPs, complete NPTEL/MOOC certifications, strengthen research activities and adopt appropriate teaching tools. Progress is reviewed through academic monitoring, student feedback, course results and subsequent appraisal.

By connecting annual assessment with increments, recognition, individual mentoring and follow-up, the institution promotes accountability, continuous professional development and sustained faculty contributions to institutional performance.

9.14 Outreach Activities (5)

Institute Marks : 5.00

Community cleanliness and village service

- Students participate in village cleaning and community cleanliness programmes that promote hygiene, responsible waste disposal and the maintenance of public spaces. These activities benefit local communities while helping students understand the importance of collective responsibility for a clean and healthy environment. Working alongside community members strengthens cooperation and awareness of local challenges.

Blood donation and humanitarian activities

- Blood donation camps encourage eligible students to contribute voluntarily to community healthcare. These programmes support awareness of blood donation and provide students with an opportunity to practise humanitarian service.
- Visits to old age homes provide opportunities for students to interact with residents and offer companionship. These interactions benefit residents through social engagement while developing empathy, patience and respect for older persons among students.

School outreach and career guidance

- Career guidance and awareness programmes connect the institution with school students. These interactions help schoolchildren understand higher education opportunities and career pathways and encourage them to consider their educational aspirations.
- Participating college students develop communication, presentation and organisational skills through these programmes. Sharing their learning experiences also strengthens their confidence and sense of responsibility towards younger learners.

Health, safety and civic awareness

- Drug awareness programmes promote understanding of the harmful effects of substance abuse and encourage healthy and responsible choices. Students participate in communicating these messages, strengthening their own awareness while contributing to public sensitisation.
- Election awareness rallies promote informed and responsible democratic participation. Traffic awareness camps encourage adherence to traffic rules and safe behaviour among road users. These activities benefit the community through public awareness while helping students develop civic responsibility and concern for public safety.

Annual NSS special camp

- The institution organises an NSS special camp every year, providing students with sustained opportunities for community engagement. The camp enables volunteers to participate in service activities, interact with residents and gain a closer understanding of community priorities.
- Planning and carrying out activities together develops teamwork, leadership, adaptability and problem-solving skills. Community interaction also helps students appreciate the practical challenges involved in organising service initiatives and responding to local needs.

Mutual benefits and student achievements

- The institution’s outreach activities create opportunities for reciprocal learning and support. Society benefits through cleanliness initiatives, blood donation, educational guidance, companionship and awareness programmes. Students benefit through practical exposure to social conditions and opportunities to apply communication, leadership and organisational skills beyond the classroom.
- Participation builds confidence, empathy and respect for people from different social and economic backgrounds. Students learn to work collectively, understand community concerns and recognise their ability to contribute to positive change. Their service contributions and learning are documented through programme reports, participation records, photographs, certificates and available beneficiary feedback.

- Through its extensive NSS and YRC activities, PERI Institute of Technology connects academic learning with community responsibility. These initiatives strengthen institution–society relationships, contribute to community well-being and help students develop into compassionate, socially responsible professionals.

Outreach Activities, Community Service and Society Connect

Community cleanliness and village service

- Students participate in village cleaning and community cleanliness programmes that promote hygiene, responsible waste disposal and the maintenance of public spaces. These activities benefit local communities while helping students understand the importance of collective responsibility for a clean and healthy environment. Working alongside community members strengthens cooperation and awareness of local challenges.

Blood donation and humanitarian activities

- Blood donation camps encourage eligible students to contribute voluntarily to community healthcare. These programmes support awareness of blood donation and provide students with an opportunity to practise humanitarian service.
- Visits to old age homes provide opportunities for students to interact with residents and offer companionship. These interactions benefit residents through social engagement while developing empathy, patience and respect for older persons among students.

School outreach and career guidance

- Career guidance and awareness programmes connect the institution with school students. These interactions help schoolchildren understand higher education opportunities and career pathways and encourage them to consider their educational aspirations.
- Participating college students develop communication, presentation and organisational skills through these programmes. Sharing their learning experiences also strengthens their confidence and sense of responsibility towards younger learners.

Health, safety and civic awareness

- Drug awareness programmes promote understanding of the harmful effects of substance abuse and encourage healthy and responsible choices. Students participate in communicating these messages, strengthening their own awareness while contributing to public sensitisation.
- Election awareness rallies promote informed and responsible democratic participation. Traffic awareness camps encourage adherence to traffic rules and safe behaviour among road users. These activities benefit the community through public awareness while helping students develop civic responsibility and concern for public safety.

Annual NSS special camp

- The institution organises an NSS special camp every year, providing students with sustained opportunities for community engagement. The camp enables volunteers to participate in service activities, interact with residents and gain a closer understanding of community priorities.
- Planning and carrying out activities together develops teamwork, leadership, adaptability and problem-solving skills. Community interaction also helps students appreciate the practical challenges involved in organising service initiatives and responding to local needs.

Mutual benefits and student achievements

- The institution’s outreach activities create opportunities for reciprocal learning and support. Society benefits through cleanliness initiatives, blood donation, educational guidance, companionship and awareness programmes. Students benefit through practical exposure to social conditions and opportunities to apply communication, leadership and organisational skills beyond the classroom.

- Participation builds confidence, empathy and respect for people from different social and economic backgrounds. Students learn to work collectively, understand community concerns and recognise their ability to contribute to positive change. Their service contributions and learning are documented through programme reports, participation records, photographs, certificates and available beneficiary feedback.
- Through its extensive NSS and YRC activities, PERI Institute of Technology connects academic learning with community responsibility. These initiatives strengthen institution–society relationships, contribute to community well-being and help students develop into compassionate, socially responsible professionals.

PERI INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)
AICTE Permanent ID Number: 1-5937291

YOUTH RED CROSS

Academic Year 2023-2024

Activities

S. No.	Date	Name of the Event	Place
1	3.4.2024	Anti Tobacco Drive	Chengalpattu
2	21.2.2024	Tree Plantation Programme	Mannivakkam
3	28.12.2023	Visit - DGSEA Orphanage and Home for the aged	Vilvarayanallur
4	12.10.2023	Visit - Uhayam Rehabilitation Centre for the Differently abled	Palliagaram

5	25.8.2023	Blood Donation Camp	College Campus

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

PERI INSTITUTE OF TECHNOLOGY
AN AUTONOMOUS INSTITUTION

Approved by AICTE, Affiliated to Anna University
Accredited | by NAAC Recognized by UGC with 2(F)

NATIONAL SERVICE SCHEME

Academic Year 2023-2024			
1	04/07/2023	One day camp in Government Higher School , Mannivakkam	Mannivakkam
2	01/04/2023	Lake Cleaning Campaign at Mannivakkam	Mannivakkam
3	17/04/2023	Temple Cleaning Program at Manneeswarar Temple, Mannivakkam	Mannivakkam

NSS - Program Officer
PERI Institute of Technology
(An Autonomous Institution)
Chennai – 600 048.

NSS camp Addressed Environmental concerns and Promotes Green Initiatives at Govt. Government Higher School Aadhanur on 4th July 2023







The NSS Club of PERI institute of Technology organized a one-day camp in the Govt.Higher Secondary school, Aadhanur near Vandalur on 4th July 2023. The major issues identified by the team were improper garbage disposal, lack of awareness regarding plastic disposal, and unrepaired grounds. Volunteers cleaned and repaired the school grounds and planted the saplings.

Dr. R. PAUSON KENNEDY, M.E., Ph.D.,
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

PERI
INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliated to Anna University
Accredited by NAAC | Recognized by UGC with 2(F)
AICTE Permanent ID Number : 1-5937291

Blood Donation camp on 14/03/2023



YRC of PERI Institute of Technology has organized Blood Donation camp at PERI IT Campus on 14/03/2023

Dr. R. PALSON KENNEDY, M.E., Ph.D.
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

PERI EDUCATION
PERI Knowledge Park, Mannivakkam, Chennai - 600 048. Tamilnadu.
Phone No : 044 3505 5400 admin@peri.education www.peri.education

Annexure I

(A) PROGRAM OUTCOME (POs)

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.

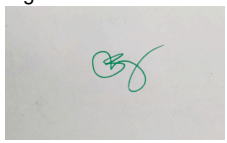
PSO1	Foundation of Electrical Engineering: Ability to understand the principles and working of electrical components, circuits, systems and control that are forming a part of power generation, transmission, distribution, utilization, conservation and energy saving. Students can assess power management, auditing, crisis and energy saving aspects.
PSO2	Foundation of Mathematical Concepts: Ability to apply mathematical methodologies to solve problems related with electrical engineering using appropriate engineering tools and algorithms.
PSO3	Computing and Research Ability: Ability to use knowledge in various domains to identify research gaps and hence to provide solutions which leads to new ideas and innovations.

Declaration

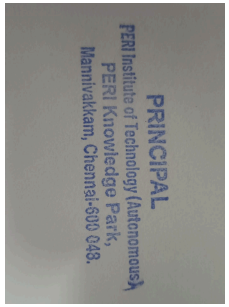
The head of the institution needs to make a declaration as per the format given -

- 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 inforce as on date and the institutes hall 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 willbe 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 K A SUNDARARAMAN
Designation : Principal
Signature :



Seal of The Institution :



Place : Chennai-48
Date : 06-11-2026 22:10:51