PERI INSTITUTE OF TECHNOLOGY

SELF ASSESSMENT REPORT(TIER - II) FOR Electronics & Communication 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	
○ State Government	☐ Any Other(Please Specify)
○ 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
Electronics & Communication Engineering	UG	2011	2021	60	Yes	60	Not accredited (specify visit dates, year)	18/11/2022	20/11/2022		4

Sanctioned Intake for Last Five Years for the Electronics & Communication Engineering	
Academic Year	**Sanctioned Intake**
2024-25	60
2023-24	60
2022-23	60
2021-22	60
2020-21	120
2019-20	120

Applied Electronics	PG	2012	2013	18	Yes	12	Not eligible for accreditation	--	--		2

Sanctioned Intake for Last Five Years for the Applied Electronics	
Academic Year	**Sanctioned Intake**
2024-25	12
2023-24	12
2022-23	12
2021-22	12
2020-21	12
2019-20	24

Communication Systems	PG	2014	2020	18	Yes	12	Not eligible for accreditation	--	--		2

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

Sanctioned Intake for Last Five Years for the Communication Systems

Academic Year	Sanctioned Intake
2024-25	12
2023-24	12
2022-23	18
2021-22	18
2020-21	9
2019-20	18

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, 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	75.89
5	FACULTY INFORMATION	100	99.85
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**	**926**

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, 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 be recognized by the society as an excellent department and to emerge as a “Centre of excellence” in the field of Electronics and Communication Engineering that imparts high quality education which create engineers capable of providing comprehensive solutions to the challenges in the latest technological trends.
Mission of the Department	

Mission No.	Mission Statements
M1	To adopt the best pedagogy method for imparting knowledge in the field of Electronics and Communication technologies through curricular and allied activities.
M2	To promote high-quality research leading to publications in reputed journals.
M3	To build partnerships with leading academic institutions and industries in India and abroad.
M4	To nurture learner centric environment with ethical values and social responsibilities.

1.1.2 State PEOs of the Program (5)

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	To provide the students with a strong foundation in the required sciences in order to pursue studies in Electronics and Communication Engineering.
PEO2	To gain adequate knowledge to become good professional in electronic and communication engineering associated industries, higher education and research.
PEO3	To develop attitude in lifelong learning, applying and adapting new ideas and technologies as their field evolves.
PEO4	To prepare students to critically analyze existing literature in an area of specialization and ethically develop innovative and research-oriented methodologies to solve the problems identified.
PEO5	To inculcate in the students a professional and ethical attitude and an ability to visualize the engineering issues in a broader social context.

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

Institute Marks : 15.00

A. Process of Defining Department Vision and 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 format and mechanism which is available in public domain of IIT’s and NIT’s.
- 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.

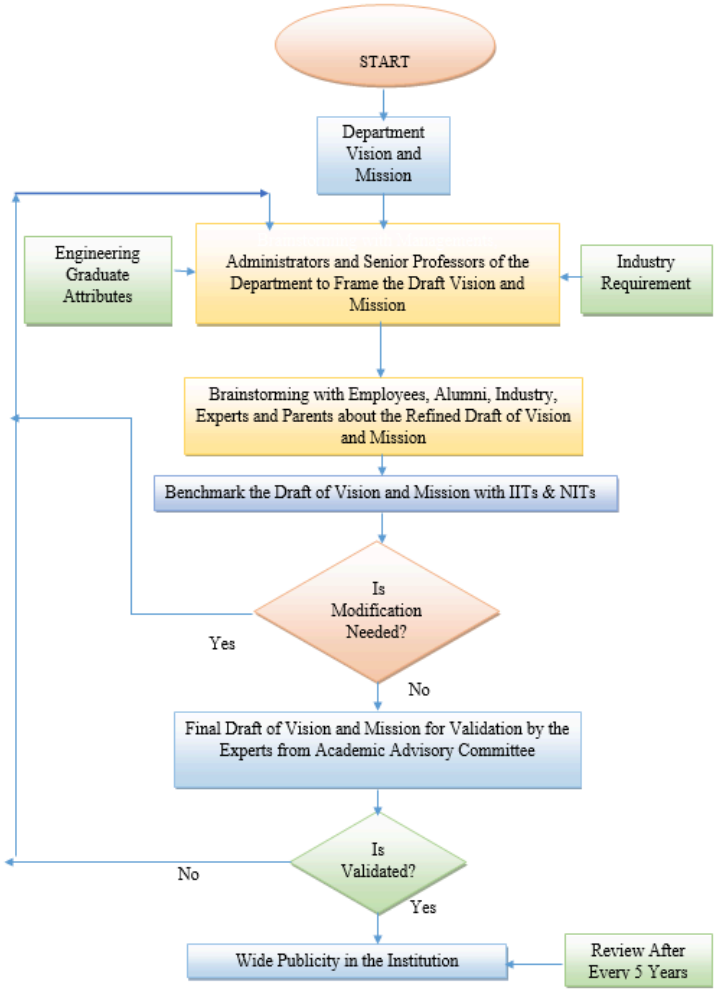


Fig 1.1.3.1: Department Vision and Mission Creation & Validation Process

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. It is then benchmarked with reputed institutions such as 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.

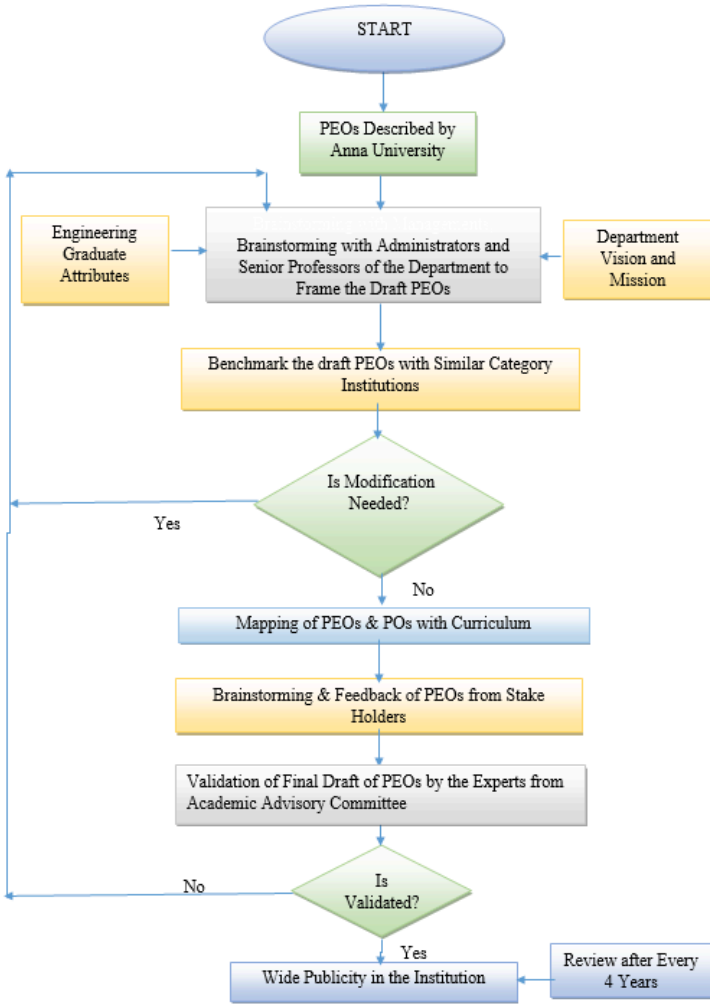


Fig 1.3.1.2: Program Educational Objectives Creation & Validation Process

1.1.4 Dissemination of Vision, Mission and PEOs (5)

Institute Marks : 5.00

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) 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

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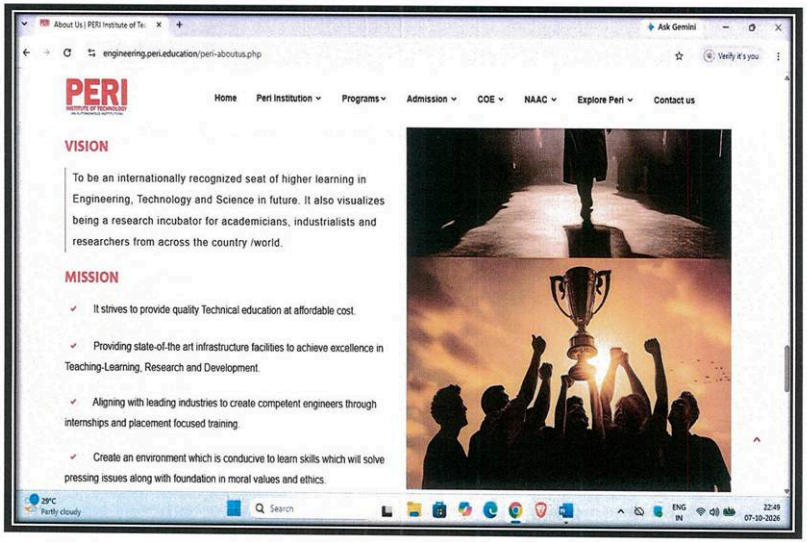


Fig 3: Publish on Institution Website

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

PERI
INSTITUTE OF TECHNOLOGY

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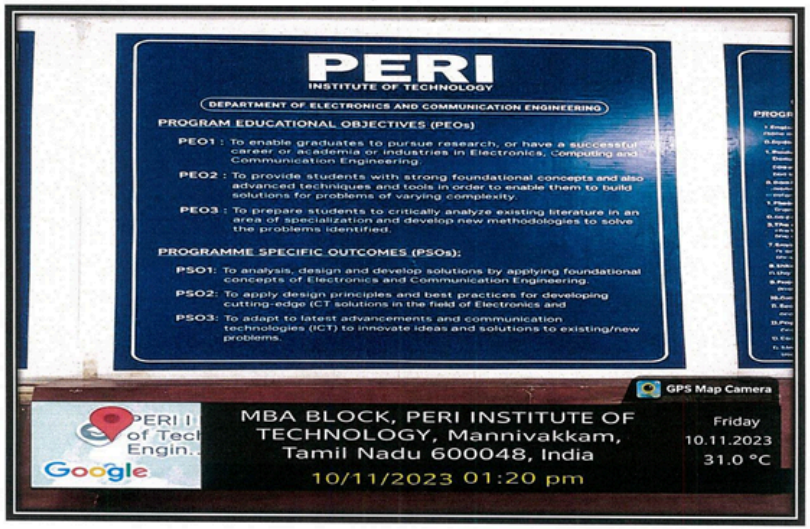


Fig 4: Dissemination of PEOs and PSOs in the Laboratory

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Fig 5: Dissemination of Department Vision and Mission in the Classroom

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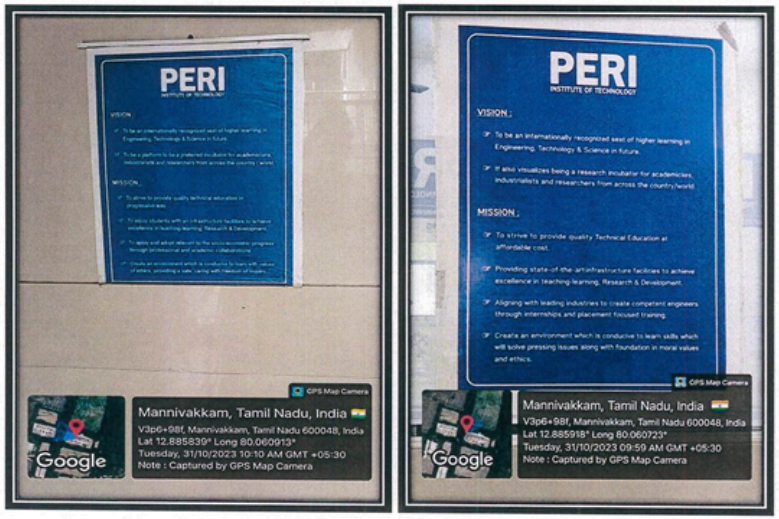


Fig 6: Dissemination of Department Vision and Mission in the Department Corridor

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Fig 7: Induction Program for Freshers'

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

1.1.5 Mapping of PEOs with Mission (10)

Institute Marks : 10.00

PEO Statements	M1	M2	M3	M4
To provide the students with a strong foundation in the required sciences in order to pursue studies in Electronics and Communication Engineering.	3	1	1	2
To gain adequate knowledge to become good professional in electronic and communication engineering associated industries, higher education and research.	3	3	3	2
To develop attitude in lifelong learning, applying and adapting new ideas and technologies as their field evolves.	3	2	3	2
To prepare students to critically analyze existing literature in an area of specialization and ethically develop innovative and research-oriented methodologies to solve the problems identified.	2	3	2	2
To inculcate in the students a professional and ethical attitude and an ability to visualize the engineering issues in a broader social context.	1	1	2	3

PEO 1 – Strong foundation in required sciences

Mission	Level	Justification
M1	3	PEO 1 is about building a scientific foundation for Electronics and Communication studies, which is exactly what M1s best pedagogy and curricular activities deliver. Direct, High correlation.
M2	1	Research publications build on a good foundation, but foundation-building is not the aim of research. Indirect contribution only.
M3	1	Partnerships (Guest lectures, MoUs) reinforce fundamentals only marginally.

M4	2	A learner-centric environment (mentoring, remedial and bridge support) helps students master basic sciences. Medium support.

PEO 2 – Competent professionals in industry, higher education and research

Mission	Level	Justification
M1	3	Acquiring adequate knowledge is the first requirement of PEO 2, and M1 delivers it through quality teaching in the discipline and allied activities. High correlation.
M2	3	PEO 2 names research as one of three career paths. High-quality research and publications prepare students for research careers and higher studies.
M3	3	Partnerships with industries and leading institutions in India and abroad directly provide internships, placements, projects and admission pathways to higher education.
M4	2	Ethical values and social responsibility shape professional character, but are not the main driver of technical competence. Medium correlation.

PEO 3 – Lifelong learning and adapting to new technologies

Mission	Level	Justification
M1	3	Good pedagogy with allied activities (seminars, self-study, projects, MOOCs) builds the habit of learning independently and the ability to pick up new technologies.
M2	2	Engagement with research exposes students to emerging ideas, but research is pursued by a subset of students. Medium correlation.
M3	3	Continuous interaction with industry and leading institutions keeps students updated on evolving technologies and tools, which PEO 3 requires. High correlation.
M4	2	A learner-centric environment encourages self-paced learning, supporting lifelong learning. Medium correlation.

PEO 4 – Critical analysis of literature and ethical, research-oriented problem solving

Mission	Level	Justification
M1	2	Pedagogy develops analytical and problem-solving skills in general, but PEO 4 is specific to research and literature review. Medium correlation.
M2	3	Research leading to publications in reputed journals requires literature survey, critical analysis and innovative methodology, which is exactly PEO 4. Strongest link, High correlation.
M3	2	Collaborations provide research problems, facilities and mentors for research-oriented work. Medium correlation.
M4	2	PEO 4 requires methodologies to be developed ethically, which matches M4s ethical values. Medium correlation.

PEO 5 – Professional ethics and awareness of the broader social context

Mission	Level	Justification
M1	1	Curricular content (professional ethics, humanities) contributes a little, but pedagogy is mainly about technical knowledge. Low.
M2	1	Research ethics (integrity, avoiding plagiarism) is only a small part of PEO 5. Low.
M3	2	Exposure to industry practice and global institutions builds awareness of professional codes and societal impact. Medium correlation.
M4	3	Ethical values and social responsibility are stated outright in M4 and in PEO 5. Direct, High correlation.

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 Program	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	30	30	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 Electronics Engineering	45	0	0	45	90	3.00
14	BE3254	Electrical and Instrumentation Engineering	45	0	0	45	90	3.00
15	GE3251	Engineering Graphics	30	0	60	30	120	4.00
16	EC3251	Circuit Analysis	45	15	0	60	120	4.00
17	GE3252	Tamils and Technology	15	0	0	15	30	1.00

18	GE3271	Engineering Practices Laboratory	0	0	60	0	60	2.00
19	EC3271	Circuit Analysis Laboratory	0	0	30	0	30	1.00
20	GE3272	Communication Laboratory	0	0	60	0	60	2.00
21	MA3355	Random Processes and Linear Algebra	45	15	0	60	120	4.00
22	CS3353	C Programming and Data structures	45	0	0	45	90	3.00
23	EC3354	Signals and Systems	30	30	0	60	120	4.00
24	EC3353	Electronic Devices and circuits	45	0	0	45	90	3.00
25	EC3351	Control Systems	45	0	0	45	90	3.00
26	EC3352	Digital Systems Design	45	0	30	45	120	4.00
27	EC3361	Electronic Devices and Circuits Laboratory	0	0	45	0	45	1.50
28	CS3362	C Programming and Data Structures Laboratory	0	0	45	0	45	1.50
29	GE3361	Professional Development	0	0	30	0	30	1.00
30	EC3452	Electromagnetic Fields	45	0	0	45	90	3.00
31	EC3401	Networks and Security	45	0	30	45	120	4.00
32	EC3451	Linear Integrated Circuits	45	0	0	45	90	3.00
33	EC3492	Digital Signal Processing	45	0	30	45	120	4.00
34	EC3491	Communication Systems	45	0	0	45	90	3.00
35	GE3451	Environmental Sciences and Sustainability	30	0	0	30	60	2.00
36	EC3461	Communication Systems Laboratory	0	0	45	0	45	1.50
37	EC3462	Linear Integrated Circuits Laboratory	0	0	45	0	45	1.50
38	EC3501	Wireless Communication	45	0	30	45	120	4.00

39	EC3552	VLSI and CHIP Design	45	0	0	45	90	3.00
40	EC3551	Transmission Lines and RF Systems	45	0	0	45	90	3.00
41	CEC352	Satellite communications	45	0	0	45	90	3.00
42	CEC345	Optical communication and networks	45	0	0	45	90	3.00
43	CEC366	Image processing	45	0	0	45	90	3.00
44	EC3561	VLSI laboratory	0	0	60	0	60	2.00
45	ET3491	Embedded systems and IoT Design	45	0	30	45	120	4.00
46	CS3491	Artificial Intelligence and Machine Learning	45	0	30	45	120	4.00
47	OEE351	Renewable Energy System	45	0	0	45	90	3.00
48	CEC333	Adavanced Wireless Communication Techniques	45	0	0	45	90	3.00
49	CEC365	Wireless sensor network design	45	0	0	45	90	3.00
50	CEC340	MEMS Design	30	0	30	30	90	3.00
51	GE3791	Human values and Ethics	30	0	0	30	60	2.00
52	GE3751	Principles of Management	45	0	0	45	90	3.00
53	OMR351	Mectronics	45	0	0	45	90	3.00
54	OMR353	Sensors	45	0	0	45	90	3.00
55	AI3021	IT in Agricultural systems	45	0	0	45	90	3.00
56	EC3711	Summer Intenership	0	0	0	60	60	2.00
57	EC3811	Project work/Intenership	0	0	300	0	300	10.00
		Total	**1740**	**90**	**1110**	**1920**	**4860**	**162.00**

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	15.43	27.00	25.00
Basic Engineering	12.96	28.00	21.00
Humanities and Social Scie	7.41	12.00	12.00
Program Core	35.80	72.00	58.00
Program Electives	11.11	18.00	18.00
Open Electives	7.41	12.00	12.00
Project(s)	6.18	20.00	10.00
Internships/Seminars	1.23	0.00	2.00
Any other (Please specify)	2.47	8.00	4.00
Total number of Credits			**162.00**

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 Program Outcomes (POs) and Program 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 program-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	EC3501 ends at 3G; 4G/	Up-skilling Course on 5(	06/11/2023	Mr.S.M.Soukath Ahamec	DADB- German Academy	PO1, PO5, PO11, PSO3	Delete
2	ET3491 covers 8051/AR	Training Program on BC	18/01/2024	Mr. Ranjith	Crystal Clear Technology	PO3, PO5, PSO1, PSO2	Delete
3	No career planning, aptit	Scientific Career Planni	09/4/2024	Mr.Krishnan Ravishanka	Harrison Assessments –	PO9, PO10, PO11	Delete
4	Only Python and C taugl	Java Technical training	29/01/2024	Mr.Ruban	FACE Prep, chennai	PO5, PO11, PSO3	Delete
5	5G architecture, NR, slic	Guest Lecture on 5G Te	03/10/2023	Mr.Sivaraj Krishnan	DADB- German Academy	PO5, PO11, PSO3	Delete
6	EC3552 theory-oriented;	VLSI and Chip Design	25/10/2023	Mr.G.Jayaprakash	Techsonic Instruments, C	PO5, PO11, PSO1, PSO	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	Embedded Systems taug	Seminar on Embedded	18/08/2022	Mr.S.Satheesh Kumar	Adventure Technology Sc	PO1, PO5, PO11, PSO1,	Delete
2	No embedded SDLC, toc	Workshop on how to wo	18/09/2022	Mr.Hareesh Kumar	IVW India Pvt Ltd, Chenn	PO3, PO5, PSO1, PSO2	Delete
3	Mobile application/platfo	Seminar on Mobile Tech	20/09/2022	Mr. G.Gopinath & Mr.B. F	Shri Harshika Institute of	PO5, PO11, PSO3	Delete
4	No PCB design and layo	Workshop on PCB Desi	21/09/2022	Mr. K. R. Bharathwaj	Wipro Ltd, Bangalore	PO3, PO5, PSO1, PSO2	Delete
5	Robotics/automation onl	Workshop on Robotics a	18/10/2022	Mr.Nagaraj	Axis Global Automation, (	PO3, PO5, PO11, PSO2,	Delete
6	No WLAN, Wi-Fi, Blueto	Seminar on Wireless Te	08/02/2023	Mr.V.S. Rajan	Aadhityaa Information Te	PO5, PSO1, PSO3	Delete
7	Lacks industry-oriented (	Seminar on Digital Elect	09/02/2023	Mr.Erwin	Sutanto University, Airlan	PO3, PO11, PSO1	Delete
8	Blockchain only a brief ir	Workshop on Block cha	11/02/2023	Mr.V.S. Rajan	Aadhityaa Infomedia Tecl	PO5, PO6, PO11, PSO3	Delete
9	No embedded-robotics ir	Workshop on Embedde(	20/03/2023	Mr.P.Vignesh & Ms.E.Pri	Swastik Electronics, Che	PO3, PO5, PO8, PSO1,	Delete
10	IoT limited to one course	Disruptive technologies	21/04/2023	Dr.S.Hariprasad	Fibre one AI India Pvt Ltd	PO5, PO11, 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	Limited exposure to data	Data Mining and its app	29/04/2022	Dr.G.Vimal Raja	Oracle, Chennai.	PO5, PO11, PSO3	Delete
2	Insufficient hands-on circ	Workshop on Tinker Ca	26/04/2022	Mr.S .Prabhakaran	IVW Private limited, Cher	PO3, PO5, PO9, PO11, F	Delete
3	Lack of practical PCB lay	Workshop on PCB Desi	21/4/2022	Mr. K.R Bharathwaj	Peri Institute of Technolo	PO3, PO5, PO11, PSO1	Delete
4	Limited awareness of so	Software development L	06/04/2022	Mr.Pandidurai Iyyapan	L&T infotech, Chennai	PO5, PO10, PO11, PSO3	Delete
5	Need for deeper RF syst	RF system design	02/04/2022	Dr.JananiSelvaraj	Periyar Manniyammai Ins	PO3, PO5, PSO2	Delete
6	Limited knowledge of se	CMOS Fabrication proc	28/03/2022	Dr.M.Arunkumar	GITAM,Bangalore	PO11, PSO1, PSO3	Delete
7	Gap in applying embedd	Internet of things guest l	23/03/2022	Mr.V.S.Rajan	Aadhitya Infomedia Techı	PO3, PO5, PO6, PO11, F	Delete
8	Need to strengthen ethic	Engineering ethics and l	19/03/2022	Mr.Raman Baskaran	Infinite Solutions, Chenna	PO6, PO7, PO8, PO9, P	Delete
9	Limited exposure to indu	Industrial Automation Se	16/03/2022	Mr.T.Arunjebooshan	Sree Technologies, Chen	PO3, PO5, PO6, PSO1,	Delete
10	Gap between syllabus ar	Chip Technologies Sem	11/03/2022	Mr.Vivek Packiaraj	Microchip Technology	PO5, PO11, PSO1, PSO	Delete
11	Need to reinforce fundar	Basic Electronics Semin	21/04/2022	K.Bharathwaj	Peri Institute of Technolo	PSO1	Delete
12	Lack of awareness of blc	Block Chain Technology	25/01/2022	Mr.V. S Vasan	Aadhitya Infomedia Techı	PO5, PO6, PO11, PSO3	Delete
13	Limited practical knowle	Access Control list in Ne	16/11/2021	Dr.Kamalakannan	Machap Asia Pacific Tech	PO5, PO7, PSO2	Delete

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

1.3.1 POs and PSOs (5) :

PSO1	Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.
PSO2	Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.
PSO3	Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems

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 Electronics Engineering, Electrical and Instrumentation Engineering, Engineering graphics, Circuit analysis, Engineering Practices Laboratory, Circuit analysis Laboratory, Communication Laboratory, Random processes and linear algebra, C Programming and Data Structures, Signals and systems, Electronic devices and circuits, Control systems, Digital Systems design, Electronic devices and circuits Laboratory, C Programming and Data Structures Laboratory, Electromagnetic Fields, Embedded systems and IOT design, Linear Integrated Circuits, Digital signal processing, Communication systems, Environmental Sciences and Sustainability, Communication Systems Laboratory, Linear Integrated Circuits Laboratory, Wireless communication, VLSI and Chip Design, Transmission lines and RF systems, Satellite Communication, Optical Communication & Networks, Image Processing, Disaster Risk Reduction and Management, VLSI Laboratory, Renewable Energy System, Advanced wireless Communication Techniques, Wireless Sensor Network Design, MEMS Design, Industrial Safety, Principles of Management, Mechatronics, Sensors, IT in Agricultural System, Telecommunication switching and Transmission, Artificial Intelligence and Machine Learning, Project Work
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 Electronics Engineering, Electrical and Instrumentation Engineering, Engineering graphics, Circuit analysis, Engineering Practices Laboratory, Circuit analysis Laboratory, Communication Laboratory, Random processes and linear algebra, C Programming and Data Structures, Signals and systems, Electronic devices and circuits, Control systems, Digital Systems design, Electronic devices and circuits Laboratory, C Programming and Data Structures Laboratory, Electromagnetic Fields, Embedded systems and IOT design, Linear Integrated Circuits, Digital signal processing, Communication systems, Environmental Sciences and Sustainability, Communication Systems Laboratory, Linear Integrated Circuits Laboratory, Wireless communication, VLSI and Chip Design, Transmission lines and RF systems, Satellite Communication, Optical Communication & Networks, Image Processing, Disaster Risk Reduction and Management, VLSI Laboratory, Renewable Energy System, Advanced wireless Communication Techniques, Wireless Sensor Network Design, MEMS Design, Industrial Safety, Principles of Management, Mechatronics, Sensors, IT in Agricultural System, Telecommunication switching and Transmission, Artificial Intelligence and Machine Learning, Project Work
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 Electronics Engineering, Electrical and Instrumentation Engineering, Engineering graphics, Circuit analysis, Circuit analysis Laboratory, Communication Laboratory, Random processes and linear algebra, C Programming and Data Structures, Signals and systems, Electronic devices and circuits, Control systems, Digital Systems design, Electronic devices and circuits Laboratory, C Programming and Data Structures Laboratory, Electromagnetic Fields, Embedded systems and IOT design, Linear Integrated Circuits, Digital signal processing, Communication systems, Environmental Sciences and Sustainability, Communication Systems Laboratory, Linear Integrated Circuits Laboratory, Wireless communication, VLSI and Chip Design, Transmission lines and RF systems, Satellite Communication, Optical Communication & Networks, Image Processing, Disaster Risk Reduction and Management, VLSI Laboratory, Advanced wireless Communication Techniques, Wireless Sensor Network Design, MEMS Design, Industrial Safety, Principles of Management, Mechatronics, Sensors, IT in Agricultural System, Telecommunication switching and Transmission, Artificial Intelligence and Machine Learning, Project Work
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, Physics for Electronics Engineering, Circuit analysis, Circuit analysis Laboratory, Communication Laboratory, Random processes and linear algebra, C Programming and Data Structures, Signals and systems, Electronic devices and circuits, Control systems, Digital Systems design, Electronic devices and circuits Laboratory, C Programming and Data Structures Laboratory, Electromagnetic Fields, Embedded systems and IOT design, Linear Integrated Circuits, Digital signal processing, Communication systems, Environmental Sciences and Sustainability, Communication Systems Laboratory, Linear Integrated Circuits Laboratory, Wireless communication, VLSI and Chip Design, Transmission lines and RF systems, Satellite Communication, Optical Communication & Networks, Image Processing, Disaster Risk Reduction and Management, VLSI Laboratory, Advanced wireless Communication Techniques, Wireless Sensor Network Design, MEMS Design, Industrial Safety, Principles of Management, Mechatronics, Sensors, IT in Agricultural System, Telecommunication switching and Transmission, Artificial Intelligence and Machine Learning, Project Work

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, Physics for Electronics Engineering, Engineering Graphics, Engineering Practices Laboratory, Communication Laboratory, Random processes and linear algebra, C Programming and Data Structures, Signals and systems, Electronic devices and circuits, Control systems, C Programming and Data Structures Laboratory, Electromagnetic Fields, Embedded systems and IOT design, Digital signal processing, Communication systems, Communication Systems Laboratory, Linear Integrated Circuits Laboratory, Wireless communication, VLSI and Chip Design, Transmission lines and RF systems, Satellite Communication, Optical Communication & Networks, Image Processing, VLSI Laboratory, Advanced wireless Communication Techniques, Wireless Sensor Network Design, MEMS Design, Industrial Safety, Principles of Management, Sensors, IT in Agricultural System, Telecommunication switching and Transmission, Artificial Intelligence and Machine Learning, Project Work
PO6	Professional English I, Engineering Physics, Engineering Chemistry, Physics and Chemistry Laboratory, English Laboratory, Professional English II, Physics for Electronics Engineering, Engineering Practices Laboratory, Communication Laboratory, Random processes and linear algebra, C Programming and Data Structures, Signals and systems, Electronic devices and circuits, Control systems, Digital Systems Design, C Programming and Data Structures Laboratory, Professional Development, Electromagnetic Fields, Digital signal processing, Communication systems, Environmental Sciences and Sustainability, Communication Systems Laboratory, Wireless communication, VLSI and Chip Design, Transmission lines and RF systems, Satellite Communication, Optical Communication & Networks, Image Processing, Disaster Risk Reduction and Management, Advanced wireless Communication Techniques, Wireless Sensor Network Design, MEMS Design, Industrial Safety, Human Values and Ethics, Principles of Management, Mechatronics, Sensors, IT in Agricultural System, Project Work
PO7	Professional English I, English Laboratory, Professional English II, Electrical Instrumentation Engineering, Circuit Analysis, Circuit Analysis Laboratory, Satellite Communication, Disaster Risk Reduction and Management, Industrial Safety, Human Values and Ethics, Principles of Management, IT in Agricultural System, Project Work
PO8	Professional English I, Matrices and Calculus, English Laboratory, Professional English II, Statistics and Numerical Methods, Communication Laboratory/Foreign language, Random processes and linear algebra, C Programming and Data Structures, C Programming and Data Structures Laboratory, Industrial Safety, Human Values and Ethics, Principles of Management, IT in Agricultural System, Artificial Intelligence and Machine Learning, Project Work
PO9	Professional English I, English Laboratory, Professional English II, Engineering Graphics, Circuit Analysis, Circuit Analysis Laboratory, Communication Laboratory/Foreign language, C Programming and Data Structures, C Programming and Data Structures Laboratory, Professional Development, Electromagnetic Fields, Communication Systems Laboratory, Transmission Lines and RF Systems, Satellite Communication, Industrial Safety, Human Values and Ethics, Principles of Management, IT in Agricultural System, Artificial Intelligence and Machine Learning, Project Work
PO10	Professional English I, Matrices and Calculus, Problem solving and Python Programming, Problem solving and Python Programming Laboratory, English Laboratory, Professional English II, Statistics and numerical methods, Communication Laboratory, C Programming and Data Structures, Control systems, Digital Systems design, C Programming and Data Structures Laboratory, Electromagnetic Fields, Linear Integrated Circuits, Digital signal processing, Communication systems, Communication Systems Laboratory, Linear Integrated Circuits Laboratory, VLSI and Chip Design, Disaster Risk Reduction and Management, VLSI Laboratory, Advanced wireless Communication Techniques, Wireless Sensor Network Design, Industrial Safety, Human Values and Ethics, Principles of Management, Sensors, IT in Agricultural System, Artificial Intelligence and Machine Learning, Project Work
PO11	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 Electronics Engineering, Engineering graphics, Engineering Practices Laboratory, Communication Laboratory, Random processes and linear algebra, C Programming and Data Structures, Professional Development, Signals and systems, Electronic devices and circuits, Control systems, Digital Systems design, C Programming and Data Structures Laboratory, Electromagnetic Fields, Linear Integrated Circuits, Digital signal processing, Communication systems, Environmental Sciences and Sustainability, Communication Systems Laboratory, Linear Integrated Circuits Laboratory, Wireless communication, VLSI and Chip Design, Transmission lines and RF systems, Satellite Communication, Optical Communication & Networks, Image Processing, VLSI Laboratory, Renewable Energy System, Wireless Sensor Network Design, MEMS Design, Industrial Safety, Human Values and Ethics, Principles of Management, Mechatronics, Sensors, IT in Agricultural System, Telecommunication switching and Transmission, Artificial Intelligence and Machine Learning, Project Work

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 :	EC3353	Semester :	3

Course Outcome	Statements
EC3353.1	Explain the structure and working operation of basic electronic devicese.vices
EC3353.2	Design and analyze amplifiers.
EC3353.3	Analyze frequency response of BJT and MOSFET amplifiers.
EC3353.4	Design and analyze feedback amplifiers and oscillator principles.
EC3353.5	Design and analyze power amplifiers and supply circuits

Course Code :	EC3451	Semester :	4

Course Outcome	Statements
EC3451.1	Design linear and nonlinear applications of OP – AMPS
EC3451.2	Design applications using analog multiplier and PLL
EC3451.3	Design ADC and DAC using OP–AMPS
EC3451.4	Generate waveforms using OP – AMP Circuits
EC3451.5	Analyze special function ICs

Course Code :	CEC352	Semester :	5

Course Outcome	Statements
CEC352.1	Identify the satellite orbits
CEC352.2	Analyze the satellite subsystems
CEC352.3	Evaluate the satellite link power budget
CEC352.4	Identify access technology for satellite
CEC352.5	Design various satellite applications

Course Code :	ET3491	Semester :	6

Course Outcome	Statements

ET3491.1	Explain the architecture and features of 8051.
ET3491.2	Develop a model of an embedded system.
ET3491.3	List the concepts of real time operating systems.
ET3491.4	Learn the architecture and protocols of IoT.
ET3491.5	Design an IoT based system for any application.

Course Code :	**OMR351**	**Semester :**	**7**

Course Outcome	**Statements**
OMR351.1	Select sensors to develop mechatronics systems.
OMR351.2	Explain the architecture and timing diagram of microprocessor and also interpret and develop programs.
OMR351.3	Design appropriate interfacing circuits to connect I/O devices with microprocessor.
OMR351.4	Apply PLC as a controller in mechatronics system.
OMR351.5	Design and develop the apt mechatronics system for an application.

Course Code :	**EC3354**	**Semester :**	**3**

Course Outcome	**Statements**
EC3354.1	Determine if a given system is linear / causal / stable
EC3354.2	Determine the frequency components present in a deterministic signal
EC3354.3	Characterize continuous LTI systems in the time domain and frequency domain
EC3354.4	Characterize discrete LTI systems in the time domain and frequency domain
EC3354.5	Compute the output of an LTI system in the time and frequency domains

1.4.2 Course Articulation Matrix (10) :

1 . course name : C2EC3353

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EC3353.1	Explain the	3	3	3	3	2	1	-	-	-	-	1
EC3353.2	Design and	3	2	2	3	2	2	-	-	-	-	1
EC3353.3	Analyze fre	3	3	3	2	1	2	-	-	-	-	1
EC3353.4	Design and	3	3	2	3	2	2	-	-	-	-	1
EC3353.5	Design and	3	2	3	2	2	1	-	-	-	-	1
Average		**3.00**	**3.00**	**3.00**	**3.00**	**2.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**

2 . course name : C2EC3451

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EC3451.1	Design line	2	-	-	-	-	-	-	-	-	1	-
EC3451.2	Design app	2	3	3	2	-	-	-	-	-	-	-
EC3451.3	Design ADC	1	-	-	2	-	-	-	-	-	-	-
EC3451.4	Generate w	1	-	-	2	-	-	-	-	-	-	-
EC3451.5	Analyze spe	1	2	3	3	-	-	-	-	-	-	3
Average		**1.40**	**2.50**	**3.00**	**2.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**	**3.00**

3 . course name : C3CEC352

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CEC352.1	Identify the	3	3	3	3	2	3	1	-	1	-	1
CEC352.2	Analyze the	3	2	2	3	2	3	-	-	-	-	1
CEC352.3	Evaluate th	3	3	3	2	1	3	-	-	-	-	1
CEC352.4	Identify acc	3	3	2	3	2	3	-	-	-	-	1
CEC352.5	Design vari	3	2	3	2	2	1	-	-	-	-	1
Average		**3.00**	**3.00**	**3.00**	**3.00**	**2.00**	**3.00**	**1.00**	**0.00**	**1.00**	**0.00**	**1.00**

4 . course name : C3ET3491

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
ET3491.1	Explain the	3	3	3	2	2	-	-	-	-	-	-
ET3491.2	Develop a r	3	3	3	2	2	-	-	-	-	-	-
ET3491.3	List the con	3	3	2	2	2	-	-	-	-	-	-
ET3491.4	Learn the a	3	3	2	2	2	-	-	-	-	-	-
ET3491.5	Design an I	3	2	3	3	3	-	-	-	-	-	-
Average		**3.00**	**3.00**	**2.60**	**2.20**	**2.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

5 . course name : C4OMR351

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
OMR351.1	Select sens	3	2	1	3	-	2	-	-	-	-	2
OMR351.2	Explain the	3	2	1	3	-	2	-	-	-	-	2
OMR351.3	Design app	3	2	1	3	-	2	-	-	-	-	2
OMR351.4	Apply PLC	3	2	1	3	-	2	-	-	-	-	2
OMR351.5	Design and	3	2	1	3	-	2	-	-	-	-	2
Average		**3.00**	**2.00**	**1.00**	**3.00**	**0.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**

6 . course name : C4EC3354

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
EC3354.1	Determine i	3	-	3	-	3	2	-	-	-	-	3
EC3354.2	Deternine tl	3	-	3	-	-	2	-	-	-	-	3
EC3354.3	Characteriz	3	3	-	-	3	2	-	-	-	-	3
EC3354.4	Characteriz	3	3	-	-	3	2	-	-	-	-	3
EC3354.5	Compute th	3	3	-	3	3	2	-	-	-	-	3
Average		**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.00**

1 . Course Name : EC3353

Course	PSO1	PSO2	PSO3
EC3353.1	2	1	1
EC3353.2	2	1	1
EC3353.3	2	1	1
EC3353.4	2	1	1
EC3353.5	2	1	1
Average	**2.00**	**1.00**	**1.00**

2 . Course Name : EC3451

Course	PSO1	PSO2	PSO3
EC3451.1	2	1	1
EC3451.2	2	1	1
EC3451.3	2	1	1
EC3451.4	2	1	1
EC3451.5	2	1	1
Average	**2.00**	**1.00**	**1.00**

3 . Course Name : CEC352

Course	PSO1	PSO2	PSO3
CEC352.1	3	3	3
CEC352.2	3	3	3
CEC352.3	3	3	3
CEC352.4	3	3	3
CEC352.5	3	3	3
Average	**3.00**	**3.00**	**3.00**

4 . Course Name : ET3491

Course	PSO1	PSO2	PSO3
ET3491.1	3	2	1
ET3491.2	3	2	1
ET3491.3	2	1	1
ET3491.4	3	3	2
ET3491.5	3	3	2
Average	**2.80**	**2.20**	**1.40**

5 . Course Name : OMR351

Course	PSO1	PSO2	PSO3
OMR351.1	3	2	3
OMR351.2	3	2	3
OMR351.3	3	2	3
OMR351.4	3	2	3
OMR351.5	3	2	3
Average	**3.00**	**2.00**	**3.00**

6 . Course Name : EC3354

Course	PSO1	PSO2	PSO3
EC3354.1	-	-	1
EC3354.2	-	3	-
EC3354.3	2	-	-
EC3354.4	-	3	1
EC3354.5	-	3	1
Average	**2.00**	**3.00**	**1.00**

1.5 Program Articulation Matrix (5)

Program Articulation Matrix

:

(10)

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
HS3152	1.6	2.2	1.8	2.2	1.5	3	3	1.6	3	3	3
MA3151	3	3	1	1	0	0	0	2	0	2	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	0	0	0	0	1.5
GE3151	2	3	3	3	2	0	0	0	0	2	2
GE3171	2	3	3	3	2	0	0	0	0	2	2
BS3171	3	2.4	2.6	1	1	0	0	0	0	0	0
GE3172	3	3	3	3	1	3	3	3	3	3	3
HS3252	3	3	3	3	2.8	3	3	2.2	3	3	3
MA3251	3	3	1	1	1	0	0	2	0	2	3
PH3202	3	2	1.4	1.5	2.5	2	0	0	0	0	1
BE3254	2	1	1	0	0	0	1	0	0	0	0
GE3251	3	1	2	0	2	0	0	0	3	0	2
EC3251	3	3	3	2	0	0	1	0	1	0	0
GE3271	3	2	0	0	1	1	0	0	0	0	2
EC3271	3	3	3	2	0	0	1	0	1	0	0
GE3272	2.4	2.8	3	3	1.8	3	3	3	3	3	3
MA3355	3	3	0	0	0	0	0	3	0	0	2
CS3353	2	2	1	2	2	1	0	1	1	1	2
EC3354	3	3	3	3	3	2	0	0	0	0	3
EC3353	3	3	3	3	2	2	0	0	0	0	1
EC3351	3	3	3	3	2	2	0	0	0	2	3
EC3352	3	2.6	2.6	2.3	0	2	0	0	0	2	2
EC3361	2	2	2.6	3	0	0	0	0	0	0	0
CS3362	2	2	1	2	2	1	0	1	1	1	2
GE3361	0	0	0	0	0	3	0	0	3	0	3
EC3452	2	2	2	2	2	2	0	0	1	1	2
EC3401	3	3	3	3	2.5	1	0	0	0	1	1
EC3451	1.4	2.5	3	2.2	0	0	0	0	0	1	3

EC3492	3	3	2	2	2	2	0	0	0	1	1
EC3491	3	3	3	3	2.5	1	0	0	0	1	1
GE3451	2.8	1.8	1	1	0	2.2	0	0	0	0	1.8
EC3461	3	3	3	3	3	2.5	0	0	1	1	1
EC3462	2	3	3	3	2	0	0	0	0	1	1
EC3501	3	3	2	2	2	2	0	0	0	0	1
EC3552	2	2	2	2	1	1.5	0	0	0	1	2
EC3551	3	3	3	3	2	1	0	0	1	0	1
CEC352	3	3	3	3	2	3	1	0	1	0	1
CEC345	3	3	2	3	3	1	0	0	0	0	1
CEC366	3	3	3	2	2	2	0	0	0	0	2
MX3084	3	3	3	3	0	1	2	0	0	2	0
EC3561	2.2	2.2	2.2	2.2	1	0	0	0	0	1	1
ET3401	3	3	2.6	2.2	2.2	0	0	0	0	0	0
CS3491	2	1	2	2	1	0	0	2	2	2	3
OEE351	3	2	0	0	0	0	0	0	0	0	2
CEC333	3	3	3	2	1	2	0	0	0	0	2
CEC365	2.8	3	2.2	2	2.2	1.4	0	0	0	2	2.2
CEC340	3	3	2.8	2	2	2	0	0	0	0	1.8
MX3089	3	3	3	2	1	3	2	3	2	1	3
GE3791	0	0	0	0	0	1.8	2	2	2	2	2
GE3751	1.66	1	1	1.5	1.5	1	1	2	3	1	1
OMR351	3	2	1	3	0	2	0	0	0	0	2
OMR353	3	3	2	0.8	0.8	0.8	0	0	0	0.8	2
AI3021	2	3	3	2	3	3	1	2	3	3	3
EC3711	3	3	3	3	3	3	3	3	3	3	3
EC3811	3	3	3	3	3	3	3	3	3	3	3

Course Code	PSO1	PSO2	PSO3
AI3021	2	2	2

BE3254	0	0	0
BS3171	0	0	0
CEC333	2	3	2
CEC340	3	2	2
CEC345	2	2	2
CEC352	3	3	3
CEC365	2.6	1.6	1.6
CEC366	2	2	2
CS3353	2	2	2
CS3362	2	2	2
CS3491	2	2	2
CY3151	0	0	0
EC3251	0	0	0
EC3271	0	0	0
EC3351	3	3	3
EC3352	3	3	2
EC3353	2	1	1
EC3354	2	3	1
EC3361	2	1	1
EC3401	2.2	2.2	2.2
EC3451	2	1	1
EC3452	0	0	0
EC3461	0	0	0
EC3462	0	0	0
EC3491	0	0	0
EC3492	2	2	2
EC3501	3	1	2
EC3551	2	1	1
EC3552	3	3	3
EC3561	2	2	2

EC3711	3	3	3
EC3811	3	3	3
ET3491	2.8	2.2	1.4
GE3151	3	3	0
GE3171	3	3	0
GE3172	0	0	0
GE3251	2	2	0
GE3271	2	1	1
GE3272	0	0	0
GE3361	1	2	1
GE3451	0	0	0
GE3751	1.5	1	1.25
GE3791	0	2	2
HS3152	0	0	0
HS3252	0	0	0
MA3151	0	0	0
MA3251	0	0	0
MA3355	0	0	0
MX3084	2	1	1
MX3089	3	3	3
OEE351	3	3	3
OMR351	3	2	3
OMR353	3	2	1
PH3151	0	0	0
PH3202	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.

2.1.1 Adherence to the 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 internal 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 approved calendar, departmental schedules, lesson plans, assessment schedules, minutes of meetings, and records of completed activities support implementation of the academic calendar.



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ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

JANUARY 2024

Date	Day	Activity	Academic Day		Class Test	
			I, II	III, IV	I, II	III, IV
1	Mon	New Year - Holiday				
2	Tue					
3	Wed					
4	Thu					
5	Fri					
6	Sat					
7	Sun					
8	Mon					
9	Tue					
10	Wed					
11	Thu	National Road Safety Week (11 to 17)				
12	Fri	Pongal Celebration / National Youth Day				
13	Sat					
14	Sun					
15	Mon	Pongal - Holiday				
16	Tue	Thiruvalluvar Day - Holiday				
17	Wed	Uzhavar Thirunal - Holiday				
18	Thu	Commencement of Classes for III & IV Year Placement Training for III and IV Year starts		1		
19	Fri			2		
20	Sat			3		
21	Sun					
22	Mon	IQAC - Faculty Development Programme		4		
23	Tue			5		
24	Wed	BC - Workshop on Design Thinking, Critical thinking and Innovation Design		6		
25	Thu	National Voters Day		7		
26	Fri	Republic Day - Holiday				
27	Sat			8		
28	Sun					
29	Mon	R&D - Seminar on Application of "Tools & Technology in Research Methodology" TBC - First Aid Training Programme		9		
30	Tue	NSS - Orientation Programme (Martyr Day)		10		
31	Wed			11		

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ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

FEBRUARY 2024

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

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ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

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MARCH 2024

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

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ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

APRIL 2024

Date	Day	Activity	Academic Day I, II	Academic Day III, IV	Class Test I, II	Class Test III, IV
1	Mon	Commencement of CAT1 for I and II year	36	62	CAT 1	Class Test 4.1
2	Tue	IIC - Workshop on Prototype/Process Design and Development	37	63		
3	Wed		38	64		
4	Thu		39	65		
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 - II and IV year	42	68		
9	Tue	Telugu New Year - Holiday				
10	Wed	Completion of Second review II and IV year	43	69		
11	Thu	Ramzan - Holiday				
12	Fri	IIC - Field Visit to Incubation Unit	44	70		
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		
18	Thu	World Heritage Day	49	75	Class Test 3.1	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 Conferences	54	80		
25	Thu	Class Committee Meeting Week - III and IV year	55	81	Class Test 3.2	
26	Fri	World Intellectual Property Day	56	82		
27	Sat	Completion of Model review - III and IV year	57	83		
28	Sun	World Day for Safety and Health at Work				
29	Mon	YRC - Eye camp Coaching and Model Exam for III and IV year NSS - Tree Plantation Drive	58	84	CT 4.1	Coaching and Model Exam
30	Tue	Mentoring Report Submission - All years	59	85		

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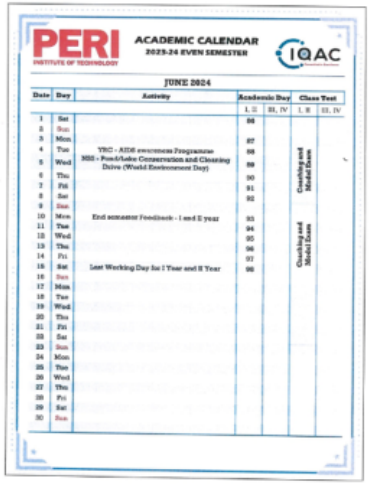
ACADEMIC CALENDAR
2023-24 EVEN SEMESTER

IQAC

MAY 2024

Date	Day	Activity	Academic Day I, II	Academic Day III, IV	Class Test I, II	Class Test 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-ups: Legal & Ethical steps"	60	86	Class Test 4.1	Coaching and Model Exam
3	Fri	ECE, EEE Conference	61	87		
4	Sat	YRC - Organ donation awareness program Last Working Day for II 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			
31	Fri	NSS - Anti-Drug Awareness Programme Anti-Tobacco Day	85		Coaching and Model Exam	

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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			
4	Tue	YRC - AIDS awareness Programme NSS - Pond/Lake Conservation and Cleaning Drive (World Environment Day)	88			
5	Wed		89		Coaching and Model Exam	
6	Thu		90			
7	Fri		91			
8	Sat		92			
9	Sun					
10	Mon	End semester Feedback - I and II year	93			
11	Tue		94			
12	Wed		95			
13	Thu		96		Coaching and Model Exam	
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					

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Figure 2.1.1.1: Academic Calendar of the Assessment Year 2023-2024 –Even Semester

2.1.2 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, , visual aids, 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.

2.1.2.1 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.

2.1.2.2 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.

2.1.2.3 Modern Teaching Tools

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

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.

2.1.2.4 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. Credit transfer provisions are available for eligible courses as per the applicable academic regulations.

2.1.2.5 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

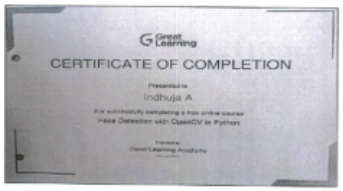


Figure 2.1.2.3 Self-learning course certificate



Figure 2.1.2.4 Student's seminar

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.

2.1.2.5 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 programs. 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. Bright students 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

Guidelines to identify the slow learners:

Criteria	Action taken
Students with backlogs in the previous semester	Periodic counselling is given to the students having backlog subjects by the mentors.
Student failing in internal exam (less than 50%)	Special coaching is provided after class hours for their betterment

Guidelines to identify the advanced learner:

Methodology	Action taken
Class topper	Appreciating them in a monthly magazine provided in our college

Student securing 7 CGPA and above	Motivating them to attend workshops, conferences, and symposiums. Making them publish a paper in a reputed journal

2.1.2.6 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.



Figure 2.1.2.5: Conference certificate



Figure 2.1.2.6: Classroom teaching

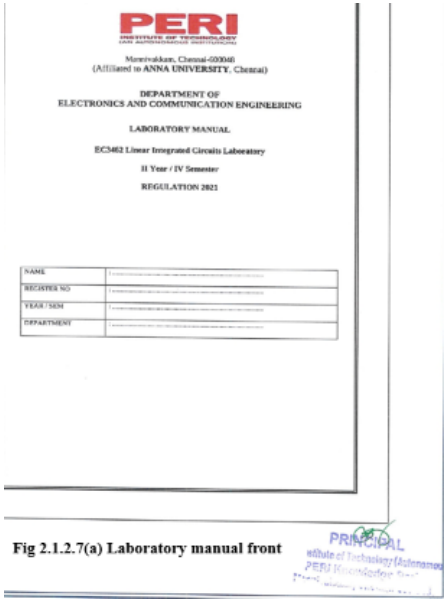
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2.1.2.7 Conduct of Experiments

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.



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DEPARTMENT OF
ELECTRONICS AND COMMUNICATION ENGINEERING

LABORATORY MANUAL

EC3462 Linear Integrated Circuits Laboratory

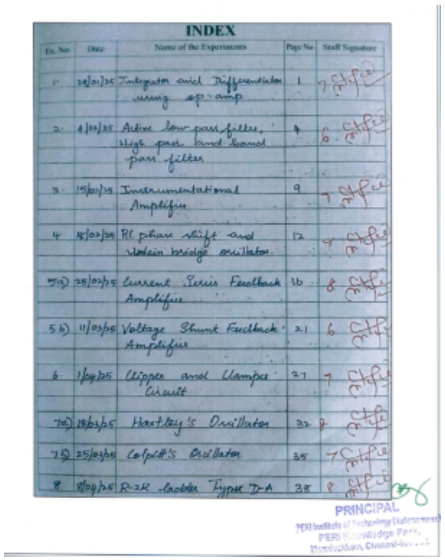
II Year / IV Semester

REGULATION 2021

NAME	
REGISTER NO	
YEAR / SEM	
DEPARTMENT	

Fig 2.1.2.7(a) Laboratory manual front

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INDEX

Ex. No.	Date	Name of the Experiments	Page No.	Staff Signature
1	28/01/25	Integrator and Differentiator using op-amp	1	
2	4/02/25	Active low-pass filter, High pass and Band pass filter	4	
3	15/02/25	Instrumentational Amplifier	9	
4	18/02/25	RC phase shift and Wein bridge oscillator	12	
5a)	25/02/25	Current Series Feedback Amplifier	16	
5b)	11/03/25	Voltage Shunt Feedback Amplifier	21	
6	1/04/25	Clipper and Clamper Circuit	27	
7a)	18/03/25	Hartley's Oscillator	32	
7b)	25/03/25	Colpitt's Oscillator	35	
8	8/04/25	R-2R Ladder Type D-A	38	

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Mannivakkam, Chennai-600 048

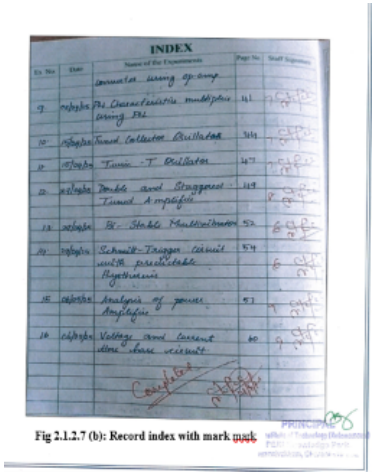


Fig 2.1.2.7 (b): Record index with mark mark

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.

2.2.1 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

2.2.2 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.

2.2.3. 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.

2.2.4. 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.

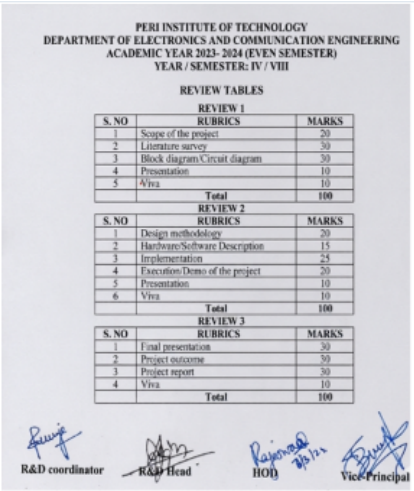
The department also considers relevant engineering responsibilities in project selection, design and execution. These include environmental implications, sustainability, safety, ethical considerations, estimated or actual cost, applicable technical standards and the responsible use of data, materials 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.



Fig 2.2.1.1: Flowchart of student capstone project workflow



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023- 2024 (EVEN SEMESTER)
YEAR / SEMESTER: IV / VIII

REVIEW TABLES

REVIEW 1

S. NO	RUBRICS	MARKS
1	Scope of the project	20
2	Literature survey	30
3	Block diagram/Circuit diagram	30
4	Presentation	10
5	Viva	10
	Total	100

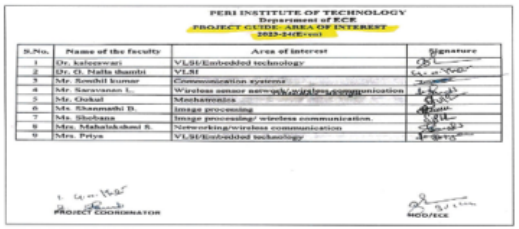
REVIEW 2

S. NO	RUBRICS	MARKS
1	Design methodology	20
2	Hardware/Software Description	15
3	Implementation	25
4	Execution/Demo of the project	20
5	Presentation	10
6	Viva	10
	Total	100

REVIEW 3

S. NO	RUBRICS	MARKS
1	Final presentation	30
2	Project outcome	30
3	Project report	30
4	Viva	10
	Total	100

R&D coordinator R&D Head HOD Vice-Principal



PERI INSTITUTE OF TECHNOLOGY
Department of ECE
PROJECT GUIDE AREA OF INTEREST
2023-24(Even)

S.No.	Name of the faculty	Area of interest	Signature
1	Dr. kaleeswari	VLSI/Embedded technology	
2	Dr. G. Nalla shanthi	VLSI	
3	Mr. Senthil kumar	Communication systems	
4	Mr. Saravanan L.	Wireless sensor network/wireless communication	
5	Mr. Gokul	Mechatronics	
6	Ms. Shanmathi D.	Image processing	
7	Ms. Shobana	Image processing/ wireless communication	
8	Mrs. Mahalakshmi S.	Networking/wireless communication	
9	Mrs. Priya	VLSI/Embedded technology	

PROJECT COORDINATOR HOD/ECE

Fig 2.2.1.3: Faculty allotment based on the area of interest



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
Project Review Circular
IV Year (2023-24): Even Semester

Letter No: PERIIT/ECE/2023-2024/PR/004 07/02/2024

Circular

The Department of Electronics and Communication Engineering is conducting the zeroth review final year ECE students in offline mode. All the staff members of ECE are requested to attend this review. The students are informed to submit the following documents and prepare as PPT.

Zeroth Review:

Date: 09.02.2024

Documents to be Submitted:

1. Title of the project
2. Domain area of the project
3. Description of the project
4. Project supervisor name

PROJECT COORDINATOR

HOD ECE

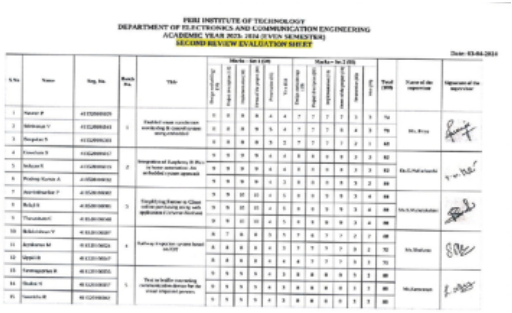
Fig 2.2.1.4: Zeroth review Circular (2023-2024)

Table 2.2.1.1: Project title and its corresponding PO and PSO (2023-2024)

Sr. No	Name	Batch No	Title	Classification of Project	Relevance to POs and PSOs
1 2 3	Naveen P Srinivasan V Boopalan S	1	Enabled Smart Transformer Monitoring and Control System Using Embedded Systems	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
4 5 6	Gowtham S Indujaa R Pradeep Kumar A	2	Integration of Raspberry Pi Pico in Home Automation: An Embedded System Approach	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
7 8 9	Aravinthsankar P Balaji S Thavasiram C	3	Simplifying Farmer to Client Online Purchasing Using Web Application (Uzhavar-Nanban)	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
10 11 12	Balakrishnan V Jayakumar M Uppili R	4	Railway Inspection System Based on IoT	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,

Sr. No	Name	Batch No	Title	Classification of Project	Relevance to POs and PSOs
13 14 15 16	Sanmugapriya R Shalini N Susmitha R Sivaprakash A	5	Text to Braille Converting Communication Device for Visually Impaired Persons	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
17 18 19	Ashwin B Jayasakthi OM Manikandan A	6	Real Time Data Communication Through LiFi in Hospital Environment	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
20 21 22	Dinesh V Vidhya S Saravanakumar A	7	Triguard: Advanced Multi Verification System for Bank Locker Security	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
23 24 25	Diviesh N Harish Balaji Kanna Nidheeshraj S	8	Developing Microcontroller Driven RSSI Controlled Prisoner Management System	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
26 27 28	Vasanthi D Vikash G Pradeep R	9	Smart Hydroponics System with Real-Time Monitoring and Control System	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
29 30 31 32	Charumathi S Gomathi N Umamageshwari U Siddique A	10	Government Support for Direct Sales from Field to Government	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
3334 35	Janaki D Sanjay R Swetha R	11	Arduino Based Coal Mine Safety Monitoring and Alerting System for Workers	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
36 37 38	Dhamodaran K Maheshbabu K Tholkappiyan B	12	Soldier Health Monitoring and Tracking System Using IoT and LoRaWAN	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,

Sr. No	Name	Batch No	Title	Classification of Project	Relevance to POs and PSOs
39 40 41	Abinaya M Kaviya A Thatchayani V	13	Design of Hybrid Audio Transmission Using LiFi	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
42 43 44	Chandanapriya RH Karthik N Prathabaruthiran R	14	Solar Floor Cleaner Robot	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
45 46 47	Arulmani K Arunraj R Sivaprakash S	15	Efficient Patient Scheduling OP Sheet and Slot Booking Solution for Hospitals	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
48 49 50	Sabarinathan V Sarmitha R Vignesh P	16	Improving Aquaculture Efficiency Through an Integrated Monitoring	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023- 2024 (EVEN SEMESTER)
SECOND REVIEW EVALUATION SHEET

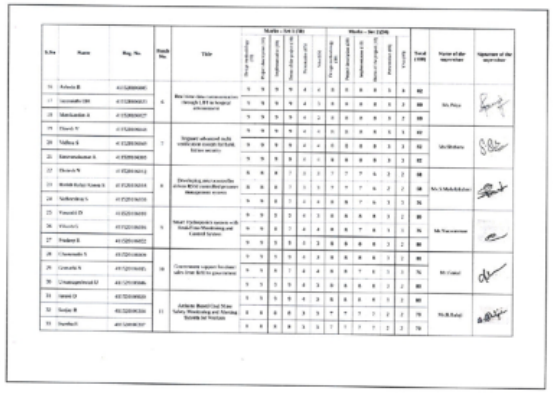


Fig 2.2.1.5: Second review evaluation sheet (2023-2024)

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 based on verifiable departmental records for the assessment period.

2.3.1. Process of Internship / Industrial Training 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 organization'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

2.3.2. Mapping of Industrial Training / Internships with POs and PSOs

The department examines the learning achieved through each internship or industrial training 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.

2.3.3. Student feedback on training / Internships and its analysis

Student feedback is collected, wherever available, to evaluate the usefulness and quality of the internship or industrial training 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 organization, 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.

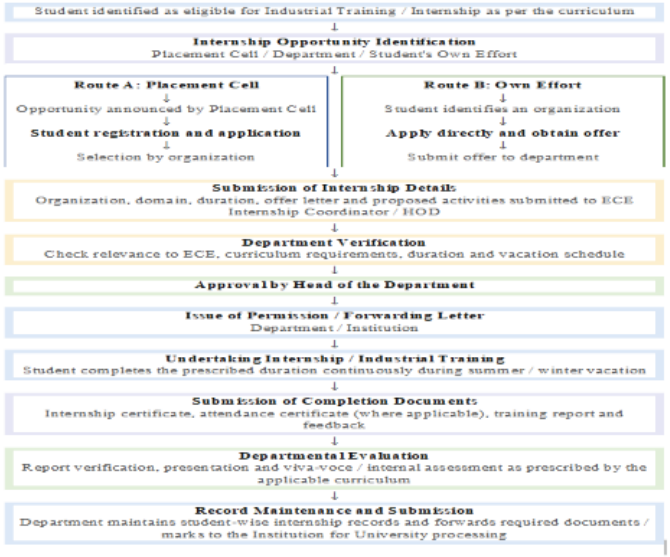


Fig 2.3.1.1: SOP flowchart for Internship/ Industrial training

Table 2.3.1.1 Internship

Academic year (2024-2025)

S. No	Name of the student	Class	Title	Place of work	PO & PSO mapped
1.	Kalaimathi. P	IV/ECE	PLC Automation	Adhira Infinite Solution	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
2.	Ajay. V	IV/ECE	Web Development	Adhityaa Infomedia Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
3.	Akash T.	IV/ECE	Web Development	Adhityaa Infomedia Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
4.	Arun.R	IV/ECE	Web Development	Adhityaa Infomedia Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
5.	Bhavan.S.D	IV/ECE	Web Development	Adhityaa Infomedia Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
6.	Mohammed Khalith R	IV/ECE	Web Development	Adhityaa Infomedia Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3

S. No	Name of the student	Class	Title	Place of work	PO & PSO mapped
7.	Ragul S.	IV/ECE	Web Development	Adhityaa Infomedia Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
8.	Sudarshan.k	IV/ECE	Web Development	Adhityaa Infomedia Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
9.	Thirupathy.G	IV/ECE	Web Development	Adhityaa Info media Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
10.	Silambarasan.S	IV/ECE	Web Development	Gateway Software Solution	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
11.	Aishwarya. I	IV/ECE	Web Development	Internz learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
12.	Ashutosh Kumar H.	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
13.	Balaji.	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
14.	Boomika N.	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
15.	Ganesh.K	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
16.	Lalitha.V	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
17.	Malin S.	IV/ECE	Web Development	Internz learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
18.	Monisha. E	IV/ECE	Web Development	Internz learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
19.	Nehemya.V	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
20.	Narmada M	IV/ECE	Web Development	Internz learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
21.	Ramya.U	IV/ECE	Web Development	Internz learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
22.	Swetha R.	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
23.	Yuvagiri. R	IV/ECE	Web Development	Internz Learn	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
24.	Reshmi.S	IV/ECE	Electronics Production	Kirti Labs	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
25.	Induja a	IV/ECE	Electronics Production	Kriti Labs	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3

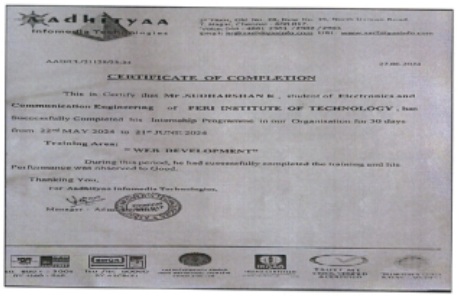
S. No	Name of the student	Class	Title	Place of work	PO & PSO mapped
26.	Sakthi.S	IV/ECE	Electronics Production	Kirti Labs	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
27.	Vijaya Sri Y	IV/ECE	Electronics Production	Kirti Labs	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
28.	Vimala.P	IV/ECE	Electronics Production	Kirti Labs	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
29.	Avinash S	IV/ECE	NOC	Microsense Works	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
30.	Gopal. E	IV/ECE	NOC	Microsense Works	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
31.	Harish Babu H.	IV/ECE	NOC	Microsense Works	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
32.	Hemantha.S	IV/ECE	NOC	Microsense networks	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
33.	Avinash.S	IV/ECE	NOC	Microsense networks	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
34.	Sujatha.S	IV/ECE	NOC	Mr.Cooper Group	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
35.	Malini.S	IV/ECE	Full Stack Web Developer	S – Logix	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
36.	Iswarya.M	IV/ECE	Full Stack Web Developer	S – Logix	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
37.	Minnala P.	IV/ECE	Full Stack Web Developer	S – Logix	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
38.	Monisha. A	IV/ECE	Full Stack Web Developer	S – Logix	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
39.	Aravind. V	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
40.	Aravindan. V	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
41.	Divya Darshan S.	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
42.	Diwakar. J	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
43.	Kamalesh.S	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3

S. No	Name of the student	Class	Title	Place of work	PO & PSO mapped
44.	Kanagavel.M	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
45.	Logaprasath. P.S	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
46.	Nethaji.R	IV/ECE	Web Development	Think Semi Infotech PvtLtd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
47.	Sharuk. E	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
48.	Sudhan.M	IV/ECE	Web Development	Think Semi Infotech Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
49.	Indhumathi. N	IV/ECE	Web Development	Weekly Once	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
50.	Noorul Famitha A	IV/ECE	Web Development	Weekly Once	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
51.	Swetha T.	IV/ECE	Web Development	Weekly Once	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
52.	Anees Fathima M.	IV/ECE	Machine Learning	Retech solutions Pvt ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
53.	Navin Raj Kumar S	IV/ECE	Machine Learning	Infac India	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
54.	Mohamed Hafeez H.	IV/ECE	Web development & design	Oasis Infobyte	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
55.	Vinoth Bharathi K	IV/ECE	Web development & designing	Oasis Info byte	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
56.	Prathap.K	IV/ECE	Machine Learning	Intern Certify	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
57.	Sujitha.S	IV/ECE	NOC	Mr.Cooper Group	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
58.	Priscilla.N	III/ECE	Industry-Based Embedded Systems with AI & IOT	The National Small Industries Corporation Limited	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3

S. No	Name of the student	Class	Title	Place of work	PO & PSO mapped
59.	Swetha. P	III/ECE	Industry-Based Embedded Systems with AI & IOT	The National Small Industries Corporation Limited	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
60.	Dhanush.P	II/ECE	Automation	Rambal Private Limited	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
61.	Pravin Raj.D	II/ECE	Automation	Rambal Private Limited	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
62.	Nishanth Leelaram	II/ECE	Automation	Rambal Private Limited	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
63.	Abilash Krishnan	II/ECE	Automation	Rambal Private Limited	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
64.	Rajesri	II/ECE	Quality checks and Testing	Just Connect	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
65.	Sowmya	II/ECE	Quality checks and Testing	Just Connect	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
66.	Sangeetha	II/ECE	Quality checks and Testing	Just Connect	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
67.	Madhumitha	II/ECE	Quality Checks and Testing	Just Connect	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
68.	Indhumathi	II/ECE	Cloud Computing	NSIC-Technologies Service Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
69.	Santhosh	II/ECE	Digital Technology	Movate Technologies Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
70.	Yeswanthraja	II/ECE	Digital Technology	Movate Technologies Pvt Ltd	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
71.	Nithin L	II/ECE	Full Stack Developer	Eros Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
72.	Marudheeswa S	II/ECE	Full Stack Developer	Eros Technologies	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
73.	Simson A	III/ECE	Robotics	Evolve Robot Lab	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3
74.	Ragul E	III/ECE	Robotics	Evolve Robot Lab	PO1,PO3,PO5,PO7,PO8,PO9 ,PO11,PSO1,PSO3

A **Academic year (2023-2024)**

S.No	Name of the student	Class	Title	Place of work	PO & PSO MAPPED
1.	Nidheesh Raj S	IV/ECE	Project	Shiash Info Solutions Private Limited	PO1,PO3,PO5,PO7,PO8, PO9 ,PO11,PSO1,PSO3
2.	Aravind Sankar p	IV/ECE	Project	Yani Technologies	PO1,PO3,PO5,PO7,PO8, PO9 ,PO11,PSO1,PSO3
3.	Balaji S	IV/ECE	Project	Yani Technologies	PO1,PO3,PO5,PO7,PO8, PO9 ,PO11,PSO1,PSO3
4.	Thavasiram. C	IV/ECE	Project	Yani Technologies	PO1,PO3,PO5,PO7,PO8, PO9 ,PO11,PSO1,PSO3



CERTIFICATE OF COMPLETION

This is Certify that Mr. SIDHARSHAN K , student of Electronics and Communication Engineering of PERI INSTITUTE OF TECHNOLOGY , has Successfully Completed Six Internship Programme in our Organisation for 30 days from 22nd MAY 2024 to 21st JUNE 2024

Training Area:

"WEB DEVELOPMENT"

During this period, he had successfully completed the training and his Performance was observed to Good.

Thanking You,

For Aadhiyaa Informatic Technologies,

Fig 2.3.1.2: Internship certificate

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

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.

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.

2.4.1Mapping 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.

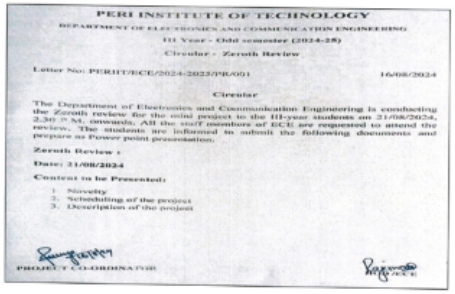
The mapping may address outcomes related to engineering knowledge, analysis, investigation, communication, individual or team work, lifelong learning and programme-specific technical competence, wherever the seminar provides evidence of such contribution. The department retains supporting records such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

2.4.2. 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 organized for assessment-year-wise verification.



PERI INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

III Year - Odd semester (2024-25)

Circular - Zeroth Review

Letter No: PERIIT/ECE/2024-2025/PRJ/01 16/08/2024

Circular

The Department of Electronics and Communication Engineering is conducting the Zeroth review for the mini project to the III-year students on 21/08/2024, 2.30 P.M. onwards. All the staff members of ECE are requested to attend the review. The students are informed to submit the following documents and prepare as Power point presentation.

Zeroth Review 1

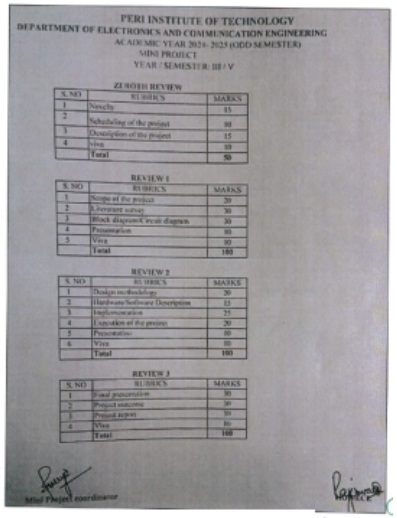
Date: 21/08/2024

Content to be Presented:

1. Novelty
2. Scheduling of the project
3. Description of the project

PROJECT CO-ORDINATOR

Fig 2.4.1.1: Mini project zeroth review circular (2024-2025)



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2024-2025 (ODD SEMESTER)
MINI PROJECT
YEAR / SEMESTER: III / V

ZEROTH REVIEW

S. NO	RUBRICS	MARKS
1	Novelty	15
2	Scheduling of the project	10
3	Description of the project	15
4	Viva	10
	Total	50

REVIEW 1

S. NO	RUBRICS	MARKS
1	Scope of the project	20
2	Literature survey	30
3	Block diagram/Circuit diagram	30
4	Presentation	10
5	Viva	10
	Total	100

REVIEW 2

S. NO	RUBRICS	MARKS
1	Design methodology	20
2	Hardware/Software Description	15
3	Implementation	35
4	Execution of the project	20
5	Presentation	10
6	Viva	10
	Total	100

REVIEW 3

S. NO	RUBRICS	MARKS
1	Final presentation	30
2	Project outcome	30
3	Project report	30
4	Viva	10
	Total	100

Mini Project coordinator

Fig 2.4.1.2: Rubrics for mini project (2024-2025)

Table 2.4.1.1.: Project title and its corresponding PO and PSO (2023-2024)

Sr.	Name	Reg No.	Batch No.	Title	Classification of project	Relevance to PO's and PSO's
1	Chandana Priya R H	411516106008	I	Automatic Smart Floor Cleaning Robot	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
2	Charumathi S	411516106009				
3	Devarapalli Vasanthi	411516106010				
4	Uma Mageshwari U	411516106346				
5	Arunraj R	411516106004	II	Home Automation using IOT	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
6	Sivaprakash S	411516106039				
7	Nidheesh raj S	411516106030				
8	Sanjay R	411516106304				

Sr.	Name	Reg No.	Batch No.	Title	Classification of project	Relevance to PO's and PSO's
9	Siddique S	411516106038	III	Obstacle Avoiding Car	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
10	Vadlamani dinesh	411516106048				
11	Vidhya S	411516106049				
12	Swetha P	411516106307				
13	Balakrishnan V	411516106007	IV	Arduino based Radar System for Short range Applications	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
14	Gowtham S	411516106017				
15	Indujaa R	411516106019				
16	Pradeep kumar A	411516106032				
17	Abinaya M	411516106001	V	Automatic Road Reflector Light	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
18	Gothala Vikash	411516106016				
19	Kaviya A	411516106026				
20	Thatchayani V	411516106043				
21	Arulmani K	411516106003	VI	Smart Waste Segregation Project	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
22	Kaka Mahesh babu	411516106024				
23	Srinivasan S	411516106041				
24	Thoikappiyan B	411516106045				

Sr.	Name	Reg No.	Batch No.	Title	Classification of project	Relevance to PO's and PSO's
25	Aravinth Sankar P	411516106002	VII	Bluetooth-based Home Automation	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
26	Balaji S	411516106006				
27	Diviesh N	411516106012				
28	Thavasiram C	411516106044				
29	Ashwin B	411516106005	VIII	Smart Shopping Trolley using Arduino	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
30	Jayasakthi O	411516106023				
31	Manikandan A	411516106027				
32	Uppili R	411516106047				
33	Shalini N	411520106037	IX	Safe Taxi Monitoring System for Women	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
34	Shanmugapriya R	411516106035				
35	Sarmitha S	411516106036				
36	Susmitha R	411516106042				
37	Dhomodharan K	411516106011	X	Traffic Light Controller	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
38	Sabannathan V	411516106034				
39	Vignesh P	411516106308				
40	Gomathi N	411516106015				
41	Janaki D	411516106020				

Sr.	Name	Reg No.	Batch No.	Title	Classification of project	Relevance to PO's and PSO's
42	Harish balaji kanna S	411516106018	XI	Laser Security System using Arduino	Product	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
43	Naveen P	411516106029				
44	Boopalan S	411516106301				
45	Saravana kumar A	411520106305				
46	Elizabeth P	412620106013				
47	Jayakumar M	411520106021	XII	Smart Home Security System with IOT	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
48	R Karthik N	411520106025				
49	Pradeep R	411516106031				
50	Prathaba Ruthiran R	411520106033				
51	Siva prakash A	412616106023				

Table 2.4.1.2: Evaluation sheet (2023-2024)

Sr.	Name	Batch No.	Title	Scope of the Project (20)	Project Working Demo (30)	Project Simulation (20)	PPT & Viva (20)	Project Report (10)	Total (100)
1	Chandana Priya R H	I	Automatic Smart Floor Cleaning Robot	20	15	15	15	10	75
2	Charumathi S			20	15	15	15	10	75
3	Devarapalli Vasanthi			20	15	15	15	10	75
4	Uma mageshwari U			20	15	15	15	10	75

Sr.	Name	Batch No.	Title	Scope of the Project (20)	Project Working Demo (30)	Project Simulation (20)	PPT & Viva (20)	Project Report (10)	Total (100)
5	Arunraj R	II	Home Automation using IOT	20	15	15	10	10	70
6	Sivaprakash S			20	15	15	15	10	75
7	Nidheesh raj S			20	15	20	15	10	80
8	Sanjay R			20	15	15	10	10	70
9	Siddique S	III	Obstacle Avoiding Car	20	15	15	15	10	75
10	Vadlamani dinesh			20	15	15	15	10	75
11	Vidhya S			20	15	15	15	10	75
12	Swetha P			20	15	15	10	10	70
13	Balakrishnan V	IV	Arduino based Radar System for Short range Applications	20	25	15	10	10	80
14	Gowtham S			20	25	20	15	10	90
15	Indujaa R			20	25	15	15	10	85
16	Pradeep kumar A			20	25	15	10	10	80
17	Abinaya M	V	Automatic Road Reflector Light	20	15	15	10	10	70
18	Gothala Vikash			20	15	15	15	10	75
19	Kaviya A			20	15	15	15	10	75
20	Thatchayani V			20	15	15	15	10	75
21	Arulmani K	VI	Smart Waste Segregation Project	20	15	15	10	10	70
22	Kaka Mahesh babu			20	15	15	15	10	75
23	Srinivasan S			20	15	15	15	10	75
24	Thoikappiyan B			20	15	15	10	10	70

Sr.	Name	Batch No.	Title	Scope of the Project (20)	Project Working Demo (30)	Project Simulation (20)	PPT & Viva (20)	Project Report (10)	Total (100)
25	Aravinth sankar P	VII	Bluetooth based Home Automation	20	20	15	10	10	75
26	Balaji S			20	20	15	10	10	75
27	Diviesh N			20	20	15	15	10	80
28	Thavasiram C			20	20	15	15	10	80
29	Ashwin B	VIII	Smart Shopping Trolley using Arduino	20	20	15	10	10	75
30	Jayasakthi O			20	20	15	15	10	80
31	Manikandan A			20	20	15	10	10	75
32	Uppili R			20	20	15	15	10	80
33	Shalini N	IX	Safe Taxi Monitoring System for Women	20	20	15	10	10	75
34	Shanmugapriya R			20	20	15	15	10	80
35	Sarmitha S			20	20	15	15	10	80
36	Susmitha R			20	20	15	15	10	80
37	Dhomodharan K	X	Traffic Light Controller	20	20	15	15	10	80
38	Sabannathan V			20	20	15	15	10	80
39	Vignesh P			20	20	15	10	10	75
40	Gomathi N			20	20	15	10	10	75
41	Janaki D			20	20	15	15	10	75
42	Harish Balaji Kanna S	XI	Laser Security System using Arduino	20	20	15	10	10	75
43	Naveen P			20	20	15	15	10	80
44	Boopalan S			20	20	10	10	10	70
45	Saravana kumar A			20	20	15	15	10	80
46	Elizabeth P			20	20	15	15	10	80

Sr.	Name	Batch No.	Title	Scope of the Project (20)	Project Working Demo (30)	Project Simulation (20)	PPT & Viva (20)	Project Report (10)	Total (100)
47	Jayakumar M	XII	Smart Home Security System with IOT	20	20	10	15	10	75
48	R Karthik N			20	20	10	10	10	70
49	Pradeep R			20	20	10	10	10	70
50	Prathaba Ruthiran R			20	20	10	10	10	70
51	Siva Prakash A			20	20	10	15	10	75

Table 2.4.1.3: Student's seminar

Academic year (2023-2024)

Odd semester

Sr. No	Register No	Name of the Student	Seminar Topic	PO and PSO Mapping
1	411522106001	Aasath G	Feedback control in room temperature regulation: air conditioner thermostat	PO1, PO2, PO5, P08, PO9, PSO3
2	411522106004	Aswini V	Transfer function modelling of RLC circuits in filters and power supply design	PO1, PO2, PO5, P08,PO9, PSO3
3	411522106005	Balaji L	Mass-spring-damper modelling of automobile suspension systems	PO1, PO2, PO5, P08, PO9, PSO3
4	411522106006	Balamurugan M	Modelling of rotational mechanical systems in gear-driven robot joints	PO1, PO2, PO5, P08, PO9,PSO3
5	411522106007	Dhakshamoorthy M	Block diagram reduction applied to a car cruise control system	PO1, PO2, PO5, P08, PO9, PSO3
6	411522106008	Eswar K	Masons gain formula in the analysis of electronic feedback amplifiers	PO1, PO2, PO5,P08, PO9,PSO3
7	411522106009	Gideon Raja J	DC servo motor in robotic arm position control	PO1, PO2, PO5,P08, PO9, PSO3

Sr. No	Register No	Name of the Student	Seminar Topic	PO and PSO Mapping
8	411522106010	Giridharan V	AC servo motor in aircraft control surfaces and instrumentation	PO1, PO2, PO5, P08, PO9, PSO3
9	411522106011	Gokul R	Synchro in antenna positioning and radar angle transmission	PO1, PO2, PO5,P08, PO9, PSO3
10	411522106012	Hariharan M	Multivariable control of boiler temperature and pressure in power plants	PO1, PO2, PO5, P08, PO9, PSO3
11	411522106013	Harish M	Time response analysis of an automatic voltage regulator	PO1, PO2, PO5, P08, PO9,PSO3
12	411522106014	Hency R	First order response in thermal systems: water heater and furnace	PO1, PO2, PO5, P08, PO9,PSO3
13	411522106016	Jeeva K	Second order response in DC motor position control	PO1, PO2, PO5,P08, PO9, PSO3
14	411522106017	Jerin J	Transient specifications in elevator ride-quality design	PO1, PO2, PO5, P08, PO9,PSO3
15	411522106018	Kabilesh S	Effect of zeros on the response of aircraft pitch control	PO1, PO2, PO5,P08, PO9, PSO3
16	411522106019	Kanishkar E	Dominant pole approximation for simplifying higher-order process models	PO1, PO2, PO5,P08, PO9,PSO3
17	411522106020	Karthikeyan R	Steady-state error in satellite antenna tracking systems	PO1, PO2, PO5,P08, PO9, PSO3
18	411522106021	Kavinan T	PD controller in robotic arm and quadcopter stabilization	PO1, PO2, PO5, P08, PO9, PSO3
19	411522106023	Kaviya T	PI controller in flow, level and speed control	PO1, PO2, PO5, P08, PO9,PSO3
20	411522106024	Kiran Akash M	PID tuning for temperature control of industrial furnaces	PO1, PO2, PO5,P08, PO9, PSO3

Sr. No	Register No	Name of the Student	Seminar Topic	PO and PSO Mapping
21	411522106025	Kishore Kumar K	Bandwidth as a performance measure in audio amplifiers and servo systems	PO1, PO2, PO5,P08, PO9,PSO3
22	411522106026	Krithikha R	Resonant peak and damping in vehicle suspension testing	PO1, PO2, PO5, P08, PO9, PSO3
23	411522106028	Logachandran M	Bode plots in audio amplifier and filter frequency response analysis	PO1, PO2, PO5, P08, PO9,PSO3
24	411522106029	Mageshwari P	Gain and phase margin in robust design of power converter control loops	PO1, PO2, PO5, P08, PO9,PSO3,
25	411522106032	Mugesh B	Polar plots in frequency response testing of servo motors	PO1, PO2, PO5, P08, PO9, PSO3
26	411522106034	Padmapriya M	Nyquist plots in stability checking of feedback amplifier circuits	PO1, PO2, PO5, P08, PO9,PSO3
27	411522106035	Pavithra M	Lead compensator for improving transient response of antenna positioning systems	PO1, PO2, PO5, P08, PO9, PSO3
28	411522106036	Pinekash S	Lag compensator for improving steady-state accuracy in temperature control	PO1, PO2, PO5, P08, PO9, PSO3
29	411522106038	Priscilla N	Lag-lead compensator in hard disk drive head positioning	PO1,PO2,PO5,P08, PO9,PSO3
30	411522106039	Pushparaj P	Op-amp realisation of lead and lag compensators in analog controllers	PO1, PO2, PO5,P08,PO9,PSO3
31	411522106040	Ragul R K	Stability in power system voltage and frequency control	PO1, PO2, PO5,P08,PO9,PSO3

Sr. No	Register No	Name of the Student	Seminar Topic	PO and PSO Mapping
32	411522106041	Rahul E.	Routh-Hurwitz criterion for finding safe gain in motor speed control	PO1, PO2, PO5,P08,PO9,PSO3
33	411522106042	Rohan Prosper R	Marginal stability and sustained oscillations in oscillator and process loops	PO1, PO2, PO5,P08,PO9,PSO3
34	411522106043	Sabarieshwaran R	Relative stability and gain margin in flight control systems	PO1, PO2, PO5,P08,PO9,PSO3
35	411522106044	Sanjay B	Root locus in gain tuning of a DC motor speed controller	PO1, PO2, PO5,P08,PO9,PSO3
36	411522106045	Sanjay Kumar A	Root locus in design of automatic voltage regulators	PO1, PO2, PO5,P08,PO9,PSO3
37	411522106046	Santhanalakshmi G	Effect of compensators on root locus in antenna positioning systems	PO1, PO2, PO5,P08,PO9,PSO3
38	411522106047	Saranya R.	Nyquist stability criterion in feedback amplifiers and power converters	PO1, PO2, PO5,P08,PO9,PSO3
39	411522106048	Simson A	Critical gain determination in temperature loops with transport delay	PO1, PO2, PO5,P08,PO9,PSO3
40	411522106049	Sindhu Usha	Stability analysis of a magnetic levitation system using Routh, root locus and Nyquist methods	PO1, PO2, PO5,P08,PO9,PSO3
41	411522106051	Sowmya S	State-space modelling of a DC motor and RLC circuit for robotics	PO1, PO2, PO5,P08,PO9,PSO3
42	411522106052	Sunilkumar S	State model of an inverted pendulum from its physical system	PO1, PO2, PO5,P08,PO9,PSO3
43	411522106053	Sushmitha L	Transfer function from state model in aircraft longitudinal dynamics	PO1, PO2, PO5,P08,PO9,PSO3

Sr. No	Register No	Name of the Student	Seminar Topic	PO and PSO Mapping
44	411522106054	Swarna T	State-space representation in satellite attitude control	PO1, PO2, PO5,P08,PO9,PSO3
45	411522106055	Swetha P	State transition matrix in predicting response of electric vehicle drives	PO1, PO2, PO5,P08,PO9,PSO3
46	411522106056	Tamizhselvan M	Controllability analysis in spacecraft and UAV actuation	PO1, PO2, PO5,P08,PO9,PSO3
47	411522106060	Umapathy D	Observability and state estimation in drones with limited sensors	PO1, PO2, PO5,P08,PO9,PSO3
48	411522106062	Vignesh B	Eigenvalue-based stability analysis of power electronic converters	PO1, PO2, PO5,P08,PO9,PSO3
49	411522106063	Vishal M	Sampled-data control in digital motor drives and microcontroller-based controllers	PO1, PO2, PO5,P08,PO9,PSO3
50	411522106301	Sakthivel	State feedback pole placement in digital control of UAVs and inverted pendulum	PO1, PO2, PO5,P08,PO9,PSO3

Academic Year (2023-2024)

Even semester

Sr. No	Register No	Name of the Student	Seminar Topic	PO and PSO Mapping
1	411522106001	Aasath G	Current mirror biasing in analog IC design for smartphone sensor interfaces	PO1, PO2, PO5,P08,PO9,PSO3
2	411522106004	Aswini V	Bandgap voltage reference in temperature-stable power management ICs	PO1, PO2, PO5,P08,PO9,PSO3

3	411522106005	Balaji L	Active-load differential amplifiers in microphone preamplifiers and sensor front-ends	PO1, PO2, PO5,P08,PO9,PSO3
4	411522106006	Balamurugan M	Op-amp error budgeting in precision weighing scale (load cell) amplifiers	PO1, PO2, PO5,P08,PO9,PSO3
5	411522106007	Dhakshamoorthy M	IC 741 based design of a low-cost audio preamplifier	PO1, PO2, PO5,P08,PO9,PSO3
6	411522106008	Eswar K	Offset and drift compensation in thermocouple and strain-gauge signal amplifiers	PO1, PO2, PO5,P08,PO9,PSO3
7	411522106009	Gideon Raja J	Slew rate and bandwidth selection for video and high-speed pulse amplifiers	PO1, PO2, PO5,P08,PO9,PSO3
8	411522106010	Giridharan V	Frequency compensation of op-amp circuits driving capacitive loads such as long cables and ADC inputs	PO1, PO2, PO5,P08,PO9,PSO3
9	411522106011	Gokul R	LF155 and TL082 op-amps in high-impedance sensor interfaces: pH meters and photodiode amplifiers	PO1, PO2, PO5,P08,PO9,PSO3
10	411522106012	Hariharan M	Op-amp selection for battery-powered wearables and IoT sensor nodes	PO1, PO2, PO5,P08,PO9,PSO3
11	411522106013	Harish M	Op-amp signal conditioning for temperature sensors in industrial monitoring	PO1, PO2, PO5,P08,PO9,PSO3
12	411522106014	Hency R	Summing amplifier as a multi-channel audio mixer	PO1, PO2, PO5,P08,PO9,PSO3

13	411522106016	Jeeva K	All-pass phase shifters for phase correction in audio and communication links	PO1, PO2, PO5,P08,PO9,PSO3
14	411522106017	Jerin J	V-to-I converters in 4–20 mA industrial transmitters	PO1, PO2, PO5,P08,PO9,PSO3
15	411522106018	Kabilesh S	Instrumentation amplifier for ECG signal acquisition	PO1, PO2, PO5,P08,PO9,PSO3
16	411522106019	Kanishkar E	Integrator and differentiator circuits in ramp generation and PID controllers	PO1, PO2, PO5,P08,PO9,PSO3
17	411522106020	Karthikeyan R	Log amplifier in audio compression and photodiode light-intensity measurement	PO1, PO2, PO5,P08,PO9,PSO3
18	411522106021	Kavinan T	Schmitt trigger and window comparator in battery-voltage monitoring and zero-crossing detection	PO1, PO2, PO5,P08,PO9,PSO3
19	411522106023	Kaviya T	Precision rectifier and peak detector in AC measurement and AM demodulation	PO1, PO2, PO5,P08,PO9,PSO3
20	411522106024	Kiran Akash M	Butterworth active filters as anti-aliasing and audio tone-control circuits	PO1, PO2, PO5,P08,PO9,PSO3
21	411522106025	Kishore Kumar K	Analog multiplier for real-time power measurement	PO1, PO2, PO5,P08,PO9,PSO3
22	411522106026	Krithikha R	Analog multiplier ICs in AM modulation and frequency doubling in transmitters	PO1, PO2, PO5,P08,PO9,PSO3
23	411522106028	Logachandran M	Phase detector in PLL-based motor speed control	PO1, PO2, PO5,P08,PO9,PSO3

24	411522106029	Mageshwari P	PLL lock and capture behaviour in FM receiver tuning	PO1, PO2, PO5,P08,PO9,PSO3
25	411522106032	Mugesh B	VCO design for tunable signal sources in test equipment	PO1, PO2, PO5,P08,PO9,PSO3
26	411522106034	Padmapriya M	IC 565 PLL as a tone decoder in remote control and signalling systems	PO1, PO2, PO5,P08,PO9,PSO3
27	411522106035	Pavithra M	PLL-based FM demodulation in radio receivers	PO1, PO2, PO5,P08,PO9,PSO3
28	411522106036	Pinekash S	FSK modem using PLL for data transmission over telephone lines	PO1, PO2, PO5,P08,PO9,PSO3
29	411522106038	Priscilla N	PLL frequency synthesizer in mobile and wireless transceivers	PO1, PO2, PO5,P08,PO9,PSO3
30	411522106039	Pushparaj P	PLL clock recovery in digital communication and processor clock generation	PO1, PO2, PO5,P08,PO9,PSO3
31	411522106040	Ragul R K	ADC and DAC specification selection for digital audio and instrumentation systems	PO1, PO2, PO5,P08,PO9,PSO3
32	411522106041	Rahul E.	Binary-weighted DAC in programmable voltage sources	PO1, PO2, PO5,P08,PO9,PSO3
33	411522106042	Rohan Prosper R	R-2R ladder DAC in arbitrary waveform generation and audio playback	PO1, PO2, PO5,P08,PO9,PSO3
34	411522106043	Sabarieshwaran R	Sample-and-hold circuits in multi-channel data acquisition systems	PO1, PO2, PO5,P08,PO9,PSO3
35	411522106044	Sanjay B	Flash ADC in digital storage oscilloscopes and radar receivers	PO1, PO2, PO5,P08,PO9,PSO3

36	411522106045	Sanjay Kumar A	SAR ADC in microcontroller-based sensor data loggers	PO1, PO2, PO5,P08,PO9,PSO3
37	411522106046	Santhanalakshmi G	Dual-slope ADC in digital multimeters and panel meters	PO1, PO2, PO5,P08,PO9,PSO3
38	411522106047	Saranya R.	Voltage-to-time conversion ADC in low-cost temperature and weighing instruments	PO1, PO2, PO5,P08,PO9,PSO3
39	411522106048	Simson A	Oversampling ADC for noise reduction in precision measurement	PO1, PO2, PO5,P08,PO9,PSO3
40	411522106049	Sindhu Usha	Sigma-delta ADC in digital audio and biomedical signal acquisition	PO1, PO2, PO5,P08,PO9,PSO3
41	411522106051	Sowmya S	Wien bridge oscillator as an audio-frequency test signal generator	PO1, PO2, PO5,P08,PO9,PSO3
42	411522106052	Sunilkumar S	Op-amp multivibrator as a clock and LED flasher in timing circuits	PO1, PO2, PO5,P08,PO9,PSO3
43	411522106053	Sushmitha L	Triangular and sawtooth generators in PWM motor control and display sweep circuits	PO1, PO2, PO5,P08,PO9,PSO3
44	411522106054	Swarna T	ICL8038 function generator in laboratory signal generator design	PO1, PO2, PO5,P08,PO9,PSO3
45	411522106055	Swetha P	555 timer in LED dimming and motor speed control using PWM	PO1, PO2, PO5,P08,PO9,PSO3
46	411522106056	Tamizhselvan M	78xx and LM317 regulators in a regulated bench power supply	PO1, PO2, PO5,P08,PO9,PSO3
47	411522106060	Umapathy D	IC 723 in an adjustable regulated supply with current-limit protection	PO1, PO2, PO5,P08,PO9,PSO3

48	411522106062	Vignesh B	LDO versus switching regulators in smartphones and portable devices	PO1, PO2, PO5,P08,PO9,PSO3
49	411522106063	Vishal M	Frequency-to-voltage and voltage-to-frequency converters in tachometers and telemetry	PO1, PO2, PO5,P08,PO9,PSO3
50	411522106301	Sakthivel	Optocoupler and isolation amplifier in medical and industrial isolated interfaces	PO1, PO2, PO5,P08,PO9,PSO3

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.

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 Program Outcomes and Program 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 2.5.1.1 Patent (2022-2024)

Name of the Applicant	Dept	Name of the Patent	Title of the Invention	Application no	Year of publication
Ms S Priya	ECE	Intellectual Property India	Hardware Efficient Low Power Booth Multiplier for Signal Processing applications	202441079609 A	2024
Mr.L.Saravanan	ECE	Intellectual Property India	Machine learning based measurement of ear canal movement and ofe type device management	202441048592 A	2024

Mr.K.Senthilkumar	ECE	Intellectual Property India	Design and Implementation of Modified Rectangular Dual Band Antenna for ISM band applications	202441069789	2024
Ms S Mahalakshmi	ECE	Intellectual Property India	Machine Learning and IOT based smart parking system for small Parking spaces	202441087206 A	2024
Mr.K.Senthil kumar	ECE	Intellectual Property India	An efficient wireless power transfer system with metasurface for 5G Applications	202441091288	2024
Mr.K.Senthilkumar	ECE	Intellectual Property India	Miniaturised wide band Honey Comb shaped frequency selective surface (FSS) for MMWave 5G applications	202441018039 A	2024
Mr.K.Senthil kumar	ECE	Intellectual Property India	Compact wideband octagonal shaped complementary split ring resonator (CSRR) for Sub -6GHz Fifth Generation Applications	202441026949 A	2024

Dr. P. Sampath	CIVIL	Intellectual Property India	The Psychometric properties and performances of teacher made tests in measuring students academic performance a machine learning approach	202441032266	2024
Dr.R.Dinesh kumar	ECE	Intellectual property India	Localization error mitigation technique for location enabled IoT in athlete training system	202331001873	2023
Dr.R.Dinesh kumar	ECE	Intellectual property India	An adaptive fuzzy power controller based wind energy conversion system	202341005348	2023
Dr.R.Dinesh kumar	ECE	Intellectual property India	AI & ML based system for prediction of wind power for multi-turbine	202341005350	2023
Dr.R. Dinesh Kumar	ECE	Intellectual property India	Architecture FPGA for non linear and morphological image filtering	202341007078	2023
Dr.M.Ramkumar Prabhu	ECE	Intellectual property India	Implementation of Effective Wideband Cavity Backed Patch Antenna for Air surveillance Radar application	202241007568	2022

Dr.M. Ramkumar Prabhu, Dr.M.Durairaj, Dr.R.Dineshkumar, Mr.L.Saravanan, Mr.K.Senthilkumar, Dr.G.Charulatha, Ms.M.Renuga, Ms.B.Kaleeswari, Ms.K.Lakshmipriya, Ms.S.Dhivyabharathi	ECE	Intellectual property India	Personalized Recommendation of Topics by Influence Analysis Using Support Vector Machine Algorithm	202241058910	2022
PERI IT, Dr.M.Ramkumar Prabhu, Dr.M.Durairaj, Dr.R.Dineshkumar, Mr.L.Saravanan, Mr.K.Senthilkumar, Dr.G.Charulatha, Ms.M.Renuga, Ms.B.Kaleeswari, Ms.K.Lakshmipriya, Ms.S.Dhivyabharathi	ECE	Intellectual property India	Virtual Cloth Fitting In 2D Using Deep Learning Approach	202241058911	2022
PERI IT, Dr.M.Ramkumar Prabhu, Dr.M.Durairaj, Dr.R.Dineshkumar, Mr.L.Saravanan, Mr.K.Senthilkumar, Dr.G.Charulatha, Ms.M.Renuga, Ms.B.Kaleeswari, Ms.K.Lakshmipriya, Ms.S.Dhivyabharathi	ECE	Intellectual property India	Artificial Intelligence (AI) Based Animal Recognition and Repellent System for Smart Farming DCNN Algorithm	202241058912	2022
Dr.G.Charulatha	ECE	Intellectual property India	IOT Based Secured and Energy Efficient Routing Protocols Using Wireless Sensor Network (WSNs)	202241007993	2022
Dr.R.Dinesh	ECE	Intellectual property India	Monitoring E-health coresystem using AI techniques and methods	202241075332	2022

Dr. M. Ramkumar Prabu	ECE	Australian Government Patent	Smart Spectacles with Display and Remainder Techniques	2021105809	2022
Dr. M. Ramkumar Prabu	ECE	Intellectual Property India	IOT based crop monitoring scheme using smart device with machine learning methodology	20214131518	2022

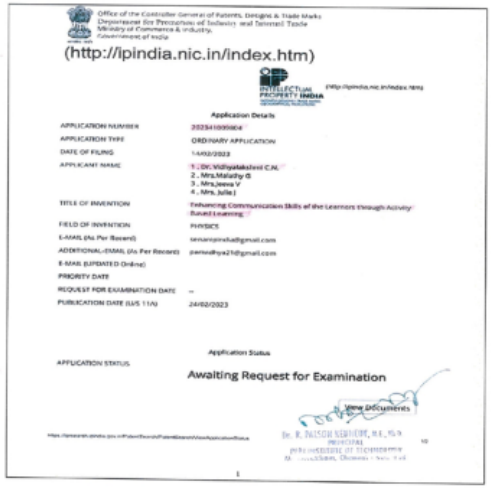




Fig 2.5.1.1: Patent proof

Table 2.5.1.2 Real-life examples mapped with PO's and PSO's

Academic year 2023-204

Odd semester

S. No.	Course	Industry visits in the same semester	Link to the industry	PO and PSO mapping
1	EC3351 Control Systems (Sem III)	TNEB Power 400 kV 03.11.2023	Feedback control, protection and monitoring in a high-voltage substation	PO1, PO5, PO11, PSO1, PSO2, PSO3
2	EC3551 Transmission Lines and RF Systems (Sem V)	TNEB Power 400 kV 02.11.2023	Power transmission line behaviour, losses and impedance	PO1, PO5, PO11, PSO1,PSO2, PSO3
3	GE3791 Human Values and Ethics (Sem VII)	Rambal Limited, 25.08.2023 TNEB Power 400 kV, 03.11.2023	Professional ethics, safety and responsibility in industrial practice	PO1, PO5, PO11, PSO1, PSO2, PSO3

Academic year (2023-2024)

Even semester

S. No.	Course (sem)	Industry visits in the same semester	Link to the industry	PO and PSO mapping
1	GE3451 Environmental Sciences and Sustainability (Sem 4)	Regional Meteorological Centre, 22.05.2024 BSNL, 23.02.2024 (Class II)	Environmental monitoring; safety and e-waste practices in a telecom facility	PO1, PO5, PO11, PSO1,PSO2, PSO3
2	ET3491 Embedded Systems and IoT Design (Sem 6)	Regional Meteorological Centre, 22.05.2024 (Class III)	Automatic weather stations and sensor networks	PO1, PO5, PO11, PSO1,PSO2, PSO3
3	CEC368 IoT-Based Systems Design (Sem 6, elective)	Regional Meteorological Centre, 22.05.2024 (Class III)	Sensor-to-cloud data flow	PO1, PO5, PO11, PSO1,PSO2, PSO3
4	CEC355 Software Defined Radio (Sem 6, elective)	BSNL, 23.02.2024 (Class III)	Mobile and base-station network practice	PO1, PO5, PO11, PSO1,PSO2, PSO3

S. No.	Course (sem)	Industry visits in the same semester	Link to the industry	PO and PSO mapping
5	CEC371 Massive MIMO Networks (Sem 6, elective)	BSNL, 23.02.2024 (Class III)	Mobile and base-station network practice	PO1, PO5, PO11, PSO1,PSO2, PSO3

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

Institute Marks : 10.00

The department encourages students to add to 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.

2.6.1 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, registration 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 Program Outcomes (POs) and Program 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.

2.6.2. 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 2.6.1.1: Self-learning course summary

S. No	Year	No. of Registered Student
1	IV	51
2	III	57
3	II	53

Table 2.6.1.2: Online course

Academic year (2023-2024)

IV Year

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
1	411520106001	Abinaya	Wireless Communication Fundamentals	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
2	411520106002	Aravindh Sankar P	Digital Image Processing with Python and OpenCV	Udemy	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
3	411520106003	Arulmani	Internet of Things (IoT) Fundamentals	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
4	411520106004	Arunraj R	AI-Assisted Machine Learning Development using Cursor	Cursor	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
5	411520106005	Ashwin B	AI-Assisted Embedded C Programming using Cursor	Cursor	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
6	411520106006	Balaji S	AI-Assisted Verilog and FPGA Design using Cursor	Cursor	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
7	411520106007	Balakrishnan. V	Digital Signal Processing with Python	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
8	411520106008	Chandana Priya R	Introduction to Cyber Security	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
9	411520106009	Charumathi S	IoT with Raspberry Pi and Arduino	Udemy	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
10	411520106010	Devarapalli Vasanthi	Embedded Systems Fundamentals	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
11	411520106011	Dhamodharan K	Python Programming for Beginners	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
12	411520106012	Diviesh N	Microcontroller Programming with Embedded C	Udemy	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
13	411520106015	Gomathi N	Machine Learning Basics	Great Learning	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
14	411520106016	Gothala Vikash	AI-Assisted Python Programming using Cursor	Cursor	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
15	411520106017	Gowtham S	VLSI Design Flow and Verilog HDL	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
16	411520106018	Harishbalaji Kanna S	Wireless Communication Fundamentals	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
17	411520106019	Indujaa R	Digital Image Processing with Python and OpenCV	Udemy	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
18	411520106020	Janaki D	Internet of Things (IoT) Fundamentals	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
19	411520106021	Jayakumar M	AI-Assisted Machine Learning Development using Cursor	Cursor	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
20	411520106023	Om Jayashakthi	AI-Assisted Embedded C Programming using Cursor	Cursor	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
21	411520106024	Kaka Mahesh Babu	AI-Assisted Verilog and FPGA Design using Cursor	Cursor	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
22	411520106025	Karthik N	Digital Signal Processing with Python	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
23	411520106026	Kaviya A	Introduction to Cyber Security	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
24	411520106027	Manikandan	IoT with Raspberry Pi and Arduino	Udemy	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
25	411520106029	Naveen P	Embedded Systems Fundamentals	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
26	411520106030	Nidheesh Raj S	Python Programming for Beginners	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
27	411520106031	Pradeep R	Microcontroller Programming with Embedded C	Udemy	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
28	411520106032	PradeepKumar A	Machine Learning Basics	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
29	411520106033	Prathaba Ruthiran R	AI-Assisted Python Programming using Cursor	Cursor	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
30	411520106034	Sabarinathan V	VLSI Design Flow and Verilog HDL	Udemy	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
31	411520106035	Sanmugapriya R	Wireless Communication Fundamentals	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
32	411520106036	Sarmitha S	Digital Image Processing with Python and OpenCV	Udemy	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
33	411520106037	Shalini N	Internet of Things (IoT) Fundamentals	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
34	411520106038	Siddique A	AI-Assisted Machine Learning Development using Cursor	Cursor	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
35	411520106039	Shivaprakash S	AI-Assisted Embedded C Programming using Cursor	Cursor	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
36	411520106041	Srinivasan V	AI-Assisted Verilog and FPGA Design using Cursor	Cursor	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
37	411520106042	Susmitha R	Digital Signal Processing with Python	Great Learning	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
38	411520106043	Thatchayni V	Introduction to Cyber Security	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
39	411520106044	Thavasiram C	IoT with Raspberry Pi and Arduino	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
40	411520106045	Tholkappiyan B	Embedded Systems Fundamentals	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
41	411520106046	Uma Mageshwari U	Python Programming for Beginners	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
42	411520106047	Uppili R	Microcontroller Programming with Embedded C	Udemy	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
43	411520106048	Vadlamani Dinesh	Machine Learning Basics	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
44	411520106049	Vidhya S	AI-Assisted Python Programming using Cursor	Cursor	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
45	411520106301	Boopalan S	VLSI Design Flow and Verilog HDL	Udemy	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
46	411520106302	Magimairaj.G	Wireless Communication Fundamentals	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
47	411520106304	Sanjay R	Digital Image Processing with Python and OpenCV	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
48	411520106305	Saravana Kumar A	Internet of Things (IoT) Fundamentals	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
49	411520106307	Swetha P	AI-Assisted Machine Learning Development using Cursor	Cursor	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
50	411520106308	Vignesh P	AI-Assisted Embedded C Programming using Cursor	Cursor	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
51	411520106701	Sivaprakash A	AI-Assisted Verilog and FPGA Design using Cursor	Cursor	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

III YEAR

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
1	411521106001	I Aishwarya	Digital Signal Processing with Python	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
2	411521106002	V Ajay	Microcontroller Programming with Embedded C	Udemy	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
3	411521106003	T. Akash	Embedded Systems Fundamentals	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
4	411521106004	V. Akash	Python Programming for Beginners	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
5	411521106005	M. Anees Fathima	Arduino Programming Step by Step	Udemy	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
6	411521106006	V Aravind	Internet of Things (IoT) Fundamentals	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
7	411521106007	V Aravindhan	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
8	411521106008	R Arun	IoT with Raspberry Pi and Arduino	Udemy	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
9	411521106009	H. Ashutosh Kumar	AI-Assisted Python Programming using Cursor	Cursor	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
10	411521106010	S. Avinash	Wireless Communication Fundamentals	Great Learning	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
11	411521106011	M. Balaji	Machine Learning Basics	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
12	411521106012	S.D Bhavan	AI-Assisted Embedded C Programming using Cursor	Cursor	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
13	411521106013	N. Boomika	Digital Electronics Fundamentals	Udemy	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
14	411521106014	S. Divya Darshan	Electronic Circuits and Devices	Udemy	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
15	411521106015	J Diwakar	Digital Signal Processing with Python	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
16	411521106016	K. Ganesh	Microcontroller Programming with Embedded C	Udemy	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
17	411521106017	E. Gopal	Embedded Systems Fundamentals	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
18	411521106018	H. Harish Babu	Python Programming for Beginners	Great Learning	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
19	411521106019	S Hemanathan	Arduino Programming Step by Step	Udemy	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
20	411521106020	A Indhuja	Internet of Things (IoT) Fundamentals	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
21	411521106021	N Indhumathi	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
22	411521106022	M Ishwarya	IoT with Raspberry Pi and Arduino	Udemy	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
23	411521106023	P. Kalaimathi	AI-Assisted Python Programming using Cursor	Cursor	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
24	411521106024	S Kamalesh	Wireless Communication Fundamentals	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
25	411521106025	M Kanagavel	Machine Learning Basics	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
26	411521106026	Kandhavel L	AI-Assisted Embedded C Programming using Cursor	Cursor	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
27	411521106027	V Lalitha	Digital Electronics Fundamentals	Udemy	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
28	411521106028	P.S Logaprasath	Electronic Circuits and Devices	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
29	411521106029	S. Malin	Digital Signal Processing with Python	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
30	411521106030	S Malini	Microcontroller Programming with Embedded C	Udemy	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
31	411521106031	P. Minnala	Embedded Systems Fundamentals	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
32	411521106032	H. Mohamed Hafeez	Python Programming for Beginners	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
33	411521106033	R Mohammed Khalith	Arduino Programming Step by Step	Udemy	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
34	411521106034	A Monisha	Internet of Things (IoT) Fundamentals	Great Learning	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
35	411521106035	E Monisha	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
36	411521106036	M Narmatha	IoT with Raspberry Pi and Arduino	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
37	411521106037	S Navin Raj Kumar	AI-Assisted Python Programming using Cursor	Cursor	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
38	411521106038	V Nehemya	Wireless Communication Fundamentals	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
39	411521106039	R Nethaji	Machine Learning Basics	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
40	411521106041	A Noorul Famitha	AI-Assisted Embedded C Programming using Cursor	Cursor	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
41	411521106042	K Prathap	Digital Electronics Fundamentals	Udemy	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
42	411521106045	S. Ragul	Electronic Circuits and Devices	Udemy	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
43	411521106046	U Ramya	Digital Signal Processing with Python	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
44	411521106047	S Reshmi	Microcontroller Programming with Embedded C	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
45	411521106048	S Sakthi	Embedded Systems Fundamentals	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
46	411521106051	E Sharuk	Python Programming for Beginners	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
47	411521106052	S. Silambarasan	Arduino Programming Step by Step	Udemy	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
48	411521106053	M Sudhan	Internet of Things (IoT) Fundamentals	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
49	411521106054	K Sudharshan	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
50	411521106055	S Sujitha	IoT with Raspberry Pi and Arduino	Udemy	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
51	411521106056	R. Swetha	AI-Assisted Python Programming using Cursor	Cursor	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
52	411521106057	T. Swetha	Wireless Communication Fundamentals	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
53	411521106059	G Thirupathy	Machine Learning Basics	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
54	411521106060	Y. Vijaya Sri	AI-Assisted Embedded C Programming using Cursor	Cursor	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
55	411521106061	P Vimala	Digital Electronics Fundamentals	Udemy	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
56	411521106062	K Vinoth Bharathi	Electronic Circuits and Devices	Udemy	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
57	411521106302	R. Lokesh Kumar	Digital Signal Processing with Python	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3

II Year

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
1	411522106001	Aasath G	AI-Assisted Python Programming using Cursor	Cursor	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
2	411522106003	Archana S	Arduino Programming Step by Step	Udemy	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
3	411522106004	Aswini V	Embedded Systems Fundamentals	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
4	411522106005	Balaji L	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
5	411522106006	Balamurugan M	Machine Learning Basics	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
6	411522106007	Dhaksha M	Internet of Things (IoT) Fundamentals	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
7	411522106008	Eswar K	Microcontroller Programming with Embedded C	Udemy	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
8	411522106009	Gideon Raja J	Digital Electronics Fundamentals	Udemy	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
9	411522106010	Giridharan V	Electronic Circuits and Devices	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
10	411522106011	Gokul R	Python Programming for Beginners	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
11	411522106012	Hariharan M	AI-Assisted Python Programming using Cursor	Cursor	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
12	411522106013	Harish M	Arduino Programming Step by Step	Udemy	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
13	411522106014	Hency R	Embedded Systems Fundamentals	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
14	411522106015	Jasmine Fathima M. B	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
15	411522106016	Jeeva K	Machine Learning Basics	Great Learning	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
16	411522106017	Jerin J	Internet of Things (IoT) Fundamentals	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
17	411522106018	Kabilesh S	Microcontroller Programming with Embedded C	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
18	411522106019	Kanishkar E	Digital Electronics Fundamentals	Udemy	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
19	411522106020	Karthikeyan R	Electronic Circuits and Devices	Udemy	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
20	411522106021	Kavinan T	Python Programming for Beginners	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
21	411522106023	Kaviya T	AI-Assisted Python Programming using Cursor	Cursor	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
22	411522106024	Kiran Akash M	Arduino Programming Step by Step	Udemy	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
23	411522106025	Kishore Kumar K	Embedded Systems Fundamentals	Great Learning	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
24	411522106026	Krithikha R	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
25	411522106028	Logachandran M	Machine Learning Basics	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
26	411522106029	Mageshwari P	Internet of Things (IoT) Fundamentals	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
27	411522106032	Mugesh B	Microcontroller Programming with Embedded C	Udemy	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
28	411522106034	Padmapriya M	Digital Electronics Fundamentals	Udemy	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
29	411522106035	Pavithra M	Electronic Circuits and Devices	Udemy	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
30	411522106036	Pinekash S	Python Programming for Beginners	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
31	411522106038	Priscilla N	AI-Assisted Python Programming using Cursor	Cursor	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
32	411522106039	Pushparaj P	Arduino Programming Step by Step	Udemy	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
33	411522106040	Ragul R K	Embedded Systems Fundamentals	Great Learning	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
34	411522106041	Rahul E.	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
35	411522106042	Rohan Prosper R	Machine Learning Basics	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
36	411522106043	Sabarieshwaran R	Internet of Things (IoT) Fundamentals	Great Learning	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
37	411522106044	Sanjay B	Microcontroller Programming with Embedded C	Udemy	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
38	411522106045	Sanjay Kumar A	Digital Electronics Fundamentals	Udemy	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
39	411522106046	Santhanalakshmi G	Electronic Circuits and Devices	Udemy	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
40	411522106047	Saranya R.	Python Programming for Beginners	Great Learning	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
41	411522106048	Simson A	AI-Assisted Python Programming using Cursor	Cursor	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
42	411522106049	Sindhu Usha	Arduino Programming Step by Step	Udemy	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

Sr. No	Reg. No	Name	Course Name	Course Platform	Completion	PO Mapping	PSO Mapping
43	411522106051	Sowmya S	Embedded Systems Fundamentals	Great Learning	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
44	411522106052	Sunilkumar S	AI-Assisted MATLAB and Python for Engineers using Cursor	Cursor	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
45	411522106053	Sushmitha L	Machine Learning Basics	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
46	411522106054	Swarna T	Internet of Things (IoT) Fundamentals	Great Learning	Dec 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
47	411522106055	Swetha P	Microcontroller Programming with Embedded C	Udemy	Mar 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
48	411522106056	Tamizhselvan M	Digital Electronics Fundamentals	Udemy	Oct 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
49	411522106059	Thiruvarian S	Electronic Circuits and Devices	Udemy	Jan 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
50	411522106060	Umapathy D	Python Programming for Beginners	Great Learning	Apr 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
51	411522106062	Vignesh B	AI-Assisted Python Programming using Cursor	Cursor	Nov 2023	PO1, PO2, PO11	PSO1, PSO2, PSO3
52	411522106063	Vishal M	Arduino Programming Step by Step	Udemy	Feb 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3
53	411522106302	Selvasri.H	Embedded Systems Fundamentals	Great Learning	May 2024	PO1, PO2, PO11	PSO1, PSO2, PSO3

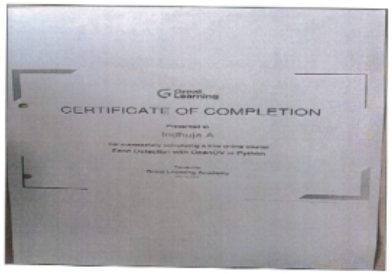


Fig 2.6.1.1(a): Self-learning course certificate

PRINCIPAL



Fig 2.6.1.1(B): Self-learning course certificate

PRINCIPAL

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 organization, 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 department justifies the relationship between the engineering problem and the selected SDG 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, data analysis, 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

Table 2.7.1.1: Syllabus mapped with Sustainable Development Goals

Sr. No	Course / Laboratory	SDG	Justification
1	**Sem III**: EC3354 Signals and Systems	SDG 9, SDG 3	Builds the mathematical foundation for communication, radar and biomedical signal analysis, supporting innovation in digital infrastructure and health monitoring technologies.
2	**Sem III**: EC3353 – Electronic Devices and Circuits	SDG 7, SDG 9	Covers semiconductor devices, rectifiers, regulators and amplifiers used in solar charge controllers and power-efficient electronics, supporting clean energy and resilient electronic infrastructure.

Sr. No	Course / Laboratory	SDG	Justification
3	**Sem III**: EC3351 – Control Systems	SDG 9, SDG 11	Teaches feedback and stability analysis used in industrial automation, smart traffic and building systems, supporting efficient infrastructure and sustainable cities.
4	**Sem III**: EC3352 – Digital Systems Design	SDG 9, SDG 12	Develops efficient digital hardware design (combinational and sequential logic, HDL), encouraging optimized use of resources and reduced hardware waste.
5	**Sem III**: EC3361 – Electronic Devices and Circuits Laboratory	SDG 7, SDG 12	Hands-on work on energy-efficient circuits and reuse of components promotes clean energy awareness and responsible lab consumption of electronic parts.
6	**Sem III**: CS3362 – C Programming and Data Structures Laboratory	SDG 4, SDG 9	Builds programming and problem-solving skills that improve employability and technical competence, supporting quality education and innovation.
7	**Sem IV**: EC3452 Electromagnetic Fields	SDG 9, SDG 3	Provides the basis for antennas, wave propagation and RF design for communication infrastructure, and for understanding electromagnetic exposure safety and human health.
8	**Sem IV**: EC3401 Networks and Security	SDG 9, SDG 16	Covers network design and security principles that protect data and communication systems, supporting reliable digital infrastructure and trustworthy, secure institutions.
9	**Sem IV**: EC3451 – Linear Integrated Circuits	SDG 7, SDG 3	Op-amp and analog IC design enables low-power sensing and medical instrumentation amplifiers, supporting energy efficiency and healthcare devices.
10	**Sem IV**: EC3492 – Digital Signal Processing	SDG 3, SDG 9	Techniques such as filtering and spectral analysis are applied to ECG/EEG processing, speech and image processing, supporting health technology and innovation.
11	**Sem IV**: EC3491 – Communication Systems	SDG 9, SDG 4	Analog and digital modulation underpin telecom networks and broadcasting, widening access to information and education.
12	**Sem IV**: EC3461 – Communication Systems Laboratory	SDG 9, SDG 4	Practical modulation, demodulation and link experiments build applied skills for developing accessible communication infrastructure and learning tools.
13	**Sem IV**: EC3462 – Linear Integrated Circuits Laboratory	SDG 7, SDG 12	Designing low-power analog circuits and reusing components in the lab supports energy efficiency and responsible resource use.
14	**Sem V**: EC3501 – Wireless Communication	SDG 9, SDG 11	Cellular, fading and mobile network concepts enable affordable connectivity and universal ICT access, and support smart and connected cities.

Sr. No	Course / Laboratory	SDG	Justification
15	**Sem V**: EC3552 – VLSI and Chip Design	SDG 9, SDG 7	Low-power, high-performance chip design drives industrial innovation and reduces energy consumption of electronic systems.
16	**Sem V**: EC3551 – Transmission Lines and RF Systems	SDG 9, SDG 13	RF, microwave and radar knowledge supports satellite communication and weather and climate monitoring systems, as well as broadband infrastructure.
17	**Sem V**: EC3561 – VLSI Laboratory	SDG 9, SDG 7	Hands-on design with EDA tools develops skills in low-power IC and FPGA design, fostering innovation and energy-efficient hardware.
18	**Sem VI**: ET3491 – Embedded Systems and IoT Design	SDG 11, SDG 13	IoT-based smart city, air-quality, water and agriculture monitoring solutions directly support sustainable cities, climate action and resource management.

Table 2.7.1.2: Major project mapped with SDG

Sr. No	Name	Batch No	Title	Classification of Project	SDG	Relevance to Pos and PSOs
1 2 3	Naveen P Srinivasan V Boopalan S	1	Enabled Smart Transformer Monitoring and Control System Using Embedded Systems	Product	SDG 7, SDG 9	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
4 5 6	Gowtham S Indujaa R Pradeep Kumar A	2	Integration of Raspberry Pi Pico in Home Automation: An Embedded System Approach	Product	SDG 9, SDG11	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
7 8 9	Aravinthsankar P Balaji S Thavasiram C	3	Simplifying Farmer to Client Online Purchasing Using Web Application (Uzhavar-Nanban)	Application	SDG 2, SDG 8, SDG12	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
10 11 12	Balakrishnan V Jayakumar M Uppili R	4	Railway Inspection System Based on IoT	Product	SDG 9, SDG 11	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,

Sr. No	Name	Batch No	Title	Classification of Project	SDG	Relevance to Pos and PSOs
13 14 15 16	Sanmugapriya R Shalini N Susmitha R Sivaprakash A	5	Text to Braille Converting Communication Device for Visually Impaired Persons	Product	SDG 4, SDG10	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
17 18 19	Ashwin B Jayasakthi OM Manikandan A	6	Real Time Data Communication Through LiFi in Hospital Environment	Application	SDG 3, SDG 9	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
20 21 22	Dinesh V Vidhya S Saravanakumar A	7	Triguard: Advanced Multi Verification System for Bank Locker Security	Product	SDG 9, SDG16	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
23 24 25	Diviesh N Harish Balaji Kanna Nidheeshraj S	8	Developing Microcontroller Driven RSSI Controlled Prisoner Management System	Product	SDG 9, SDG16	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
26 27 28	Vasanthi D Vikash G Pradeep R	9	Smart Hydroponics System with Real-Time Monitoring and Control System	Product	SDG 2, SDG 6, SDG12	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
29 30 31 32	Charumathi S Gomathi N Umamageshwari U Siddique A	10	Government Support for Direct Sales from Field to Government	Application	SDG 2, SDG 8	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
3334 35	Janaki D Sanjay R Swetha R	11	Arduino Based Coal Mine Safety Monitoring and Alerting System for Workers	Product	SDG 3, SDG 8	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
36 37 38	Dhamodaran K Maheshbabu K Tholkappiyan B	12	Soldier Health Monitoring and Tracking System Using IoT and LoRaWAN	Product	SDG 3, SDG 9, SDG16	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,

Sr. No	Name	Batch No	Title	Classification of Project	SDG	Relevance to Pos and PSOs
39 40 41	Abinaya M Kaviya A Thatchayani V	13	Design of Hybrid Audio Transmission Using LiFi	Research	SDG 4, SDG 9	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
42 43 44	Chandanapriya RH Karthik N Prathabaruthiran R	14	Solar Floor Cleaner Robot	Product	SDG 7, SDG 11	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
45 46 47	Arulmani K Arunraj R Sivaprakash S	15	Efficient Patient Scheduling OP Sheet and Slot Booking Solution for Hospitals	Application	SDG 3, SDG 9	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,
48 49 50	Sabarinathan V Sarmitha R Vignesh P	16	Improving Aquaculture Efficiency Through an Integrated Monitoring	Product	SDG 2, SDG12	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PSO1, PSO2,

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 Organizes, 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, organizesn, 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.

2.8.2 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 organizes 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 organization, 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 organization, 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 a review has taken place.The department organizes 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. The SAR reports only activities supported by verifiable records for the applicable assessment period.

Table 2.8.1.1 MOU

Academic Year: 2024- 2025

S.No	Date	Name of the Company	Duration
1	15-02-2025	Crystal Clear Technology and Innovation	Permanent
2	29-01-2025	Pantech E-Learning Pvt Ltd	Permanent
3	17-12-2024	First academic of Blockchain Council	5 year
4	13-08-2024	B.S.Abdur Rahman Crescent Institute of Science and Technology	Permanent

Academic Year: 2023-2024

S.No	Date	Name of the Company	Duration
1	12-08-2023	DADB India Private Limited	Permanent

2.	26-4-2023	Forview technology private limited	3 year

Academic Year: 2022 – 2023

S.No	Date	Name of the Company	Duration
1	07-02-2023	Retech Solution Private Ltd	3 Years
2	09-01-2023	Universitas Airlangga Indonsia	5 Years
3	18-08-2022	Adventure Solution Pvt Limited	2 Years
4.	22-03-2022	IPCS global	Permanent
5.	02-03-2022	Kaashiv infotech	2 year
6.	20-9-2022	Vei technology Pvt technology	2 year
7	29-7-2022	Pumo Technovation India Pvt Ltd	2 year
8	2-03-2022	Sree technology	2 year

Academic Year: 2021 – 2022

S.No	Date	Name of the Company	Duration
1	12-08-2021	Accubits Technologies Pvt. Limited	Permanent
2	12-08-2021	Worksbot Application Pvt.Limited	Permanent
4	23-03-2022	BSNL	2 Years
5	23-03-2022	Prince Infotech	Permanent
6	23-03-2022	Rajiv Gandhi Memorial Telecom Training Centre	2 Years
7	31-03-2022	Adhityaa InfoMedia Technologies	2 Year

Table 2.8.1.2. Event conducted by signed MOU

S.No	year	Name of training program / industrial visits offered to student	Name of the company offering training	Duration	Year of study
1	2022-2023	Industrial visit	Prince infotech	1 day	II,III,IV
2.	2022-2023	Industrial visit	BSNL	1 day	II,III,IV
3	2022-2023	Seminar - Embedded system	Adventure private limited	18/8/2022	II,III,IV
4.	2022-2023	Industrial visit	Pumo technologies	20/8/2022	II,III,IV
5.	2022-2023	Workshop - Blockchain technology	Adithiya Infomedia Technologies	11/2/2023	II,III,IV
6.	2022-2023	Seminar – Wireless technolog	Adithiya Infomedia Technologies	8/2/2023	II,III,IV

Academic year (2023-2024)



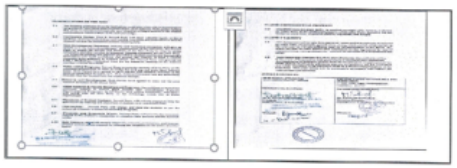


Fig 2.8.1.1 Signed MOU Copy

PRINCIPAL



Fig 2.8.1.2 MOU signed company

PRINCIPAL

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

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.

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. 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.

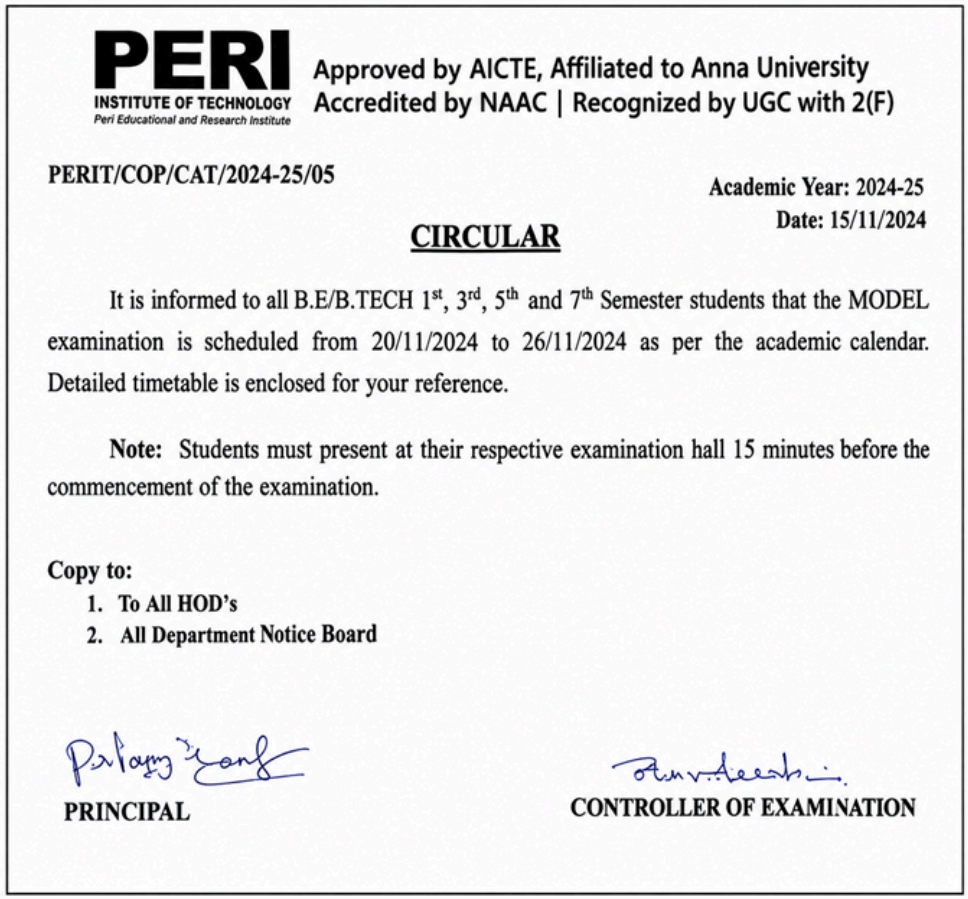
4. Post-Evaluation Feedback and Performance Improvement

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.

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.



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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

Figure 3.1.1: Sample Circular for Students

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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:

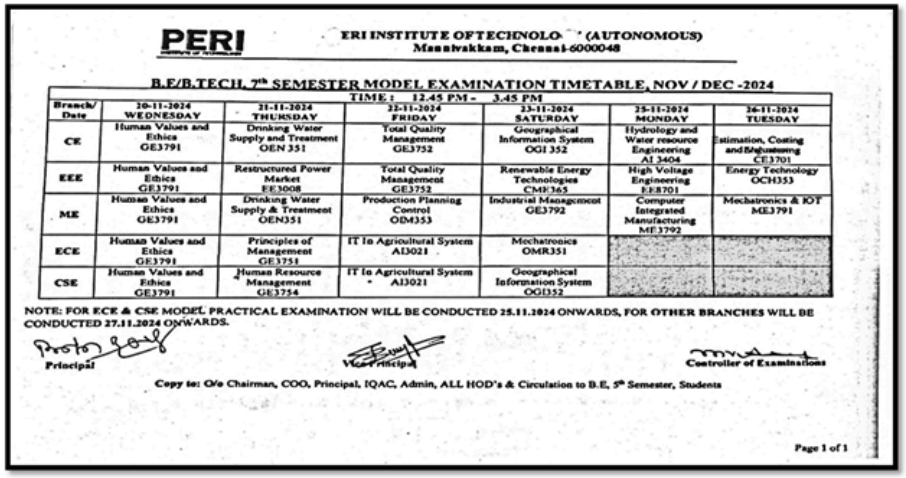
- Collect your exam papers from the COE office before the commencement of examinations.
- After completing your respective subjects, submit the answer key to the COE office.
- Collect your answer scripts from the COE office thereafter.

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

Thank you.

PRINCIPAL **CONTROLLER OF EXAMINATION**

Figure 3.1.2 Sample Circular for Staffs to conduct model exam



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

TIME : 12.45 PM - 3.45 PM

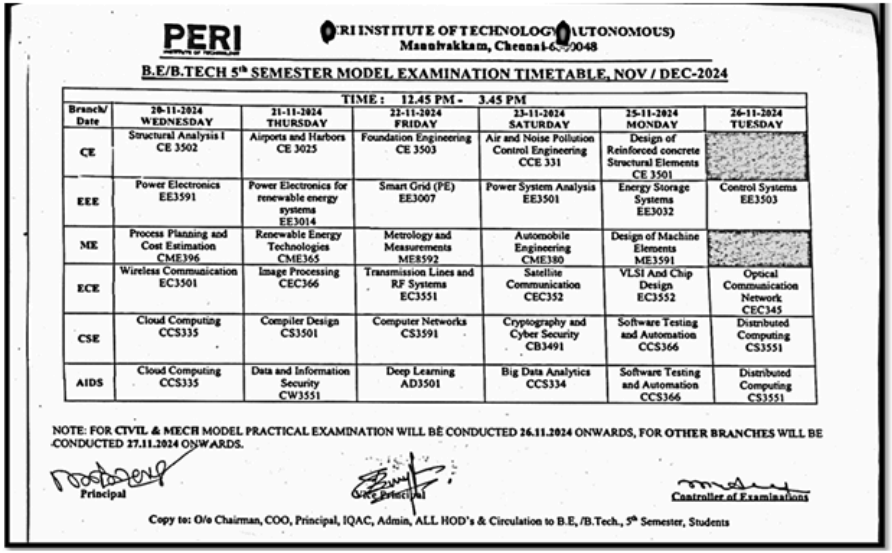
Branch/ Date	20-11-2024 WEDNESDAY	21-11-2024 THURSDAY	22-11-2024 FRIDAY	23-11-2024 SATURDAY	25-11-2024 MONDAY	26-11-2024 TUESDAY
CE	Human Values and Ethics GE3791	Drinking Water Supply and Treatment OEN 351	Total Quality Management GE3752	Geographical Information System OGI 352	Hydrology and Water resource 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 OEM353	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



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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

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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

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

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MODEL Examination Seating Arrangements

Academic Year 2024 - 2025 ODD SEM

DATE : 22.11.2024 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 06	BETA	III	MECH	III	NA	411522114001	411522114013 , 4309	10	50
				MECH	II	NA	411523114001	411523114007	7	
				CIVIL	III	NA	411522103002	411522103007 , 3301 - 3302	8	
				ECE	III	NA	411522106001	411522106020	18	
				EEE	III	NA	411522105023	411522105024, 5301 - 5305	7	
2	BT 08	BETA	III	EEE	III	NA	411522105001	411522105022	20	50
				CIVIL	II	NA	411523103002	411523103006 , MONISH	5	
				ECE	III	NA	411522106021	411522106052	25	
3	BT 13	BETA	III	CIVIL	IV	NA	411521103002	411521103013, 3301 - 3303	12	37
				ECE	III	NA	411522106053	411522106063, 6301 -6302	9	
				CSBS	II	NA	411523244001	411523244018	16	
4	BT 14	BETA	III	CIVIL	IV	NA	411521103304	411521103312	9	66
				MECH	IV	NA	411521114001	411521114028	16	
				AI&DS	II	NA	411523243001	411523243017	17	
				CSBS	II	NA	411523244019	411523244030	8	
				EEE	II	NA	411523105001	411523105008	8	
				CSE	III	B	411522104099	411522104107	8	
5	BT 15	BETA	III	MECH	IV	NA	411521114029	411521114037, 4318 - 4324	11	45
				EEE	IV	NA	411521105001	411521105015	11	
				IT	II	NA	411523205001	411523205016	15	
				AI&DS	II	NA	411523243019	411523243025, RITHESHWARAN	8	
6	BS 03	BETA	II	EEE	IV	NA	411521105017	411521105025, 5305 -5311, 5501	13	50
				ECE	IV	NA	411521106001	411521106012	12	

PERI INSTITUTE OF TECHNOLOGY (AN AUTONOMOUS INSTITUTION)

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MODEL Examination Seating Arrangements

Academic Year 2024 - 2025 ODD SEM

DATE : 22.11.2024 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
				IT	II	NA	411523205017	411523205041	25	
7	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	
8	BS 05	BETA	II	ECE	IV	NA	411521106039	411521106062, 6302 - 6309	20	50
				AI&DS	III	NA	411522243001	411522243006	5	
				CSE	II	A	411523104024	411523104050	25	
9	BS 06	BETA	II	AI&DS	III	NA	411522243007	411522243031	25	50
				CSE	II	A	411523104052	411523104072	21	
				CSE	II	B	411523104073	411523104076	4	
10	BS 08	BETA	II	AI&DS	III	NA	411522243301	411522243303	3	42
				CSE	III	A	411522104003	411522104021	18	
				CSE	II	B	411523104077	411523104102	21	
11	BS 09	BETA	II	CSE	III	A	411522104022	411522104046	21	42
				CSE	II	B	411523104103	411523104127	21	
12	BS 15	BETA	II	CSE	III	A	411522104047	411522104068, 4078, 4080, 4106 ,4114	20	40
				CSE	II	B	411523104128	411523104148	20	
13	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	

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MODEL Examination Seating Arrangements

Academic Year 2024 - 2025 ODD SEM

DATE : 22.11.2024 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
				CSE	II	B	411523104149	411523104150	2	
14	BG 11	BETA	GF	CSE	III	B	411522104077	411522104098	20	40
				ECE	II	NA	411523106019	411523106038, Sowmya	20	
15	BT 07	BETA	III	CSE	III	B	411522104108	411522104125, Nithyasree , Supriya	18	20
				EEE	II	NA	411523105009	411523105301	2	
									672	672

Controller of Examinations

Figure 3.1.4. Sample Model exam Seating arrangement for students

PERI INSTITUTE OF TECHNOLOGY (AN AUTONOMOUS INSTITUTION)

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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. Vickneswari	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. Ana 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. Athirayan	AP	CSE		Y		Y	Y	Y
19	Mr. S. Duraimurugan	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. Veekata Vijayalakshmi	AP	CSE	Y		Y	Y		
24	Ms Saranya	AP	CSE		Y	Y	Y		Y
25	Mr. V. Soundararaju	AP	MECH		Y		Y	Y	Y
26	Mr. P. Prabhakaran	AP	MECH	Y	Y			Y	Y
27	Mr. G. Vaithiyanathan	AP	MECH	Y	Y		Y	Y	
28	Dr. N. Tamileli	Professor	MECH		Y			Y	
29	Mrs. Nivedha	AP	S & H		Y	Y		Y	Y

Controller of Examinations VICE PRINCIPAL PRINCIPAL

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 04	9.30	
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

Figure 3.1.6 Staff attendance for exam duty

PERI INSTITUTE OF TECHNOLOGY
AN AUTONOMOUS INSTITUTION

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Examination: Model, November 2024
Degree: BE
Year/Semester: II/3

Acadwemic Year: 2024-25
Programme: ECE
Section: NA
Room No. **BG 04**

	Date:	20-11-2024	21-11-2024	22-11-2024	23-11-2024	25-11-2024	26-11-2024
	Subject:	MA3355-RPLA	EC3351-CS	EC3352-DSD	EC3353-EDC	EC3354-SS	CS3353-CPDS
S.No.	Reg. No	Signature	Signature	Signature	Signature	Signature	Signature
1	411523106001	AB	AB	AB	AB	AB	AB
2	411523106002	AB	AB	AB	AB	AB	AB
3	411523106003	E.Bijith	E.Bijith	E.Bijith	E.Bijith	E.Bijith	E.Bijith
4	411523106004	N.Arjun	N.Arjun	N.Arjun	N.Arjun	N.Arjun	N.Arjun
5	411523106005	B.Rohith	B.Rohith	B.Rohith	B.Rohith	B.Rohith	B.Rohith
6	411523106006	AB	A.Bastin	A.Bastin	AB	A.Bastin	A.Bastin
7	411523106007	E.Boon	E.Boon	E.Boon	E.Boon	E.Boon	E.Boon
8	411523106008	P.Dhoh	P.Dhoh	P.Dhoh	P.Dhoh	P.Dhoh	P.Dhoh
9	411523106009	P.Jeeva	P.Jeeva	AB	AB	P.Jeeva	P.Jeeva
10	411523106010	M.Jhuti	M.Jhuti	M.Jhuti	M.Jhuti	M.Jhuti	M.Jhuti
11	411523106011	B.V.Pinky	AB	B.V.Pinky	B.V.Pinky	B.V.Pinky	B.V.Pinky
12	411523106012	AB	AB	AB	AD	AB	AB
13	411523106013	G.Dhoni	G.Dhoni	G.Dhoni	G.Dhoni	G.Dhoni	G.Dhoni
14	411523106014	Enbat.E	Enbat.E	Enbat.E	Enbat.E	Enbat.E	Enbat.E
15	411523106015	P.Indumathi	P.Indumathi	P.Indumathi	P.Indumathi	P.Indumathi	P.Indumathi
16	411523106016	V.Jaya Prathap	V.Jaya Prathap	V.Jaya Prathap	V.Jaya Prathap	AB	V.J.P.
17	411523106017	S.madhitha	S.madhitha	S.madhitha	S.madhitha	S.madhitha	S.madhitha

18	411523106018	AB	AB	AB	AB	AB	AB
	No. of Present:	13	13	13	12	13	13
	No.of Absent:	05	05	5	06	05	04
	Total:	18	18	18	18	18	18
	Invigilator Signature	G.Christopher	Abhay	22/11/24	G.Christopher	G.Christopher	26/11/24 (AS+CA)

Fig 3.1.7 Student attendance for Model exam

Reg. No:

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CONTINUOUS ASSESSMENT TEST - 1
OPTICAL COMMUNICATION (R2017)

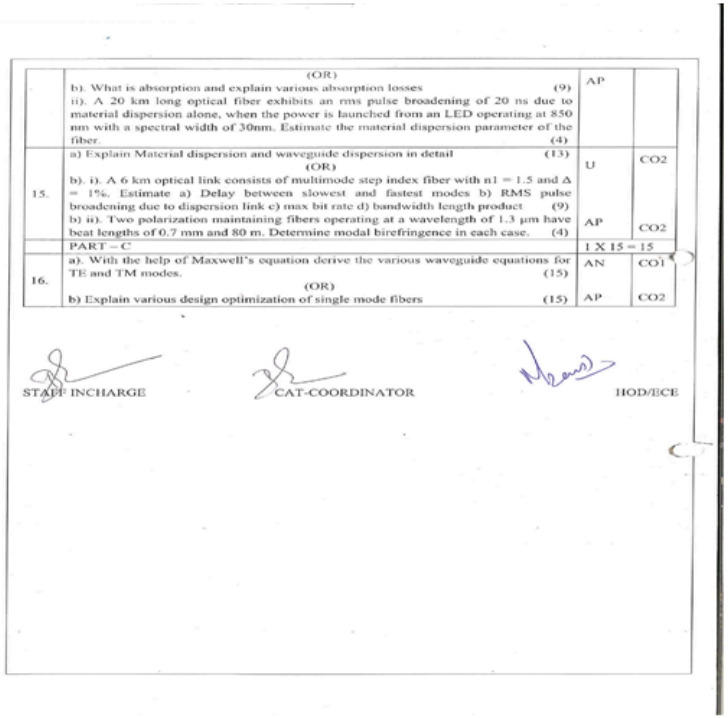
Year/Sem/Sec	II / III	Date	14/09/2022
DEPT	ECE	Duration	3 Hrs
Faculty	Ms. KALEESWARI	Total Marks	100

PART A (10X2=20)

1.	Differentiate single mode and multimode fibers	U	CO1
2.	What is meridional and skew rays	U	CO1
3.	Write the modal equation.	U	CO1
4.	What is step index and graded index fiber	U	CO1
5.	A step index fiber has n1 = 1.5 and n2 = 1.47. Determine the solid acceptance angle.	AP	CO1
6.	What is intermodal dispersion? What is its cause?	U	CO2
7.	What is chromatic dispersion?	U	CO2
8.	What is Rayleigh scattering?	U	CO2
9.	What is RI profile?	U	CO2
10.	A multimode GI fiber exhibits a total pulse broadening of 0.1μ sec over a distance of 15km. Estimate the maximum possible bandwidth on the line.	AP	CO2

PART B (5X13 = 65)

11.	a) i). Draw a neat diagram and explain the ray theory behind the optical fiber communication with a special mention about the total internal reflection, Acceptance angle and Numerical aperture. (9) ii). What are the advantages of optical fiber communication system? (4) (OR) b) A single mode step index fiber has core cladding refractive indeces of 1.498 and 1.495 respectively. Determine the core diameter required for the fiber to permit its operation over the wavelength range 1.48 to 1.6μm. Calculate the new fiber core diameter to enable single mode transmission at the wavelength of 1.3μm (13)	U AP	CO1
12.	a) Explain about step index and graded index fiber structure with their index profile diagrams. (10) ii) Compare single mode and multimode fibers (3) (OR) b) Apply Bessel's function and find various modes (including LP modes) in step index fiber (13)		CO1
13.	a) With schematic diagram, explain the blocks and their functions of the major elements of an optical fiber transmission link. (13) (OR) b). Explain Intermodal dispersion in multimode step index fiber (13)	U U	CO1 CO2
14.	a) Explain various scattering losses in detail (13)	U	CO2



	(OR)		
	b). What is absorption and explain various absorption losses (9) ii). A 20 km long optical fiber exhibits an rms pulse broadening of 20 ns due to material dispersion alone, when the power is launched from an LED operating at 850 nm with a spectral width of 30nm. Estimate the material dispersion parameter of the fiber. (4)	AP	
15.	a) Explain Material dispersion and waveguide dispersion in detail (13) (OR) b). i). A 6 km optical link consists of multimode step index fiber with n1 = 1.5 and Δ = 1%. Estimate a) Delay between slowest and fastest modes b) RMS pulse broadening due to dispersion link c) max bit rate d) bandwidth length product (9) b) ii). Two polarization maintaining fibers operating at a wavelength of 1.3 μm have beat lengths of 0.7 mm and 80 m. Determine modal birefringence in each case. (4)	U AP	CO2 CO2
	PART – C	1 X 15 = 15	
16.	a). With the help of Maxwell's equation derive the various waveguide equations for TE and TM modes. (15) (OR) b) Explain various design optimization of single mode fibers (15)	AN AP	CO1 CO2

STAFF INCHARGE CAT-COORDINATOR HOD/ECE

Figure 3.1.8 Sample Question Paper for CAT 1

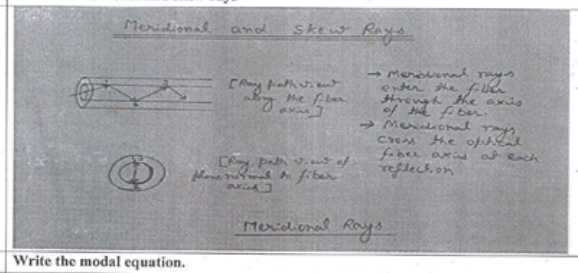
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
CONTINUOUS ASSESSMENT TEST - 1
OPTICAL COMMUNICATION (R2017)

Answer Key

Year/Sem/Sec	IV / VII	Date	14/09/2022
DEPT	ECE	Duration	3 Hrs
Faculty	Ms. KALEESWARI	Total Marks	100

PART A (10X2=20)

1.	**Differentiate single mode and multimode fibers**
	• The major difference single-mode and multimode optical fiber is that in single-mode optical fiber light ray propagates only through a single path. On the contrary, in multimode optical fiber several light rays propagate through the waveguide at the same time. —1m • Another crucial difference between single-mode and multimode optical fiber is that **single-mode fiber has a smaller core diameter** as compared to multimode fiber. —1m
2.	**What is meridional and skew rays**
	 —1m —1m
3.	**Write the modal equation.**
	$(J_v + K_v)(K_1^2 J_v + K_2^2 K_v) = \frac{1}{a}\left(\frac{1}{U^2} + \frac{1}{W^2}\right)^2$ —2m
4.	**What is step index and graded index fiber**
	STEP INDEX FIBER : The refractive index of the core is uniform throughout and undergoes on abrupt change at the core cladding boundary —1m GRADED INDEX FIBER: The refractive index of the core is made to vary gradually such that it is maximum at the center of the core. —1m

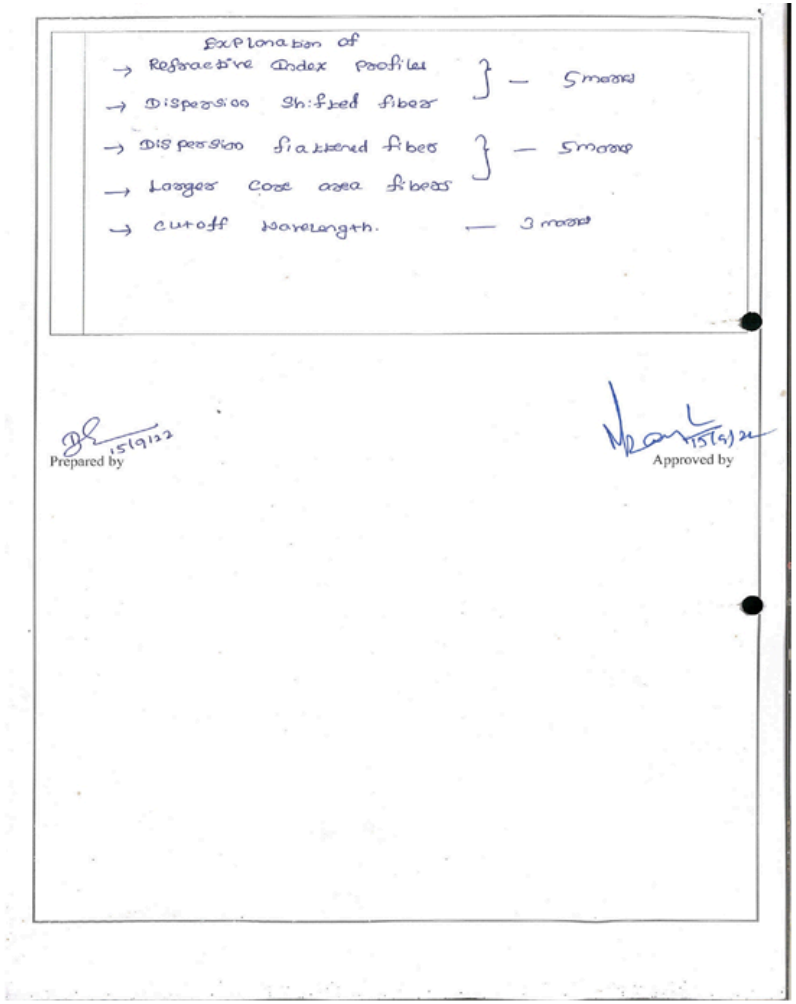
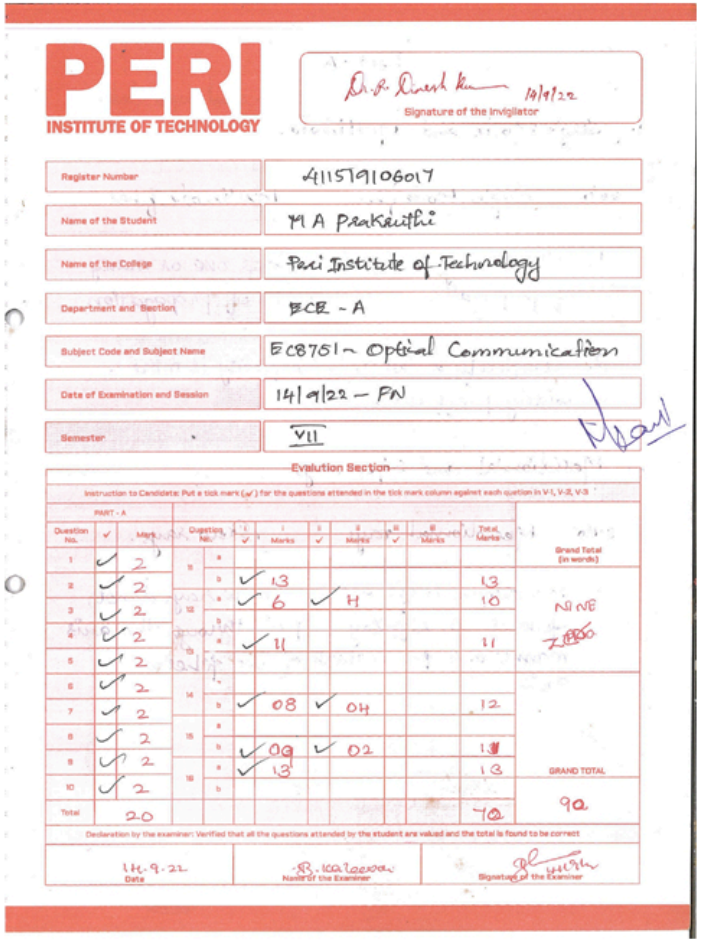


Figure 3.1.9 Sample Answer key for CAT 1



PERI
INSTITUTE OF TECHNOLOGY

Signature of the Invigilator 14/9/22

Register Number	411519106017
Name of the Student	M A Prakkithi
Name of the College	Peri Institute of Technology
Department and Section	ECE - A
Subject Code and Subject Name	EC8751 - Optical Communication
Date of Examination and Session	14/9/22 – FN
Semester	VII

Evalution 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	✓	2
3	✓	2
4	✓	2
5	✓	2
6	✓	2
7	✓	2
8	✓	2
9	✓	2
10	✓	2
Total		20

Question No.		I ✓	I Marks	II ✓	II Marks	III ✓	III Marks	Total Marks
11	a							
	b	✓	13					13
12	a	✓	6	✓	H			10
	b							
13	a	✓	11					11
	b							
14	a							
	b	✓	08	✓	04			12
15	a							
	b	✓	09	✓	02			11
16	a	✓	13					13
	b							

Grand Total (in words): NINE

GRAND TOTAL: 90

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
14.9.22	R. Karthikeyan	

Figure 3.1.10 Sample Answer sheet for CAT 1

PERI INSTITUTE OF TECHNOLOGY (AN AUTONOMOUS INSTITUTION)

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

DEPARTMENT OF SCIENCE AND HUMANITIES
MODEL EXAM - November 2024
MA3355 RANDOM PROCESSES AND LINEAR ALGEBRA
SET B

Year/Sem	II/III	**Date**	20.11.2024
Department	ECE	**Duration**	3 Hrs.
Faculty	Mrs. S. Nivedha	**Total Marks**	100

PART A **10X2=20 Marks**

Q. No.	Question	BT	CO
1.	The cumulative distribution of a random variable is given by $F(x)=\begin{cases}0, x<0\\ x+\frac{1}{2}, 0<x<\frac{1}{2}\\ 1, x>\frac{1}{2}\end{cases}$. Compute $P(X>\frac{1}{4})$.	U	CO1
2.	Consider a random experiment of tossing a fair coin three times. If X denotes the number of heads obtained. Find $P(X<2)$.	U	CO1
3.	The two lines of regression are $3x+2y-26=0$ & $6x+y-31=0$. Find the value of correlation coefficient between x and y.	U	CO2
4.	The joint pdf of two dimensional random variables (X,Y) is given by $f(x,y)=\begin{cases}kxe^{-y}, 0<x<2, y>0\\ 0, otherwise\end{cases}$. Find the value of k.	U	CO2
5.	State Chapman-Kolmogorov equations.	R	CO3
6.	A radioactive source emits particles at a rate of 5 per minute in accordance with Poisson process. Each particle emitted has a probability 0.6 of being recorded. Estimate the probability that 10 particles are recorded in 4 minute period.	Ap	CO3
7.	Check whether the set of vectors $v_1=(1,-2,3)$, $v_2=(5,6,-1)$ and $v_3=(3,2,1)$ form a linearly dependent or linearly independent set.	U	CO4
8.	Check whether the vector $(2,-1,1,-3)$ is in the span of S, where $S=\{(1,0,1,-1),(0,1,1,1)\}$.	U	CO4
9.	Show that the vectors $u=(-2,3,1,4)$ and $v=(1,2,0,-1)$ are orthogonal in R^4.	U	CO5
10.	Let T: $R^2 \rightarrow R^3$ be defined by T(x, y) = (2x−y, 3x+4y, x). Compute the matrix of the transformation w.r.t the standard bases of R^2 & R^3.	U	CO5

	(ii) The transition probability matrix of a Markov chain having three states 0, 1, 2 is $P = \begin{bmatrix} \frac{3}{4} & \frac{1}{4} & 0 \\ \frac{1}{4} & \frac{1}{2} & \frac{1}{4} \\ 0 & \frac{3}{4} & \frac{1}{4} \end{bmatrix}$ and the initial distribution is $P(X_0 = i) = \frac{1}{3}, i = 0,1,2.$ Find (1) $P(X_2 = 2)$ and (2) $P(X_3 = 1, X_2 = 2, X_1 = 1, X_0 = 2)$.	U	8	CO3
14.a)	Determine whether the set of all 2x2 matrices with real entries is a vector space if addition is defined to be standard matrix addition & scalar multiplication is defined to be matrix scalar multiplication.	U	16	CO4
	(OR)			
14.b)	(i) Let $v_1 = (1, 2, 1)$, $v_2 = (2, 9, 0)$ and $v_3 = (3, 3, 4)$. Show that the set $S = \{v_1, v_2, v_3\}$ is a basis for R^3.	U	8	CO4
	(ii) Solve the following system of linear equations $x_1 - 2x_2 + 2x_3 = 5$, $x_1 - x_3 = -1$, $-x_1 + x_2 + x_3 = 5$.	U	8	CO4
15.a)	Find the least square solution of the linear system $AX = B$ given by $x_1 - x_2 = 4$; $3x_1 + 2x_2 = 1$, $-2x_1 + 4x_2 = 3$.	Ap	16	CO5
	(OR)			
15.b)	(i) Let R^3 have the Euclidean inner product. Use the Gram-Schmidt process to the given subset $S = \{u_1, u_2, u_3\}$ where $u_1 = (3,0,4)$, $u_2 = (-1,0,7)$ and $u_3 = (2,9,11)$ of the inner product space to obtain (1) an orthogonal basis and (2) an orthonormal basis, β.	Ap	8	CO5
	(ii) State and prove dimension theorem.	U	8	CO5

CAT Co-ordinator HOD/ECE

Figure 3.1.11 Sample Question paper for Model Exam

PERI INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2024-25

STUDENT FEEDBACK MODEL

Course code & Name: MA3355 Exam Date: 20-11-24
Year / Sem: II / III Name of the Student: E.AJITH

Question Paper Setting			
Description of Criteria	**Yes**	**No**	**Remarks**
Has the faculty framed the question paper insuch a way that the given time is sufficient to complete?		✓	
Were the questions asked relevant to the syllabus covered?	✓		
Are the data given in all the questions sufficient?	✓		

Answer Script Valuation			
Description of Criteria	**Yes**	**No**	**Remarks**
Whether the valuation is done in accordance to the answer key?	✓		
Has the faculty suggested any comments/remarks for the improvement?	✓		

General issues			
Description of Criteria	**Yes**	**No**	**Remarks**
Describe any other additional issues faced during CAT I exam		←	

E.Ajith
Student Signature

Figure 3.1.12 Sample Student feedback for Model Exam

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

Institute Marks : 10.00

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.

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. 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 : 50579

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

Fifth/Sixth Semester

Electronics and Communication Engineering

CEC 365 – WIRELESS SENSOR NETWORK DESIGN

(Common to : Electronics and Instrumentation Engineering/Electronics and Telecommunication Engineering/Instrumentation and Control Engineering)

(Regulations 2021)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is an ad hoc wireless network?
2. Outline the challenging issues in ad hoc network maintenance.
3. Write the importance of PEGASIS protocol.
4. Why is multihop wireless communication required for WSN?
5. List the factors that are essential for PHY design in WSNs.
6. Differentiate wakeup period and listen period.
7. Why wireless sensor networks need localization protocols?
8. Why is topology control necessary for WSN?
9. Name any two node-level simulators for wireless sensor networks.
10. What is TinyOS? Where is it used?

PART B — (5 × 13 = 65 marks)

11. (a) What is a routing protocol? Outline the issues in designing a routing protocol for ad hoc wireless networks. (13)

Or

(b) Explain top-down design process and bottom up implementation process for wireless sensor network application in detail. (13)

12. (a) (i) Outline the Low Energy Adaptive Clustering Hierarchy (LEACH) protocol for wireless sensor networks. (7)

(ii) Explain the design approaches and performance of S-MAC protocol. (6)

Or

(b) (i) Explain the concept of Gateway with different scenarios in wireless sensor networks. (7)

(ii) Explain the concept of TRAMA protocol. (6)

13. (a) Discuss the distributed assignment of Locally Unique MAC address for WSN. (13)

Or

(b) (i) Bring out the differences between stateless header compression and Context-based header compression. (7)

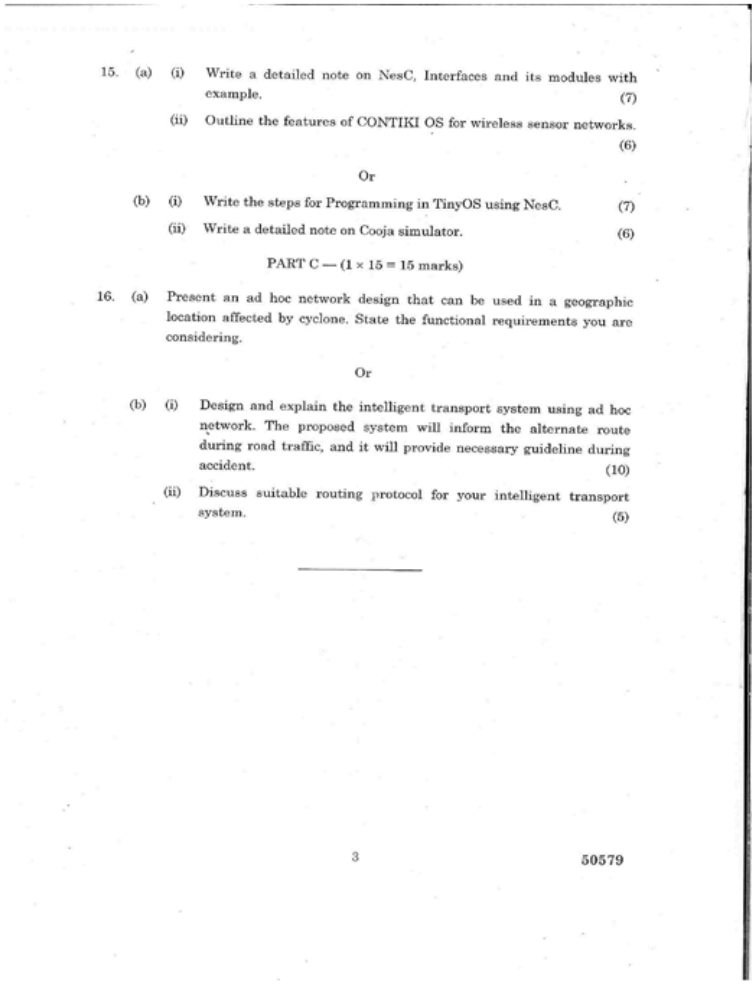
(ii) Write a detailed note on Proxy Home Agent and Proxy MIPv6. (6)

14. (a) (i) Write a detailed note of ZigBee compact application protocol (CAP). (7)

(ii) Explain about Web service paradigms. (6)

Or

(b) Explain the architecture of SNMP entity and traditional SNMP manager, as specified in RFC2271. (13)



15. (a) (i) Write a detailed note on NesC, Interfaces and its modules with example. (7)

(ii) Outline the features of CONTIKI OS for wireless sensor networks. (6)

Or

(b) (i) Write the steps for Programming in TinyOS using NesC. (7)

(ii) Write a detailed note on Cooja simulator. (6)

PART C — (1 × 15 = 15 marks)

16. (a) Present an ad hoc network design that can be used in a geographic location affected by cyclone. State the functional requirements you are considering.

Or

(b) (i) Design and explain the intelligent transport system using ad hoc network. The proposed system will inform the alternate route during road traffic, and it will provide necessary guideline during accident. (10)

(ii) Discuss suitable routing protocol for your intelligent transport system. (5)

3 50579

Figure 3.2.1 Sample Anna University Question paper

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

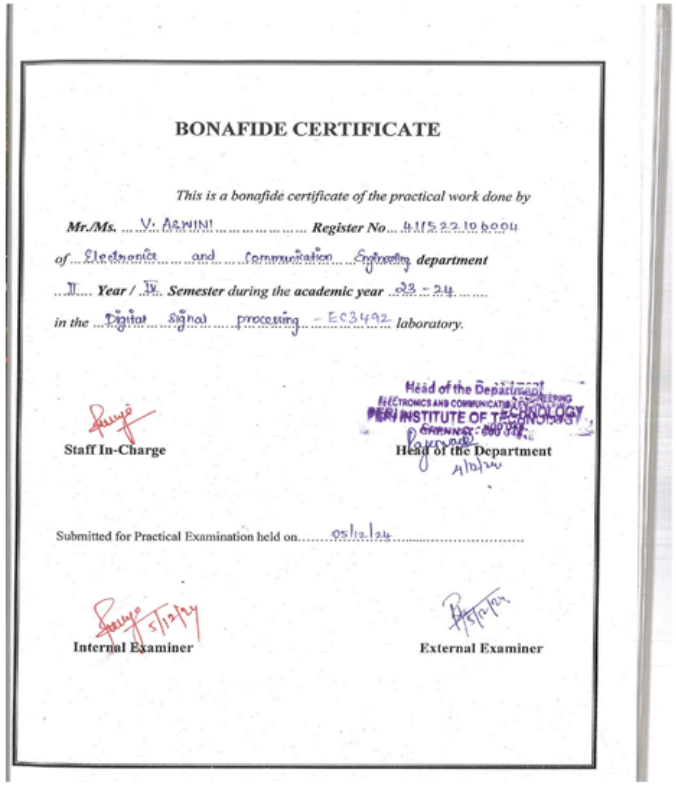
A sample CO–Rubric–PO/PSO mapping is maintained for the course EC3353 – Electronic Devices and Circuits Laboratory. The mapping identifies the relevant COs assessed through individual experiments and the corresponding rubric parameters, which are further aligned with the relevant POs and PSOs.

The rubric-based assessment provides measurable evidence of student performance and supports the evaluation of CO attainment. The assessment records are maintained by the respective course-handling faculty members and reviewed by the department as part of the Outcome-Based Education (OBE) process.

Table 3.3.2 Sample CO-PO/PSO Mapping

Course Name: Electronic Devices and Circuits Course Code: EC3353

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	3	3	2	1	-	-	-	-	1	2	1	1
CO-2	3	2	2	3	2	2	-	-	-	-	1	2	1	1
CO-3	3	3	3	2	1	2	-	-	-	-	1	2	1	1
CO-4	3	3	2	3	2	2	-	-	-	-	1	2	1	1
CO-5	3	2	3	2	2	1	-	-	-	-	1	2	1	1
Average	**3**	**3**	**3**	**3**	**2**	**2**	**-**	**-**	**-**	**-**	**1**	**2**	**1**	**1**



BONAFIDE CERTIFICATE

This is a bonafide certificate of the practical work done by

Mr./Ms. V. ASWINI *Register No* 411522106004

of Electronics and Communication Engineering *department*

II *Year /* IV *Semester during the academic year* 23 - 24

in the Digital Signal processing - EC3492 *laboratory.*

Head of the Department
ELECTRONICS AND COMMUNICATION ENGINEERING
PERI INSTITUTE OF TECHNOLOGY
CHENNAI - 600 048.
4/12/24

Staff In-Charge

Head of the Department

Submitted for Practical Examination held on 05/12/24

5/12/24

Internal Examiner

External Examiner

Fig 3.3.1 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.

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.

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

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 3.4.2 Industrial Training Programs

S. No	Training Name	Duration (days)	Starting Date
1	Scientific career Planning	1	09/04/2024
2	Technical – Java	12	29/01/2024
3	Aptitude	6	18/01/2024
4	PCB Training	14	07/08/2023

Table 3.4.3 Internship Training Details for AY 2024 - 2025

S:NO	Name	Year	Title	Place of Work

1	KALAIMATHI P.	IV/ECE	PLC Automation	Adhira Infinite Solution
2	AJAY V	IV/ECE	Web Development	Adhityaa Infomedia Technologies
3	AKASH T.	IV/ECE	Web Development	Adhityaa Infomedia Technologies
4	ARUN R	IV/ECE	Web Development	Adhityaa Infomedia Technologies
5	BHAVAN S.D	IV/ECE	Web Development	Adhityaa Infomedia Technologies
6	MOHAMMED KHALITH R	IV/ECE	Web Development	Adhityaa Infomedia Technologies
7	RAGUL S.	IV/ECE	Web Development	Adhityaa Infomedia Technologies
8	SUDHARSHAN K	IV/ECE	Web Development	Adhityaa Infomedia Technologies
9	THIRUPATHY G	IV/ECE	Web Development	Adhityaa Info media Technologies
10	SILAMBARASAN S.	IV/ECE	Web Development	Gateway Software Solution
11	AISHWARYA I	IV/ECE	Web Development	Internz learn
12	ASHUTOSH KUMAR H.	IV/ECE	Web Development	Internz Learn
13	BALAJI M.	IV/ECE	Web Development	Internz Learn
14	BOOMIKA N.	IV/ECE	Web Development	Internz Learn
15	GANESH K.	IV/ECE	Web Development	Internz Learn
16	LALITHA V	IV/ECE	Web Development	Internz Learn
17	MALIN S.	IV/ECE	Web Development	Internz learn
18	MONISHA E	IV/ECE	Web Development	Internz learn
19	NEHEMYA V	IV/ECE	Web Development	Internz Learn
20	NARMATHA M	IV/ECE	Web Development	Internz learn
21	RAMYA U	IV/ECE	Web Development	Internz learn
22	SWETHA R.	IV/ECE	Web Development	Internz Learn
23	YUVAGIRI R	IV/ECE	Web Development	Internz Learn
24	RESHMI S	IV/ECE	Electronics Production	Kirti Labs
25	INDHUJA A	IV/ECE	Electronics Production	Kriti Labs
26	SAKTHI S	IV/ECE	Electronics Production	Kirti Labs
27	VIJAYA SRI Y.	IV/ECE	Electronics Production	Kirti Labs
28	VIMALA P	IV/ECE	Electronics Production	Kirti Labs

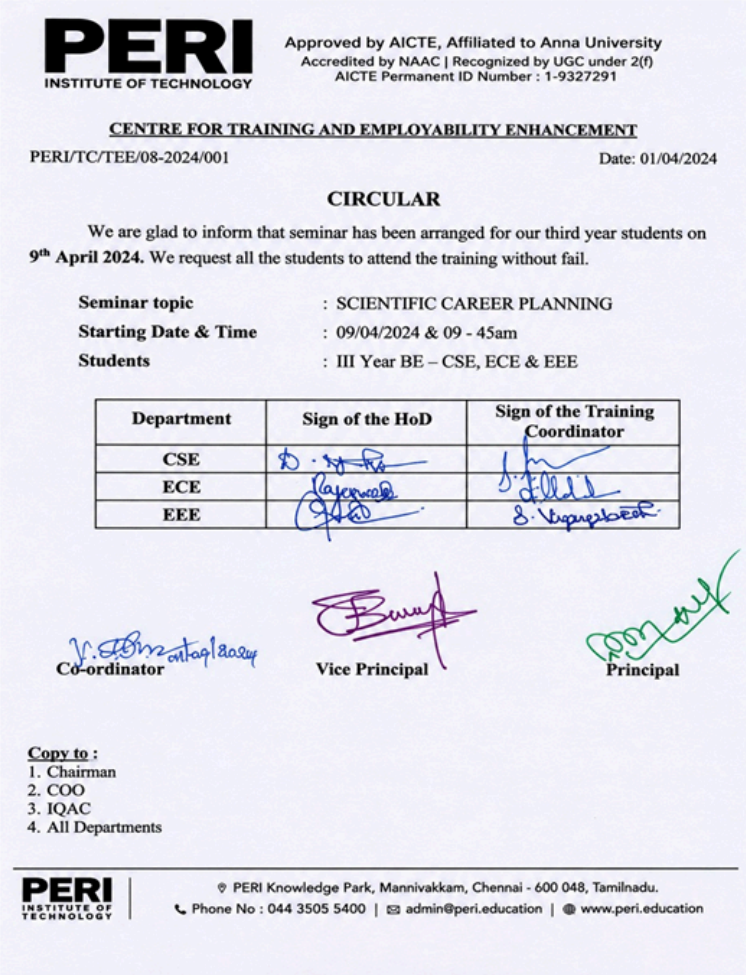
29	AVINASH S.	IV/ECE	NOC	Microsense Works
30	GOPAL E.	IV/ECE	NOC	Microsense Works
31	HARISH BABU H.	IV/ECE	NOC	Microsense Works
32	HEMANATHAN S	IV/ECE	NOC	Microsense networks
33	AVINASH S.	IV/ECE	NOC	Microsense networks
34	SUJITHA S	IV/ECE	NOC	Mr.Cooper Group
35	MALINI S	IV/ECE	Full Stack Web Developer	S – Logix
36	ISWARYA M	IV/ECE	Full Stack Web Developer	S – Logix
37	MINNALA P.	IV/ECE	Full Stack Web Developer	S – Logix
38	MONISHA A	IV/ECE	Full Stack Web Developer	S – Logix
39	ARAVIND V	IV/ECE	Web Development	Think Semi Infotech PvtLtd
40	ARAVINDHAN V	IV/ECE	Web Development	Think Semi Infotech PvtLtd
41	DIVYA DARSHAN S.	IV/ECE	Web Development	Think Semi Infotech PvtLtd
42	DIWAKAR J	IV/ECE	Web Development	Think Semi Infotech PvtLtd
43	KAMALESH S	IV/ECE	Web Development	Think Semi Infotech PvtLtd
44	KANAGAVEL M	IV/ECE	Web Development	Think Semi Infotech PvtLtd
45	LOGAPRASATH P.S	IV/ECE	Web Development	Think Semi Infotech PvtLtd
46	NETHAJI R	IV/ECE	Web Development	Think Semi Infotech PvtLtd
47	SHARUK E	IV/ECE	Web Development	Think Semi Infotech PvtLtd
48	SUDHAN M	IV/ECE	Web Development	Think Semi Infotech PvtLtd
49	INDHUMATHI N	IV/ECE	Web Development	Weekly Once
50	NOORUL FAMITHA A	IV/ECE	Web Development	Weekly Once
51	SWETHA T.	IV/ECE	Web Development	Weekly Once
52	ANEES FATHIMA M.	IV/ECE	Machine Learning	Retech solutions Pvt ltd
53	NAVIN RAJ KUMAR S	IV/ECE	Machine Learning	Infac India
54	MOHAMED HAFEEZ H.	IV/ECE	Web development & designing	Oasis Infobyte
55	VINOTH BHARATHI K	IV/ECE	Web development & designing	Oasis Infobyte
56	PRATHAP K	IV/ECE	Machine Learning	Intern Certify
57	SUJITHA S	IV/ECE	NOC	Mr.Cooper Group
58	PRISCILLA N	III/ECE	Industrial Based Embedded Systems with AI & IOT	The National Small Industries Corporation Limited

59	SWETHA P	III/ECE	Industrial Based Embedded Systems with AI & IOT	The National Small Industries Corporation Limited

60	DHANUSH P	II/ECE	Automation	Rambal Private Limited
61	PRAVIN RAJ D	II/ECE	Automation	Rambal Private Limited
62	NISHANTH LEELARAM	II/ECE	Automation	Rambal Private Limited
63	ABILASH KRISHNAN	II/ECE	Automation	Rambal Private Limited
64	RAJESRI	II/ECE	Quality checks and Testing	Just Connect
65	SOWMYA	II/ECE	Quality checks and Testing	Just Connect
66	SANGEETHA	II/ECE	Quality checks and Testing	Just Connect
67	MADHUMITHA	II/ECE	Quality checks and Testing	Just Connect
68	INDHUMATHI	II/ECE	Cloud Computing	NSIC-Technologies Service Pvt Ltd
69	SANTHOSH	II/ECE	Digital Technology	Movate Technologies Pvt Ltd
70	YESWANTHRAJA	II/ECE	Digital Technology	Movate Technologies Pvt Ltd
71	NITHIN L	II/ECE	Full Stack Developer	Eros Technologies
72	SIMSON A	III/ECE	Robotics	Evolve Robot Lab
73	RAGUL E	III/ECE	Robotics	Evolve Robot Lab

Table 3.4.4 Internship Training Details for AY 2023 - 2024

S.NO	NAME OF THE STUDENT	CLASS	TITLE	PLACE OF WORK
1	Nidheesh Raj S	IV/ECE	Project	Shiash Info Solutions Private Limited
2	Aravind Sankar P	IV/ECE	Project	Yani Techniologies
3	Balaji S	IV/ECE	Project	Yani Techniologies
4	Thavasiram C	IV/ECE	Project	Yani Techniologies
5	Gothala Vikash	IV/ECE	Project	Codebind Technologies
6	Nidheesh Raj S	IV/ECE	Project	Codebind Technologies
7	Saravana Kumar A	IV/ECE	Project	Codebind Technologies
8	Vidhya S	IV/ECE	Project	Codebind Technologies



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

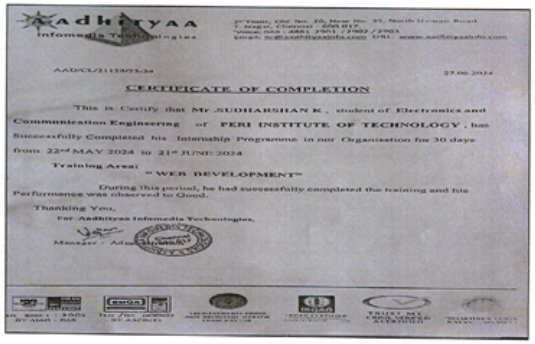
PERI INSTITUTE OF TECHNOLOGY | PERI Knowledge Park, Mannivakkam, Chennai - 600 048, Tamilnadu.
Phone No : 044 3505 5400 | admin@peri.education | www.peri.education

Figure 3.4.1 Circular for Scientific Career Planning Training

PERI INSTITUTE OF TECHNOLOGY

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

2.3. INTERNSHIP / INDUSTRIAL TRAINING



CERTIFICATE OF COMPLETION

"This is Certify that Mr.SUDHARSHAN K , student of Electronics and Communication Engineering of PERI INSTITUTE OF TECHNOLOGY , has Successfully Completed his Internship Programme in our Organization for 30 days from 22nd MAY 2024 to 21st JUNE 2024

Training Area: " WEB DEVELOPMENT"

During this period, he had successfully completed the training and his Performance was observed to Good.

Thanking You,

For Adhityaa Infomedia Technologies,

Figure 2.3(B): Internship certificate

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

Figure 3.4.2 Evidence for Internship training for AY 2024 – 2025



Figure 3.4.4 Sample Internship Presentation



PERI INSTITUTE OF TECHNOLOGY

Department of Electronics and Communication Engineering

INTERNSHIP REPORT

Web Development

Submitted by

SUDHARSHAN K.

Internship Organisation: Adhityaa Infomedia Technologies

Duration: 30 Days (22nd May 2024 – 21st June 2024)

PERI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Academic Year 2024–2025

ABSTRACT

Web development stands as a critical computational domain focused on building dynamic engineering solutions, cloud interfaces, and interactive systems. In the paradigm of Electronics and Communication Engineering, web interfaces serve as the essential presentation layer for hardware automation telemetry, remote embedded devices, IoT control portals, and signal visualization frameworks. This report presents a structured account of an intensive 11-day internship titled **"Web Development Foundations and Engineering Practices"** completed at AB Technologies. The report framework extensively covers client-side scripting architectures, server-side processing layers, full-stack database management solutions, and real-time interface engineering protocols.

TABLE OF CONTENTS

1. Introduction to Web Systems
2. Technical Objectives of the Internship
3. Architectural Overview & Protocols
4. Frontend Infrastructure (HTML5, CSS3, JavaScript)
5. Backend Frameworks & Execution Layers
6. Database Topologies & Information Systems
7. Skills, ECE Hardware Integration & Learning Outcomes
8. Operational Summary & Conclusion

Figure 3.4.5 Sample Internship report

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.

Table 3.5.1 Awarding Marks for Internal Assessment R2021

Review I	Review II	Review III	End Semester Examinations				
			Project Report		Viva-Voce Examination		
10	15	15	Internal	External	Internal	External	Supervisor
			10	10	10	20	20

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.

Table 3.5.2 Awarding Marks for Internal Assessment R2017

Review I	Review II	Review III	End Semester Examinations				
			Project Report		Viva-Voce Examination		
5	7.5	7.5	Internal	External	Internal	External	Supervisor
			15	15	15	20	15

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 defence their work. This component addresses PO1, PO3, PO9, and PO10.

Table 3.5.3 Rubrics for First Review

Particulars	Marks

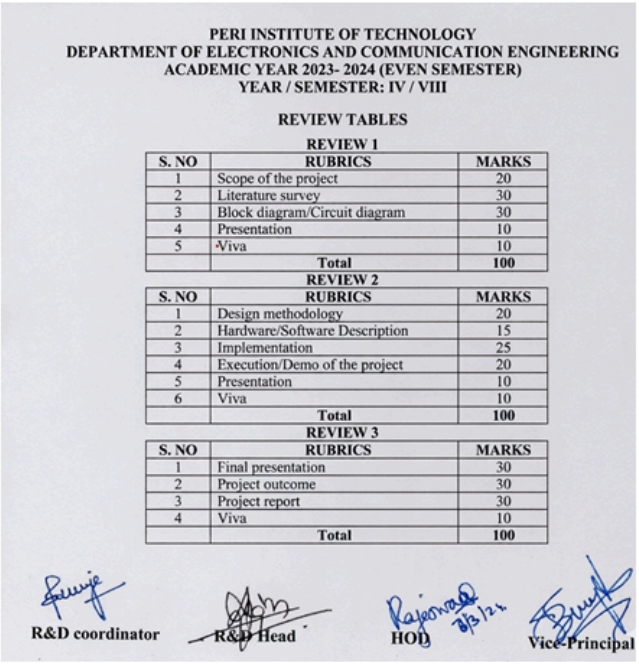
Scope of the Project	20
Literature Survey	30
Block Diagram	30
Presentation	10
Viva	10

Table 3.5.4 Rubrics for Second Review

Particulars	Marks
Design Methodology	20
Hardware / Software Description	15
Implementation	25
Execution / Demo	20
Presentation	10
Viva	10

Table 3.5.5: Rubrics for Third Review

Particulars	**Marks**
Final Presentation	30
Project Outcome	30
Project Report	30
Viva	10



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023- 2024 (EVEN SEMESTER)
YEAR / SEMESTER: IV / VIII

REVIEW TABLES

REVIEW 1

S. NO	RUBRICS	MARKS
1	Scope of the project	20
2	Literature survey	30
3	Block diagram/Circuit diagram	30
4	Presentation	10
5	Viva	10
	Total	**100**

REVIEW 2

S. NO	RUBRICS	MARKS
1	Design methodology	20
2	Hardware/Software Description	15
3	Implementation	25
4	Execution/Demo of the project	20
5	Presentation	10
6	Viva	10
	Total	**100**

REVIEW 3

S. NO	RUBRICS	MARKS
1	Final presentation	30
2	Project outcome	30
3	Project report	30
4	Viva	10
	Total	**100**

R&D coordinator R&D Head HOD Vice-Principal

Figure 3.5.1 Rubrics followed for Project Review

PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023- 2024 (EVEN SEMESTER)
Project Schedule

Zeroth Review:

Dates: 09/02/2024

Documents to be Submit:

- Batch List
- Novelty
- Project Title
- Description

First Review:

Dates: 12/03/2024

Documents to be Submit:

- Abstract
- Scope of the project
- Literature Review
- Block/Circuit diagram

Second Review:

Dates: 04/04/2024

Documents to be Submit:

- Design methodology
- Hardware/Software Description
- Implementation
- Execution/Demo of the project
- Presentation

Model Review:

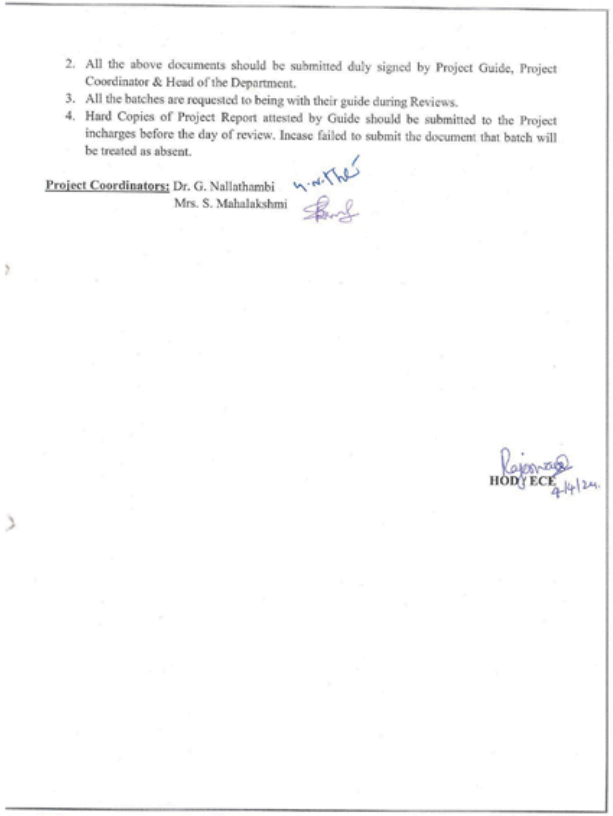
Dates: 25/04/2024

Documents to be Submit:

- Final Presentation
- Project output/Demo
- Project Report

Note:

1. Internal Marks purely based on your Presentation Skill, Innovation of the project, Review marks & Questionnaires.



2. All the above documents should be submitted duly signed by Project Guide, Project Coordinator & Head of the Department.
3. All the batches are requested to being with their guide during Reviews.
4. Hard Copies of Project Report attested by Guide should be submitted to the Project incharges before the day of review. Incase failed to submit the document that batch will be treated as absent.

Project Coordinators: Dr. G. Nallathambi
Mrs. S. Mahalakshmi

HOD / ECE 4/4/24.

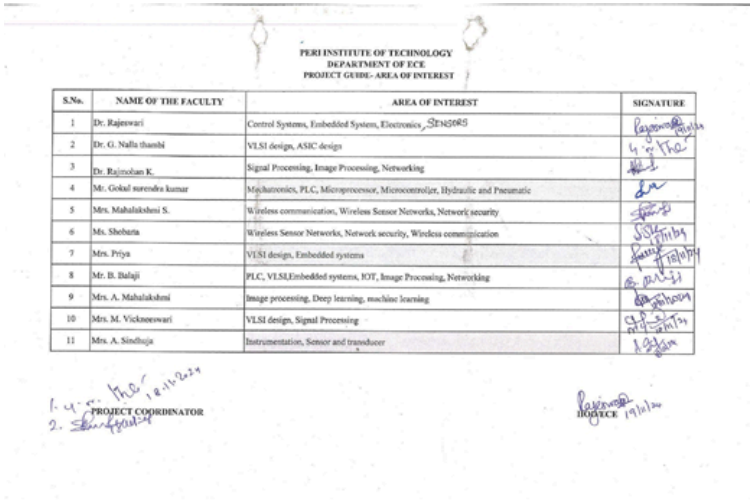
Figure 3.5.2 Project Schedule for AY 2023 - 2024

PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMUNICATION ENGINEERING
PROJECT DETAILS 2023-24

Name	Reg No.	Batch No.	Title	Classification of project	Relevance's to PO's and PSO's
Naveen P	411520106029	1	Enabled smart transformer monitoring & control system using embedded	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Srinivasan V	411520106041				
Boopalan S	411520106301				
Gowtham S	411520106017	2	Integration of Raspberry Pi Pico in home automation: An embedded system approach	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Indujaa R	411520106019				
Pradeep Kumar A	411520106032				
Aravinthsankar P	411520106002	3	Simplifying Farmer to Client online purchasing using web application (Uzhavar-Nanban)	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Balaji S	411520106006				
Thavasiram C	411520106044				
Balakrishnan V	411520106007	4	Railway inspecion system based on IOT	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Jayakumar M	411520106021				
Uppili R	411520106047				
Sanmugapriya R	411520106035	5	Text to braile converting communication device for the visual impaird persons	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Shalini N	411520106037				
Susmitha R	411520106042				
Sivaprakash A	411520106701				
Ashwin B	411520106005	6	Real time data communication through LIFI in hospital environment	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Jayasakthi OM	411520106023				
Manikandan A	411520106027				
Dinesh V	411520106048	7	Triguard advanced multi verification system for bank locker security	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Vidhya S	411520106049				
Saravanakumar A	411520106305				
Divivesh N	411520106012	8	Developing microcontroller driven RSSI controlled prisoner management system	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Harish Balaji Kanna	411520106018				
Nidheeshraj S	411520106030				
Vasanthi D	411520106010	9	Smart Hydroponics system with Real-Time Monitoring and Control System	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Vikash G	411520106016				
Pradeep R	411520106032				
Charumathi S	411520106009	10	Government support for direct sales from field to government	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Gomathi N	411520106015				
Umamageshwari U	411520106046				
Siddique A	411520106038				
Janaki D	411520106020	11	Arduino Based Coal Mine Safety Monitoring and Alerting System for Workers	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Sanjay R	411520106304				
Swetha R	411520106307				
Dhamodaran K	411520106011	12	Soldier health monitoring and tracking system using IOT & LORAWAN	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Maheshbabu K	411520106024				
Tholkappiyan B	411520106045				
Abinaya M	411520106001	13	Design of hybrid audio transmission using LIFI	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Kaviya A	411520106026				
Thatchayani V	411520106043				
Chandanapriya RH	411520106008	14	Solar floor cleaner robot	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Karthik N	411520106025				
Prathabaruthiran R	411520106033				
Arulmani K	411520106003	15	Efficient patient schedualing OP sheet and slot booking solution for hospitals	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Arunraj R	411520106004				
Sivaprakash S	411520106039				
Sabarinathan V	411520106034	16	Improving aqualture efficiency though an intergrated monitoring	Application	PO1,PO2, PO3, PO5, PO6,PO7, PO9,PO10,PO11,PO12,PSO2, PSO3
Sarmitha R	411520106036				
Vignesh P	411520106308				

HOD/ECE

Figure 3.5.3 Linkage of PO's and PSO's for the Projects



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ECE
PROJECT GUIDE- AREA OF INTEREST

S.No.	NAME OF THE FACULTY	AREA OF INTEREST	SIGNATURE
1	Dr. Rajeswari	Control Systems, Embedded System, Electronics, SENSORS	
2	Dr. G. Nalla thambi	VLSI design, ASIC design	
3	Dr. Rajmohan K.	Signal Processing, Image Processing, Networking	
4	Mr. Gokul surendra kumar	Mechatronics, PLC, Microprocessor, Microcontroller, Hydraulic and Pneumatic	
5	Mrs. Mahalakshmi S.	Wireless communication, Wireless Sensor Networks, Network security	
6	Ms. Shebaria	Wireless Sensor Networks, Network security, Wireless communication	
7	Mrs. Priya	VLSI design, Embedded systems	
8	Mr. B. Balaji	PLC, VLSI,Embedded systems, IOT, Image Processing, Networking	
9	Mrs. A. Mahalakshmi	Image processing, Deep learning, machine learning	
10	Mrs. M. Vicknesswari	VLSI design, Signal Processing	
11	Mrs. A. Sindhuja	Instrumentation, Sensor and transducer	

PROJECT COORDINATOR

HOD/ECE

Figure 3.5.4 Sample of Project Guide Area of Interest

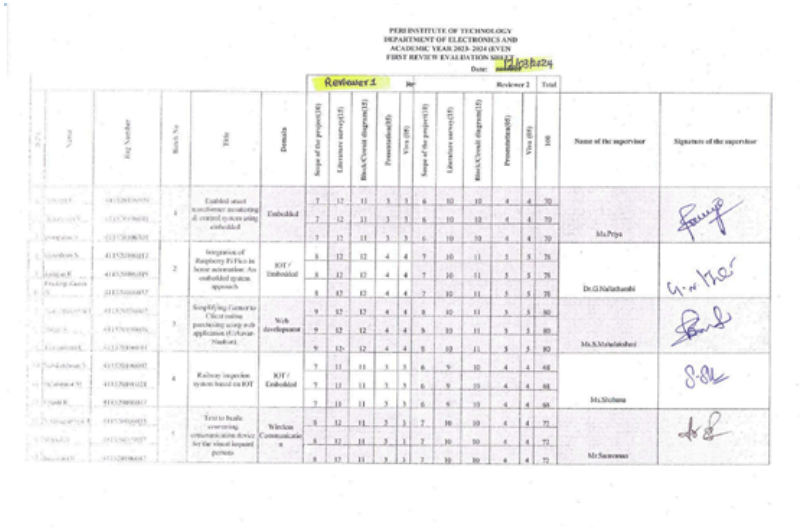


PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023- 2024 (EVEN SEMESTER)
IV YEAR(VIII SEMESTER)
PROJECT TITLE CONFIRMATION

S No	Name	Reg Number	Batch No	Title	Domain	SUPERVISOR	SIGNATURE
1	Naveen P	411520106029	1	Enabled smart transformer monitoring & control system using embedded	Embedded	Ms.Priya	
2	Srinivasan V	411520106041					
3	Boopalan S	411520106301					
4	Gowtham S	411520106017	2	Integration of Raspberry Pi Pico in home automation: An embedded system approach	IOT / Embedded	Dr.G.Nallathambi	
5	Indujaa R	411520106019					
6	Pradeep Kumar A	411520106032					
7	Aravinthsankar P	411520106002	3	Simplifying Farmer to Client online purchasing using web application (Uzhavar-Nanban)	Web development	Ms.S.Mahalakshmi	
8	Balaji S	411520106006					
9	Thavasiram C	411520106044					
10	Balakrishnan V	411520106007	4	Railway inspecion system based on IOT	IOT / Embedded	Ms.Shobana	
11	Jayakumar M	411520106021					
12	Uppili R	411520106047					
13	Sanmugapriya R	411520106035	5	Text to braile converting communication device for the visual impaird persons	Wireless Communication	Mr.Saravanan	
14	Shalini N	411520106037					
15	Sumitha R	411520106042					
16	Ashwin B	411520106005	6	Real time data communication through LIFI in hospital environment	IOT / Embedded	Ms.Priya	
17	Jayasakthi OM	411520106023					
18	Manikandan A	411520106027					
19	Dinesh V	411520106048	7	Triguard advanced multi verification system for bank locker security	IOT / Embedded	Ms.Shobana	
20	Vidhya S	411520106049					
21	Saravanakumar A	411520106305					
22	Divitesh N	411520106012	8	Developing microcontroller driven RSSI controlled prisoner management system	Embedded(RSSI)	Ms.S.Mahalakshmi	
23	Harish Balaji Kanna	411520106018					
24	Nigheeshraj S	411520106030					
25	Vasanthi D	411520106010	9	Smart Hydroponics system with Real-Time Monitoring and Control System	Wireless Communication / Image processing	Mr.Narasimman	
26	Vikash G	411520106016					
27	Pradeep R	411520106032					
28	Charumathi S	411520106009	10	Government support for direct sales from field to government	IOT / Embedded	Mr.Gokul	
29	Gomathi N	411520106015					
30	Umamageshwari U	411520106046					
31	Janaki D	411520106020	11	Arduino Based Coal Mine Safety Monitoring and Alerting System for Workers	Embedded	Mr.B.Balaji	
32	Sanjay R	411520106304					
33	Swetha R	411520106307					
34	Dhamodaran K	411520106011	12	Soldier health monitoring and tracking system using IOT & LORAWAN	IOT / Embedded	Mr.Gokul	
35	Maheshbabu K	411520106024					
36	Thothappiyan B	411520106045					
37	Abisaya M	411520106001	13	Design of hybrid audio transmission using LIFI	Embedded / Lucent	Dr.G.Nallathambi	
38	Kaviya K	411520106026					
39	Thirubayani V	411520106043					
40	Chandanapriya RH	411520106008	14	Solar floor cleaner robot	Robotics	Mr.Narasimman	
41	Karthik N	411520106025					
42	Prathubaiyathoran R	411520106033					
43	Anjimani K	411520106003	15	Efficient patient schedualing OP sheet and slot booking solution for hospitals	Embedded / RFID	Dr.G.Nallathambi	
44	Azuraj R	411520106004					
45	Sivaprakash S	411520106039					
46	Saharinathan V	411520106034	16	Improving aquature efficiency though an intergrated monitoring	IOT	Mr.B.Balaji	
47	Sarmitha R	411520106036					
48	Vignesh P	411520106308					
49	Siddiquar A	411520106038	17	Safeguarding lives on the road pre-venting accident through strict road rule enforcement	RSSI	Dr.G.Nallathambi	
50	Magimairaj G	411520106302					
51	Sivaprakash A	411520106040					

PROJECT CO-ORDINATOR
Dr. Nallathambi
Mrs. S. MAHALAKSHMI

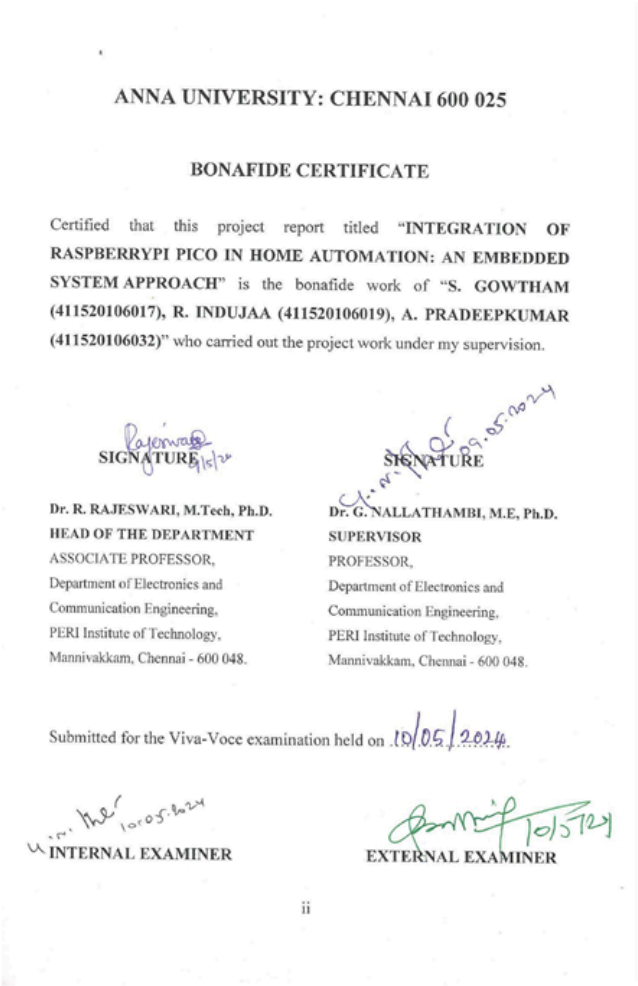
Figure 3.5.5 List of Projects carried out during AY 2023 - 2024



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND
ACADEMIC YEAR 2023- 2024 (EVEN
FIRST REVIEW EVALUATION
Date:

S.No	Team No	Reg Number	Batch No	Title	Domain	Reviewer 1					Reviewer 2					Total	Name of the supervisor	Signature of the supervisor
						Scope of the project(10)	Literature survey(15)	Block/Circuit diagram(15)	Presentation(05)	Viva (05)	Scope of the project(10)	Literature survey(15)	Block/Circuit diagram(15)	Presentation(05)	Viva (05)	100		
			1	Enabled smart transformer monitoring & control system using embedded	Embedded	7	12	11	3	3	6	10	10	4	4	70	Ms.Priya	
						7	12	11	3	3	6	10	10	4	4	70		
						7	12	11	3	3	6	10	10	4	4	70		
			2	Integration of Raspberry Pi/Pico in home automation: An embedded system approach	IOT / Embedded	8	12	12	4	4	7	10	11	5	5	78	Dr.G.Nallathambi	
						8	12	12	4	4	7	10	11	5	5	78		
						8	12	12	4	4	7	10	11	5	5	78		
			3	Simplifying Farmer to Officer online purchasing using web application (Civil,Aviat-Nadu-ori)	Web development	9	12	12	4	4	9	10	11	5	5	80	Ms.S.Malalakshmi	
						9	12	12	4	4	9	10	11	5	5	80		
						9	12	12	4	4	9	10	11	5	5	80		
			4	Railway ingestion system based on IOT	IOT / Embedded	7	11	11	3	3	6	9	10	4	4	68		
						7	12	11	3	3	6	9	10	4	4	68	Ms.Shobana	
						7	12	11	3	3	6	9	10	4	4	68		
			5	Text to braille converting communication device for the visual impaired persons	Wireless Communication	8	12	11	3	3	7	10	10	4	4	72		
						8	12	11	3	3	7	10	10	4	4	72	Mr.Saravanan	
						8	12	11	3	3	7	10	10	4	4	72		

Figure 3.5.6 Evaluation of Project Work AY 2023 – 2024



ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report titled **"INTEGRATION OF RASPBERRYPI PICO IN HOME AUTOMATION: AN EMBEDDED SYSTEM APPROACH"** is the bonafide work of **"S. GOWTHAM (411520106017), R. INDUJAA (411520106019), A. PRADEEPKUMAR (411520106032)"** who carried out the project work under my supervision.

SIGNATURE

Dr. R. RAJESWARI, M.Tech, Ph.D.
HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSOR,
Department of Electronics and
Communication Engineering,
PERI Institute of Technology,
Mannivakkam, Chennai - 600 048.

SIGNATURE

Dr. G. NALLATHAMBI, M.E, Ph.D.
SUPERVISOR
PROFESSOR,
Department of Electronics and
Communication Engineering,
PERI Institute of Technology,
Mannivakkam, Chennai - 600 048.

Submitted for the Viva-Voce examination held on 10/05/2024.

INTERNAL EXAMINER

EXTERNAL EXAMINER

ii

Figure 3.5.7 Sample Project Work AY 2023 - 2024

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

Institute Marks : 10.00

During **projects and industrial training** in both **ECE and IT domains**, students carried out activities that contributed to these SDGs by **enhancing technical skills, applying innovative solutions, improving employability, and using resources efficiently.**

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:

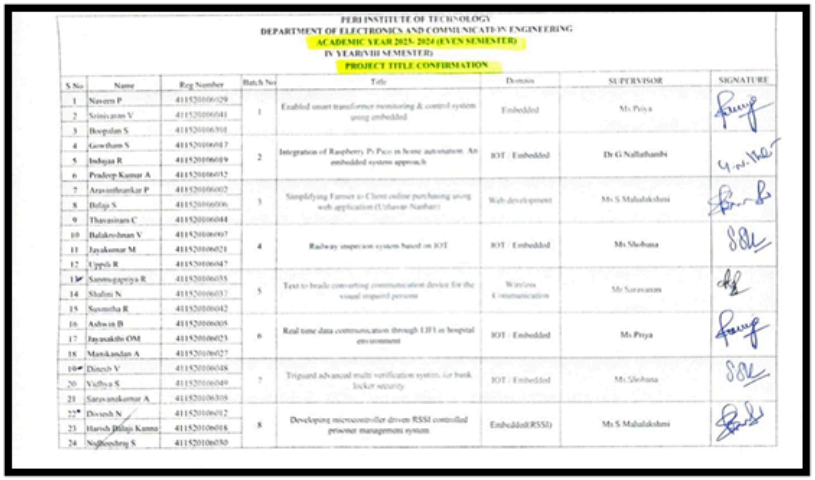
- **SDG 4 – Quality Education** → learning new skills, technical knowledge.
- **SDG 8 – Decent Work & Economic Growth** → skill development, employability.
- **SDG 9 – Industry, Innovation & Infrastructure** → innovation, technology, embedded systems, IoT.

SDG 12 – Responsible Consumption & Production → digitalization, resource efficiency, less paper.

Table 3.6.1 Details of Student Projects and Corresponding SDG Goals

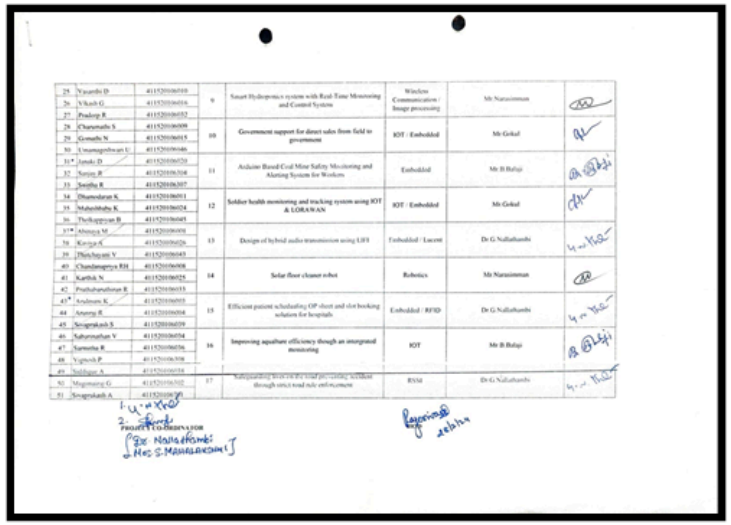
S.NO	REGISTER NUMBER	NAME OF THE STUDENT	TITLE OF PROJECT	GUIDE NAME	SDG GOAL COVERED
1	411520106017 411520106019 411520106032	Gowtham S Indujaa R Pradeep Kumar A	Integration of Raspberry Pi Pico in home automation: An embedded system approach	Dr. G. Nallathambi	4,8,9,11

2	411520106007 411520106021 411520106047	Balakrishnan V Jayakumar M Uppili R	Railway inspection system based on IoT	Ms. S. Shobana	4,9,11
3	411520106011 411520106024 411520106045	Dhamodaran K Maheshbabu K Tholkappiyan B	Soldier Health Monitoring and Tracking System Using IoT & LORAWAN	Mr. G. Gokul Surendra Kumar	3,4,8,9,
4	411520106008 411520106025 411520106033	Chandanapriya RH Karthik N Prathabaruthiran R	Solar Floor Cleaner Robot	Mr. Narasiman	4,7,12
5	411520106034 411520106036 411520106308	Sabarinathan V Sarmitha R Vignesh P	Improving aqualture efficiency though an integrated monitoring	Mr. B. Balaji	2,7,8, 12
6	411520106009 411520106015 411520106046	Charumathi S Gomathi N Umamageshwari U	Government support for direct sales from field to government	Mr. G. Gokul Surendra Kumar	1,2,8



PERI INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023- 2024 (EVEN SEMESTER)
IV YEAR/VIII SEMESTER)
PROJECT TITLE CONFIRMATION

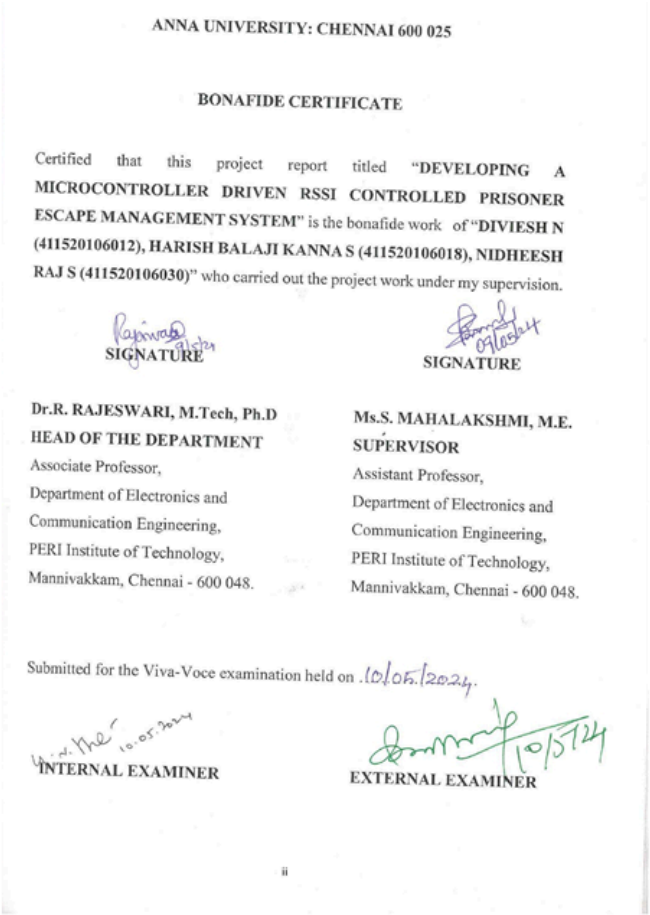
S.No	Name	Reg Number	Batch No	Title	Domain	SUPERVISOR	SIGNATURE
1	Naveen P	411520106029	1	Enabled smart transformer monitoring & control system using embedded	Embedded	Ms Priya	
2	Srinivasan V	411520106041					
3	Boopalan S	411520106301					
4	Gowtham S	411520106017	2	Integration of Raspberry Pi Pico in home automation: An embedded systems approach	IOT / Embedded	Dr G Nallathambi	
5	Indujaa R	411520106039					
6	Pradeep Kumar A	411520106032					
7	Aravinthasekar P	411520106002	3	Simplifying Farmer to Client online purchasing using web application (Uzhavar Nanban)	Web development	Ms S Mahalakshmi	
8	Balaji S	411520106006					
9	Thavasiram C	411520106044					
10	Balakrishnan V	411520106007	4	Railway inspection system based on IOT	IOT / Embedded	Ms Shobana	
11	Jayakumar M	411520106021					
12	Uppili R	411520106047					
13	Sanmugapriya R	411520106035	5	Text to braile converting communication device for the visual impaired persons	Wireless Communication	Mr Saravanan	
14	Shalini N	411520106037					
15	Susmitha R	411520106042					
16	Ashwin B	411520106005	6	Real time data communication through LIFI in hospital environment	IOT / Embedded	Ms Priya	
17	Jayanakthi OM	411520106023					
18	Manikandan A	411520106027					
19	Dinesh V	411520106048	7	Triguard advanced multi verification system for bank locker security	IOT / Embedded	Ms Shobana	
20	Vidhya S	411520106049					
21	Saravanakumar A	411520106305					
22	Dinesh N	411520106012	8	Developing microcontroller driven RSSI controlled prisoner managements system	Embedded(RSSI)	Ms S Mahalakshmi	
23	Harish Balaji Kanna	411520106018					
24	Nagheeshraj S	411520106030					



25	Vasanthi D	411520106010	9	Smart Hydroponics system with Real-Time Monitoring and Control System	Wireless Communication / Image processing	Mr Narasimman
26	Vikash G	411520106016				
27	Pradeep R	411520106032				
28	Charumathi S	411520106008	10	Government support for direct sales from field to government	IOT / Embedded	Mr Gokul
29	Gomathi N	411520106015				
30	Umamageshwari U	411520106046				
31*	Janaki D	411520106020	11	Arduino Based Coal Mine Safety Monitoring and Alerting System for Workers	Embedded	Mr B Balaji
32	Sanjay R	411520106304				
33	Swetha R	411520106307				
34	Dhanedaran K	411520106011	12	Soldier health monitoring and tracking system using IOT & LORAWAN	IOT / Embedded	Mr Gokul
35	Maheshbabu K	411520106024				
36	Thrilkapriyan B	411520106045				
37*	Abinaya M	411520106001	13	Design of hybrid audio transmission using LIFI	Embedded / Lucent	Dr G Nallathambi
38	Kaviya G	411520106026				
39	Thirichyani V	411520106043				
40	Chandanapriya RH	411520106008	14	Solar floor cleaner robot	Robotics	Mr Narasimman
41	Karthik N	411520106025				
42	Prathaharathoran R	411520106033				
43*	Arulmani K	411520106003	15	Efficient patient scheduling OP sheet and slot booking solution for hospitals	Embedded / RFID	Dr G Nallathambi
44	Anjaraj R	411520106004				
45	Sivaprakash S	411520106039				
46	Sabarinathan V	411520106034	16	Improving aquafarm efficiency though an intergrated monitoring	IOT	Mr B Balaji
47	Sumetha R	411520106036				
48	Vignesh P	411520106308				
49	Siddiqui A	411520106038				
50	Magimaraj G	411520106302	17	Safeguarding from on the road pre-existing accident through strict road rule enforcement	RSSI	Dr G Nallathambi
51	Sivaprakash A	411520106040				

PROJECT COORDINATOR

Figure 3.6.1 List of Projects carried out during AY 2023 – 2024



ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report titled "**DEVELOPING A MICROCONTROLLER DRIVEN RSSI CONTROLLED PRISONER ESCAPE MANAGEMENT SYSTEM**" is the bonafide work of "**DIVIESH N (411520106012), HARISH BALAJI KANNA S (411520106018), NIDHEESH RAJ S (411520106030)**" who carried out the project work under my supervision.

SIGNATURE

Dr.R. RAJESWARI, M.Tech, Ph.D
HEAD OF THE DEPARTMENT
Associate Professor,
Department of Electronics and
Communication Engineering,
PERI Institute of Technology,
Mannivakkam, Chennai - 600 048.

SIGNATURE

Ms.S. MAHALAKSHMI, M.E.
SUPERVISOR
Assistant Professor,
Department of Electronics and
Communication Engineering,
PERI Institute of Technology,
Mannivakkam, Chennai - 600 048.

Submitted for the Viva-Voce examination held on 10/05/2024.

INTERNAL EXAMINER

EXTERNAL EXAMINER

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Figure 3.6.2 Sample Project Work AY 2023 - 2024

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 Describe the Assessment Tools and Processes Used to Gather the Data for the Evaluation of Course Outcome (05)

3.7.1.1 Assessment Tools and Processes Used to Gather Data for the Evaluation of Course Outcomes (05 Marks)

A. List of Assessment Tools and Processes (02 Marks)

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.

1.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

1.b) Indirect Assessment Tools

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

2. Assessment Processes

The course-handling faculty member identifies the 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.

B. Quality and Relevance of Assessment Tools/Processes (03 Marks)

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.

4.1 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.

4.2 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.3.2.1b.

Table B.3.2.1b: 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	✓	✓	✓	✓	✓

Note: The above table is illustrative of the mapping format. The entries must be verified against the actual question-to-CO mapping records for the respective course. A CO should be marked only when the corresponding assessment component evaluates that CO.

4.3 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.

4.4 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 B.3.2.1b.

Table B.3.2.1b: 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	✓	✓	✓	✓	✓

4.5 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.

4.6 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.

4.7. 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.

4.8 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.

4.9 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.

4.10 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 80%	3
Greater than or equal to 70%	2
Greater than or equal to 60%	1
Greater than 0% and up to 59%	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.

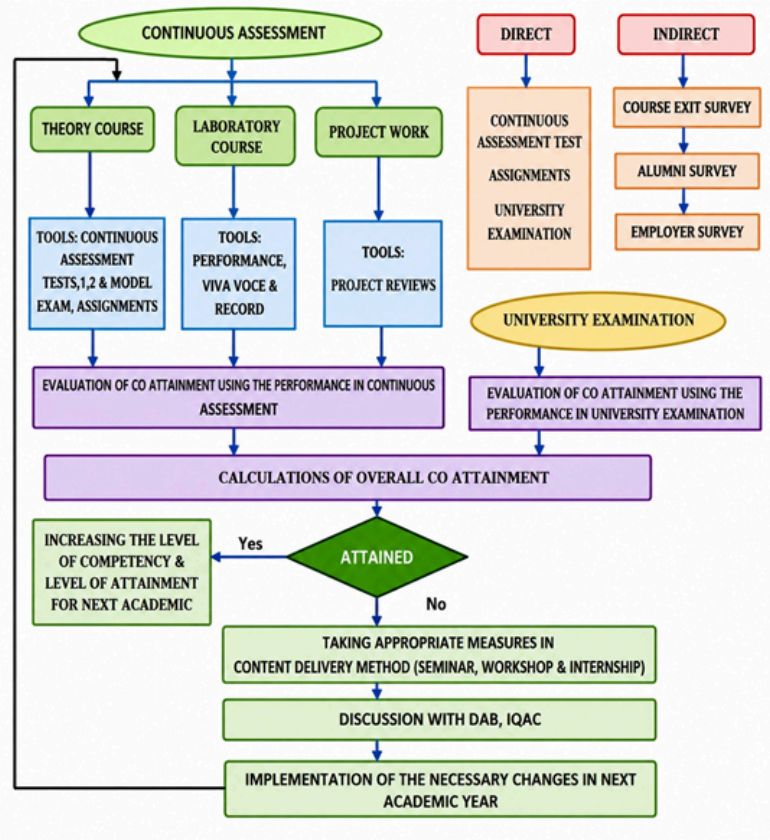


Figure 3.7.1 Flowchart for CO Attainment

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

Institute Marks : 20.00

2021-2025 Batch						
S.No	**Course Index**	**Course Code & Course Name**	**Direct Attainment**	**Indirect Attainment**	**Attainment Status**	**Level of Attainment (0-3)**
2021-2022 Odd Semester I Semester						
1.	C101	HS3152 Professional English –I	70.4	20	90.4	3
2.	C102	MA3151 Matrices and Calculus	62.4	20	82.4	3
3.	C103	PH3151 Engineering Physics	57.6	20	77.6	2
4.	C104	CY3151 Engineering Chemistry	67.2	20	87.2	3
5.	C105	GE3151 Problem Solving and Python Programming	68.8	20	88.8	3
6.	C106	BS3171 Physics and Chemistry Laboratory	80	20	100	3
7.	C107	GE3171 Problem Solving and Python Programming Laboratory	80	20	100	3
8.	C108	GE3172 English Laboratory	80	20	100	3
2021-2022 Even Semester II Semester						
9.	C201	HS3252 Professional English–II	74.4	20	94.4	3
10.	C202	MA3251 Statistics and Numerical Methods	56	20	76	3
11.	C203	PH3254 Physics for Electronics Engineering	54.4	20	74.4	2

12.	C204	BE3254 Electrical and Instrumentation Engineering	43.2	20	63.2	1
13.	C205	GE3251 Engineering Graphics	70.4	20	90.4	3
14.	C206	EC3251 Circuit Analysis	48	20	68	1
15.	C207	GE3271 Engineering Practices Laboratory	80	20	100	3
16.	C208	EC3271 Circuits Analysis Laboratory	80	20	100	3
17.	C209	GE3272 Communication Laboratory / Foreign Language	72	20	92	3
2022-2023 Odd Semester III Semester						
18.	C301	MA3355 Random Process and Linear Algebra	5.512	20	25.512	0
19.	C302	CS3353 C Programming and Data Structures	61.936	20	81.936	2
20.	C303	EC3354 Signals and Systems	60.688	20	80.688	2
21.	C304	EC3353 Electronic Devices and Circuits	30.968	20	50.968	0
22.	C305	EC3351 Control Systems	60.896	20	80.896	2
23.	C306	EC3352 Digital Systems Design	72.096	20	92.096	3
24.	C307	EC3361 Electronic Devices and Circuits Laboratory	80	20	100	3

25.	C308	CS3362 C Programming and Data Structures Laboratory	80	20	100	3
26.	C309	GE3361 Professional Development	80	20	100	3
2022-2023 Even Semester IV Semester						
27.	C401	EC3452 Electromagnetic Fields	23.856	20	43.856	0
28.	C402	EC3401 Networks and Security	68.568	20	88.568	3
29.	C403	EC3451 Linear Integrated Circuits	36.488	20	56.488	0
30.	C404	EC3492 Digital Signal Processing	70	20	90	3
31.	C405	EC3491 Communication Systems	55.712	20	75.812	2
32.	C406	GE3451 Environmental Sciences and Sustainability	57.52	20	77.52	2
33.	C407	EC3461 Communication Systems Laboratory	78.816	20	98.816	3
34.	C408	EC3462 Linear Integrated Circuits Laboratory	78.6	20	98.6	3
2023-2024 Odd Semester V Semester						
35.	C501	EC3501 Wireless Communication	75.68	20	95.68	3
36.	C502	EC3552 VLSI and Chip Design	40.72	20	60.72	1
37.	C503	EC3551 Transmission lines and RF Systems	48	20	68	1
38.	C504	CEC345 Optical Communication and Networks	53.36	20	73.36	1
39.	C505	CEC352 Satellite Communication	51.84	20	71.84	1

40.	C506	CEC366 Image Processing	42.96	20	62.96	1
41.	C507	EC3561 VLSI Laboratory	80	20	100	3
2023-2024 Even Semester VI Semester						
42.	C601	ET3491 Embedded Systems and IOT Design	80	20	100	3
43.	C602	CS3491 Artificial Intelligence and Machine Learning	72.304	20	92.304	3
44.	C603	OEE351 Renewable Energy System	76.96	20	96.96	3
45.	C604	CEC333 Advanced Wireless Communication Techniques	72.32	20	92.32	3
46.	C605	CEC365 Wireless Sensor Network Design	72.16	20	92.16	3
2024-2025 Odd Semester VII Semester						
47.	C701	GE3791 Human Values and Ethics	75.44	20	95.44	3
48.	C702	GE3751 Principles of Management	68.36	20	88.36	3
49.	C703	AI3021 IT in Agricultural System	71.44	20	91.44	3
50.	C704	OMR351 Mechatronics	75.6	20	95.6	3
51.	C705	EC3711 Summer internship	80	20	100	3
2024-2025 Even Semester VIII Semester						
52.	C409	EC3811 Project Work / Internship	80	20	100	3

Batch: 2020-2024

S.No	Course Index	Course Code & Course Name	Direct Attainment	Indirect Attainment	Attainment Status	Level of Attainment (0-3)
2020-2021 Odd Semester I Semester						
1.	C101	**HS8151** Communicative English	57.6	20	77.6	2
2.	C102	**MA8151** Engineering Mathematics-I	80	20	100	3
3.	C103	**PH8151** Engineering Physics	52.8	20	72.8	2
4.	C104	**CY8151** Engineering Chemistry	75.52	20	95.52	3
5.	C105	**GE8151** Problem Solving and Python Programming	71.2	20	91.2	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.	C201	**HS8251** Technical English	75.52	20	95.52	3

10.	C202	**MA8251** Engineering Mathematics–II	75.52	20	95.52	3
11.	C203	**PH8253** Physics for Electronics Engineering	75.52	20	95.52	3
12.	C204	**BE8254** Basic Electrical and Instrumentation Engineering	75.52	20	95.52	3
13.	C205	**EE8251** Circuit Analysis	75.52	20	95.52	3
14.	C206	**EC8252** Electron Devices	75.52	20	95.52	3
15.	C207	**GE8261** Engineering Practices Laboratory	80	20	100	3
16.	C208	**EC8261** Circuits and Devices Laboratory	80	20	100	3
2021-2022 Odd Semester III Semester						
17.	C301	**MA8352** Linear Algebra and Partial Differential Equations	80	20	100	3
18.	C302	**EC8393** Fundamentals of Data Structures In C	78.36	20	98.36	3
19.	C303	**EC8351** Electronic Circuits - I	80	20	100	3
20.	C304	**EC8352** Signals and Systems	80	20	100	3
21.	C305	**EC8392** Digital Electronics	80	20	100	3
22.	C306	**EC8391** Control Systems Engineering	80	20	100	3
23.	C307	**EC8381** Fundamentals of Data Structures in C Laboratory	80	20	100	3
24.	C308	**EC8361** Analog and Digital Circuits Laboratory	80	20	100	3

25.	C309	**HS8381** Interpersonal Skills/Listening & Speaking	80	20	100	3
2021-2022 Even Semester IV Semester						
26.	C401	**MA8451** Probability and Random Processes	29.38	20	49.38	0
27.	C402	**EC8452** Electronic Circuits II	60.4	20	80.4	3
28.	C403	**EC8491** Communication Theory	62.04	20	82.04	3
29.	C404	**EC8451** Electromagnetic Fields	70.2	20	90.2	3
30.	C405	**EC8453** Linear Integrated Circuits	57.14	20	77.14	2
31.	C406	**GE8291** Environmental Science and Engineering	45.71	20	65.71	1
32.	C407	**EC8461** Circuits Design and Simulation Laboratory	80	20	100	3
33.	C408	**EC8462** Linear Integrated Circuits Laboratory	80	20	100	3
2022-2023 Odd Semester V Semester						
34.	C501	**EC8501** Digital Communication	80	20	100	3
35.	C502	**EC8553** Discrete-Time Signal Processing	80	20	100	3
36.	C503	**EC8552** Computer Architecture and Organization	76.8	20	96.8	3
37.	C504	**EC8551** Communication Networks	80	20	100	3
38.	C505	**GE8077** Total Quality Management	76.8	20	96.8	3
39.	C506	**ORO551** Renewable Energy Sources	80	20	100	3

40.	C507	**EC8562** Digital Signal Processing Laboratory	80	20	100	3
41.	C508	**EC8561** Communication Systems Laboratory	80	20	100	3
42.	C509	**EC8563** Communication Networks Laboratory	80	20	100	3
2022-2023 Even Semester VI Semester						
43.	C601	**EC8691** Microprocessors and Microcontrollers	70.4	20	90.4	3
44.	C602	**EC8095** VLSI Design	51.2	20	71.2	2
45.	C603	**EC8652** Wireless Communication	76.66	20	96.66	3
46.	C604	**MG8591** Principles of Management	52.8	20	72.8	2
47.	C605	**EC8651** Transmission Lines and RF Systems	62.04	20	82.04	3
48.	C606	**EC8004** Wireless Networks	67.2	20	87.2	3
49.	C607	**EC8681** Microprocessors and Microcontrollers Laboratory	80	20	100	3
50.	C608	**EC8661** VLSI Design Laboratory	80	20	100	3
51.	C609	**EC8611** Technical Seminar	80	20	100	3
52.	C610	**HS8581** Professional Communication	80	20	100	3
2023-2024 Odd Semester VII Semester						
53.	C701	**EC8751** Optical Communication	68.8	20	88.8	3
54.	C702	**EC8791** Embedded and Real Time Systems	45.712	20	65.712	1

55.	C703	EC8702 Ad hoc and Wireless Sensor Networks	62.4	20	82.4	3
56.	C704	**EC8701** Antennas and Microwave Engineering	51.2	20	71.2	2
57.	C705	**OBM752** Hospitality Management	76.8	20	96.8	3
58	C706	**EC8711** Embedded Laboratory	80	20	100	3
59	C707	**EC8761** Advanced Communication Laboratory	80	20	100	3
2023-2024 Even Semester VIII Semester						
60.	C801	**GE8076** Professional Ethics in Engineering	66.664	20	86.664	3
61.	C802	**EC8094** Satellite Communication	65.304	20	85.304	3
62	C803	**EC8811** Project Work	80	20	100	3

Batch: 2019-2023						
S.No	**Course Index**	**Course Code & Course Name**	**Direct Attainment**	**Indirect Attainment**	**Attainment Status**	**Level of Attainment (0-3)**
2019-2020 Odd Semester I Semester						
1.	C101	**HS8151** Communicative English	76.8	20	96.8	3
2.	C102	**MA8151** Engineering Mathematics-I	59.2	20	79.2	2
3.	C103	**PH8151** Engineering Physics	59.2	20	79.2	2
4.	C104	**CY8151** Engineering Chemistry	68	20	88	3

5.	C105	**GE8151** Problem Solving and Python Programming	74.4	20	94.4	3
6.	C106	**GE8152** Engineering Graphics	50.4	20	70.4	2
7.	C107	**GE8161** Problem Solving and Python Programming Laboratory	80	20	100	3
8.	C108	**BS8161** Physics and Chemistry Laboratory	76.8	20	96.8	3
2019-2020 Even Semester II Semester						
9.	C201	**HS8251** Technical English	77.328	20	97.328	3
10.	C202	**MA8251** Engineering Mathematics–II	61.328	20	81.328	3
11.	C203	**PH8253** Physics for Electronics Engineering	69.328	20	89.328	3
12.	C204	**BE8254** Basic Electrical and Instrumentation Engineering	66.664	20	86.664	3
13.	C205	**EC 8251** Circuit Analysis	56	20	76	2
14.	C206	**EC 8252** Electronic devices	58.928	20	78.928	2
15.	C207	**EC 8261** Circuits and Devices Laboratory	80	20	100	3
16.	C208	**GE 8261** Engineering practices laboratory	80	20	100	3
2020-2021 Odd Semester III Semester						
17.	C301	**MA8352** Linear Algebra and Partial Differential Equations	77.32	20	97.32	3
18.	C302	**EC8393** Fundamentals of Data Structures In C	61.32	20	81.32	3

19.	C303	**EC8351** Electronic Circuits – I	69.32	20	89.32	3
20.	C304	**EC8352** Signals and Systems	66.66	20	86.66	3
21.	C305	**EC8392** Digital Electronics	56	20	76	2
22.	C306	**EC8391** Control Systems Engineering	58.92	20	78.92	2
23.	C307	**EC8381** Fundamentals of Data Structures in C Laboratory	80	20	100	3
24.	C308	**EC8361** Analog and Digital Circuits Laboratory	80	20	100	3
25.	C309	**HS8381** Interpersonal Skills/Listening & Speaking	80	20	100	3
2020-2021 Even Semester IV Semester						
26.	C401	**MA8451** Probability and Random Processes	72	20	92	3
27.	C402	**EC8452** Electronic Circuits-II	64	20	84	3
28.	C403	**EC8491** Communication Theory	72	20	92	3
29.	C404	**EC8451** Electromagnetic Fields	77.32	20	97.32	3
30.	C405	**EC8453** Linear Integrated Circuits	80	20	100	3
31.	C406	**GE8291** Environmental Science and Engineering	80	20	100	3
32.	C407	**EC8461** Circuits Design and Simulation Laboratory	80	20	100	3
33.	C408	**EC8462** Linear Integrated Circuits Laboratory	80	20	100	3
2021-2022 Odd Semester V Semester						
34.	C501	**EC8501** Digital Communication	80	20	100	3

35.	C502	**EC8553** Discrete-Time Signal Processing	80	20	100	3
36.	C503	**EC8552** Computer Architecture and Organization	80	20	100	3
37.	C504	**EC8551** Communication Networks	80	20	100	3
38.	C505	**GE8077** Total Quality Management	80	20	100	3
39.	C506	**ORO551** Renewable Energy Sources	80	20	100	3
40.	C507	**EC8562** Digital Signal Processing Laboratory	80	20	100	3
41.	C508	**EC8561** Communication Systems Laboratory	80	20	100	3
42.	C509	**EC8563** Communication Networks Laboratory	80	20	100	3
2021-2022 Even Semester VI Semester						
43.	C601	**EC8691** Microprocessors and Microcontrollers	56	20	76	2
44.	C602	**EC8095** VLSI Design	50.66	20	70.66	3
45.	C603	**EC8652** Wireless Communication	50.66	20	70.66	3
46.	C604	**MG8591** Principles of Management	48	20	68	1
47.	C605	**EC8651** Transmission Lines and RF Systems	56	20	76	2
48.	C606	**EC8004** Wireless Networks	60.68	20	80.68	3
49.	C607	**EC8681** Microprocessors and Microcontrollers Laboratory	80	20	100	3
50.	C608	**HS8581** Professional Communication	80	20	100	3
51.	C609	**EC8611** Technical Seminar	80	20	100	3

52.	C610	**EC8661** VLSI Design Laboratory	80	20	100	3
2022-2023 Odd Semester VII Semester						
53.	C701	**EC8751** Optical Communication	71.72	20	91.72	3
54.	C702	**EC8791** Embedded and Real Time Systems	68.98	20	88.98	3
55.	C703	**EC8702** Ad hoc and Wireless Sensor Networks	77.24	20	97.24	3
56.	C704	**EC8701** Antennas and Microwave Engineering	66.20	20	86.20	3
57.	C705	**OBM752** Hospitality Management	68.96	20	88.96	3
58.	C706	**EC8711** Embedded Laboratory	80	20	100	3
59.	C707	**EC8761** Advanced Communication Laboratory	80	20	100	3
2022-2023 Even Semester VIII Semester						
60.	C801	**GE8076** Professional Ethics in Engineering	77.24	20	97.24	3
61.	C802	**EC8094** Satellite Communication	60.688	20	80.688	3
62.	C803	**EC8811** Project Work	80	20	100	3

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	1.6	2.2	1.8	2.2	2.25	3	3	3	1.6	3	3	PO12
C102	3	3	1	1	0	0	0	2	0	2	3	PO12
C103	3	3	1.6	1.2	1.4	0	0	0	0	0	1	PO12
C104	2.8	1.3	1.6	1	0.75	1.8	0	0	0	0	1.5	PO12
C105	2	3	3	3	1	0	0	0	0	2	2	PO12
C106	3	3	3	3	3	3	3	3	3	3	3	PO12
C107	3	3	3	3	3	3	3	3	3	3	3	PO12
C108	3	3	3	3	3	3	3	3	3	3	3	PO12
C201	3	3	3	3	2.88	3	3	2.2	3	3	3	PO12
C202	2.5	2.5	0.83	0.83	0.42	0	0	1.67	0	1.67	2.5	PO12
C203	2.5	1.67	1.17	1.25	1.88	2.5	0	0	0	0	0.83	PO12
C204	1.33	0.67	0.67	0	0	0	0	0.67	0	0	0	PO12
C205	3	1	2	0	1	0	0	0	3	0	2	PO12
C206	2	2	2	1.33	0	0	0.67	0	0.67	0	0	PO12
C207	3	3	3	3	3	3	3	3	3	3	3	PO12
C208	3	3	3	3	3	3	3	3	3	3	3	PO12
C209	3	3	3	3	3	3	3	3	3	3	3	PO12
C301	1.2	1.2	0	0	0	0	0	1.2	0	0	0.8	PO12
C302	1.6	1.6	0.8	1.6	1.6	0.8	0.8	0.8	0.8	1.6	0.8	PO12
C303	2.4	2.4	2.4	2.4	2.4	1.6	0	0	0	0	2.4	PO12
C304	1.2	1.2	1.2	1.2	0.8	0.8	0	0	0	0	0.4	PO12
C305	2.4	2.4	2.4	2.4	1.6	1.6	0	0	0	1.6	2.4	PO12
C306	3	2.6	2.6	2.3	0	2	0	0	0	2	2	PO12
C307	2	2	2.6	3	2	1	0	0	0	0	1	PO12
C308	2	2	1	2	2	1	0	1	1	1	2	PO12
C309	0	0	0	0	0	3	0	0	3	0	3	PO12
C401	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0	0	0.4	0.4	PO12
C402	3	3	3	3	2.5	1	0	0	0	1	1	PO12

C403	0.56	1	1.2	0.88	0	0	0	0	0	0.4	1.2	PO12
C404	3	3	2	2	2	2	0	0	0	1	1	PO12
C405	1.2	1.2	1.2	1.2	1	0.4	0	0	0	0.4	0.4	PO12
C406	2.24	1.44	0.8	0.8	0	1.92	0	0	0	0	1.44	PO12
C407	3	3	3	3	3	2.5	0	0	1	1	1	PO12
C408	2	3	3	3	2	0	0	0	0	1	1	PO12
C501	3	3	2	2	2	2	0	0	0	0	1	PO12
C502	0.8	0.8	0.8	0.8	0.4	0.6	0	0	0	0.4	0.8	PO12
C503	1.8	1.8	1.8	1.8	1.2	0.6	0	0	0.6	0	0.6	PO12
C504	1.8	1.8	1.2	1.8	1.8	0.6	0	0	0	0	0.6	PO12
C505	1.8	1.8	1.8	1.8	1.2	1.8	0.6	0	0.6	0	0.6	PO12
C506	1.2	1.2	1.2	0.8	0.8	0.8	0	0	0	0	0.8	PO12
C507	2.2	2.2	2.2	2.2	1	0	0	0	0	1	1	PO12
C601	3	3	2.6	2.2	2.2	0	0	0	0	0	0	PO12
C602	2	2	2	2	2	3	0	0	0	0	1	PO12
C603	3	2	0	0	0	0	0	0	0	0	2	PO12
C604	3	2.8	2.8	2	1.6	1.2	0	0	0	0	2	PO12
C605	2.8	3	2.2	2	2.2	1.4	0	0	0	2	2.2	PO12
C701	0	0	0	0	0	1.8	2	2	2	2	2	PO12
C702	1.66	1	1	1.5	1.5	1	1	2	3	1	1	PO12
C703	2	3	3	2	3	3	1	2	3	3	3	PO12
C704	3	2	1	3	0	2	0	0	0	0	2	PO12
C705	3	3	3	3	3	3	3	3	3	3	3	PO12
C801	3	2	2	2	1	1.8	2	2	2	2	2	PO12

PO Attainment Indirect

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
EXIT SURVE	3	3	3	2.9	3	2.9	3	3	3	3	3	PO12
ALUMNI SUF	3	3	3	3	2.8	2.7	2.4	2.8	2.7	2.9	3	PO12
EMPLOYER	3	3	3	2.9	3	2.6	2.9	2.7	2.8	2.8	2.9	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	2.31	2.19	1.98	2.03	1.86	1.88	2.09	2.19	2.20	1.85	1.73	0
InDirect Attainment	3	3	3	2.93	2.93	2.73	2.77	2.83	2.83	2.9	2.97	0
Overall Attainment	2.45	2.35	2.18	2.21	2.07	2.05	2.23	2.32	2.33	2.06	1.98	0

PSO Attainment

Course	PSO1	PSO2	PSO3
C101	0	0	0
C102	0	0	0
C103	0	0	1
C104	0	0	0
C105	3	3	0
C106	0	0	1
C107	3	3	0
C108	0	0	1
C201	0	0	1
C202	0	0	1
C203	0	0	1
C204	0	0	0
C205	2	2	0
C206	0	0	1
C207	2	2	1
C208	0	0	1
C209	0	0	0
C301	0	0	1
C302	1.6	1.6	0
C303	1.6	2.4	0
C304	0.8	0.4	0

C305	2.4	2.4	1
C306	3	3	0
C307	2	1	0
C308	2	2	1
C309	1	2	0
C401	0.8	0.8	0
C402	2.2	2.2	0
C403	0.8	0.4	1
C404	2	2	0
C405	0.88	0.88	1
C406	0	0	2
C407	0	0	1
C408	2.6	2.6	0
C501	3	2	1
C502	1.2	1.2	0
C503	1.2	0.6	1
C504	1.2	1.2	0
C505	1.8	1.8	1
C506	0.8	0.8	1
C507	2	2	2
C601	2.8	2.2	3
C602	3	3	2
C603	3	3	0
C604	3	2	3
C605	2.6	1.6	2
C701	0	2	0
C702	1.5	1.25	1.8
C703	2	2	1
C704	3	3	2
C705	3	3	1
C801	2	2	2

PSO Attainment Indirect

Survey	PSO1	PSO2	PSO3
EXIT SURVEY	3	3	2.7
ALUMNI SURVEY	3	3	2.5
Employer Survey	3	3	2.3

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	2.02	1.90	1.36
InDirect Attainment	3	3	2.5
Overall Attainment	2.22	2.12	1.59

4 STUDENTS' PERFORMANCE (120) Total Marks 75.89

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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)	60	60	60	60	120	120	120
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	51	38	63	60	49	28	72
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	1	3	9	8	4	3
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.	51	39	66	69	57	32	75

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	0
N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	0	0	0	0	1	0	0
N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N5=N52+N53+N54	N5=N52+N53+N54	0	0	0	0	1	0	0
N61=No. of students exits after 1st year via multiple entry and exit points in same batch	N61=No. of students exits after 1st year via multiple entry and exit points in same batch	1	6	11	3	0	2	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	2	2	9	3	0	1
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	2	0	4	0	0
N6=N61+N62+N63	N6=N61+N62+N63	1	8	15	12	7	2	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)	50				
2023-24 (CAYm1)	31	36			
2022-23 (CAYm2)	51	52	48		
2021-22 (CAYm3)	57	57	67	57	
2020-21 (LYG)	51	47	54	54	51
2019-20 (LYGm1)	30	28	30	30	30
2018-19 (LYGm2)	72	72	73	72	72

4.1 Enrolment Ratio (20)

Institute Marks : 17.00

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)	60	51	0	85.00
2023-24 (CAYm1)	60	38	0	63.33
2022-23 (CAYm2)	60	63	0	105.00

Average [(ER1 + ER2 + ER3) / 3] = 84.44 ≡ 17.00

Assessment : 17.00

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

Institute Marks : 6.13

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).	128.00	124.00	123.00
B=No. of students who graduated from the program in the stipulated course duration	51.00	30.00	72.00
Success Rate (SR)= (B/A) * 100	39.84	24.19	58.54

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 40.86

SR Points : 6.13

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 : 5.46

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)	6.41	5.47	6.11
Y=Total no. of successful students	36.00	52.00	57.00
Z=Total no. of students appeared in the examination	38.00	63.00	60.00
API [X*(Y/Z)]	6.07	4.51	5.80

Average API[(AP1+AP2+AP3)/3] : 5.46

Assessment = Average API : 5.46

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

Institute Marks : 5.41

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)	5.04	4.90	6.98
Y=Total no. of successful students	48.00	67.00	54.00
Z=Total no. of students appeared in the examination	55.00	66.00	55.00
API [X * (Y/Z)]	4.40	4.97	6.85

Average API [(AP1 + AP2 + AP3)/3] : 5.41

Assessment [AverageAPI] : 5.41

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

Institute Marks : 6.73

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)	7.24	6.77	7.25
Y=Total no. of successful students	57.00	54.00	30.00
Z=Total no. of students appeared in the examination	67.00	54.00	30.00
API [X*(Y/Z)]:	6.16	6.77	7.25

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

Assessment [1.5 * AverageAPI] : 6.73

4.6 Placement, Higher Studies and Entrepreneurship (30)

Institute Marks : 10.16

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	128.00	124.00	123.00
X=No. of students placed	48.00	15.00	58.00
Y=No. of students admitted to higher studies	1.00	2.00	1.00
Z= No. of students taking up entrepreneurship	1.00	1.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	39.06	14.52	47.97

Average Placement Index = (P_1 + P_2 + P_3)/3: 33.85

Placement Index Points: 10.16

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	PEACE Association
2	Robo Club
3	Board and Silicon Engineers Club
4	Space and Communication Engineers 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	PEACE Association	PEACE Association inauguration / Add on Course-5G TECHNOLOGY	National Level	03/10/2023
2	PEACE Association	Add on Course - VLSI Chip Design	National Level	25/10/2023
3	PEACE Association	Seminar on Up skilling course on 5G Communication Technology	National Level	06/11/2023
4	PEACE Association with CTEE	Seminar on Career Planning	National Level	09/04/2024
5	PEACE Association	International conference on Electrical Electronics and Communication Technology ICEECT'24	National Level	27/04/2024

(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	Robo Club	Seminar on Embedded systems	National Level	18/08/2022
2	Robo Club	One day Workshop-How to work an Embedded Software	National Level	18/09/2022
3	PEACE Association	Workshop on Mobile Technology	National Level	20/09/2022
4	PEACE Association	Workshop on PCB Designing	National Level	21/09/2022
5	PEACE with IETE	Workshop on Robotics and Industrial Automation	National Level	18/10/2022
6	PEACE Association	Seminar on Wireless technologies	National Level	08/02/2023
7	PEACE Association	Seminar on Digital Electronics	International	09/02/2023
8	PEACE Association	Workshop On Block Chain Technology	National Level	11/02/2023
9	PEACE Association	Add On Course Advanced Java Programming	National Level	25/02/2023
10	Robo Club	Add On Course Robotics And Its Application	National Level	25/02/2023
11	PEACE Association	Add On Course Ethical Hacking	National Level	04/03/2023
12	Robo Club	Workshop on Embedded system in robotics	National Level	20/03/2023
13	PEACE Association	Guest Lecture on Disruptive Technology IOT For tomorrow.	National Level	21/04/2023
14	PEACE Association	International Conference on Robotics and Communication Technology ICRCT'23	National Level	28/04/2023

(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	PEACE Association	Add On Course Cyber Security And Web Designing	National Level	14/09/2021
2	Robo Club	International Conference on Robotics and Communication Technology ICRCT'22	National Level	04/01/2022
3	Robo Club	Seminar on Access Control List in Network security	International L	16/11/2022
4	PEACE Association	Webinar on Block Chain Technology	National Level	25/01/2022
5	PEACE Association	Seminar on basic Electronics	National Level	21/04/2022
6	Robo Club	Seminar on Chip Technologies	National Level	11/03/2022
7	Robo Club	Seminar on Industrial Automation	National Level	16/03/2022
8	PEACE Association	Guest Lecture on Engineering ethics and Life enhancement	National Level	19/03/2022
9	PEACE Association	Seminar on software Development Lifecycle	National Level	06/04/2022
10	PEACE Association	Guest Lecture on Data Mining and its Applications	National Level	29/04/2022
11	PEACE Association	Add On Course Microprocessor And Microcontroller	National Level	22/01/2022
12	PEACE Association	Add On Course Cloud Computing And Distributed System	National Level	07/01/2022
13	PEACE Association	Workshop on PCB Designing	National Level	21/04/2022
14	Robo Club	Workshop on Tinker Cad	National Level	26/04/2022

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	Avinash S	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	I Place
2	Sudhan M	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	I Place
3	Harish Babu H	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	I Place
4	Indhumathi N	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
5	Indhuja A	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
6	Noorul famitha	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
7	Vijayasri Y	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
8	Reshmi S	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
9	Sakthi s	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
10	Boomika N	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
11	Anees fathima	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	Participated
12	Narmatha	Paper Presentation in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	21/09/2023	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	Vijayasri Y	Paper Presentation in “FUERZA’23”-National Level Technical Sympoium	National Level	15/03/2023	Participated
2	Vijayasri Y	Graphic Design Workshop in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	27/03/2023	Participated
3	Sujitha S	Graphic Design Workshop in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	27/03/2023	Participated
4	Ramya U	Graphic Design Workshop in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	27/03/2023	Participated
5	Vimala P	Paper Presentation in “TEKCLUSTER’22”-National Level Technical Symposium by Kongunadu College-Trichy	National Level	17/09/2022	Participated
6	Ramya U	Paper Presentation in “EPSILON’2K23”-National Level Technical Symposium by Meenakshi Sundararajan Engg College	National Level	25/03/2023	Participated
7	Silambarasan	Paper Presentation in “FUERZA’23”-National Level Technical Symposium by Panimalar Engg College	National Level	15/03/2023	Participated
8	Thirupathy G	Paper Presentation in “FUERZA’23”-National Level Technical Symposium by Panimalar Engg College	National Level	15/03/2023	Participated
9	Indhuja A	Graphic Design Workshop “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	19/04/2023	Participated
10	Harish Babu H	Graphic Design Workshop in “IMPULSE 2023”-National Level Technical Symposium,by CIT	National Level	29/03/2023	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	Vimala P	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	Participated
2	Monisha E	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	Participated
3	Vijayasri Y	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	Participated
4	Indhuja A	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	Participated
5	Sujitha S	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	Participated
6	Swetha R	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	Participated
7	Swetha T	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	Participated
8	Ramya U	Technical quiz in “MECHGUST’22”-National Level Technical Symposium by CIT	National Level	24/05/2022	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	Campus Chronicals (ODD & EVEN)	Mr.Balaji B, Asst Prof	Nidheesh Raj	8	2	Hardcopy
2	TECHTONIC Annual	Mrs.Shobana S, Asst prof	Indhuja A,	6	1	Hardcopy
3	TECHTONIC Annual	Vijayasri Y,VI Sem	Sudhan M	6	1	Hardcopy

(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	Campus Chronicals (ODD & EVEN)	Mrs.Kaleeswari B, Asst Prof	Nidheesh Raj	6	2	Hardcopy
2	TECHTONIC Annual	Mrs.Lakshmi priya, Asst Prof	Chandana Priya	6	1	Hardcopy
3	TECHTONIC Annual	Nidheesh Raj S	Gowtham S	6	1	Hardcopy

(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	Campus Chronicals (ODD & EVEN)	Ms.Dhivya Bharathi S, Asst Prof	Barathwaj,	8	2	Hardcopy
2	TECHTONIC Annual	Mrs.Lakshmi priya, Asst Prof	Gowtham S	4	1	Hardcopy
3	TECHTONIC Annual	Barathwaj	Akash S	6	1	Hardcopy

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	Enabled Smart Transformer Monitoring and Control System Using (WSN)	Naveen P	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
2	Enabled Smart Transformer Monitoring and Control System Using (WSN)	Srinivasan V	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
3	Enabled Smart Transformer Monitoring and Control System Using (WSN)	Boopalan S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
4	Integration of Raspberry Pi Pico in Home Automation: An Embedded System Approach	Gowtham S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
5	Integration of Raspberry Pi Pico in Home Automation: An Embedded System Approach	Indhuja R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
6	Integration of Raspberry Pi Pico in Home Automation: An Embedded System Approach	Pradeep kumar A	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
7	Simplifying Farmer-to-Client Online Purchasing Using Web Application (Uzhavar-Nanban)	Aravinth Sankar P	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
8	Simplifying Farmer-to-Client Online Purchasing Using Web Application (Uzhavar-Nanban)	Balaji S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
9	Simplifying Farmer-to-Client Online Purchasing Using Web Application (Uzhavar-Nanban)	Thavasiram C	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
10	Railway Track Maintenance Robot	Jayakumar M	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

11	Railway Track Maintenance Robot	Uppili R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
12	Railway Track Maintenance Robot	Balakrishnan V	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
13	Assistive Device for Deaf, Dumb and Blind People	Sanmuga Priya R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
14	Assistive Device for Deaf, Dumb and Blind People	Shalini N	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
15	Assistive Device for Deaf, Dumb and Blind People	Susmitha R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
16	Implementation of Patient Health Monitoring System for Patients Using Visible Light Communication an	Ashwin B	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
17	Implementation of Patient Health Monitoring System for Patients Using Visible Light Communication an	Jayasakthi Om	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
18	Implementation of Patient Health Monitoring System for Patients Using Visible Light Communication an	Manikandan A	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
19	Triguard: Advanced Multi-Verification System for Bank Locker Security	Dinesh V	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
20	Triguard: Advanced Multi-Verification System for Bank Locker Security	Vidhya S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

21	Triguard: Advanced Multi-Verification System for Bank Locker Security	Saravana kumar A	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
22	Multi-Verification System for Bank Locker Security	Diviesh N	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
23	Multi-Verification System for Bank Locker Security	Harish Balakrishnan S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
24	Multi-Verification System for Bank Locker Security	Nidheesh Raj S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
25	Smart Hydroponics System with Real-Time Monitoring and Control System	Vasanthi D	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
26	Smart Hydroponics System with Real-Time Monitoring and Control System	Vikash G	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
27	Smart Hydroponics System with Real-Time Monitoring and Control System	Pradeep R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
28	Promoting Farmer Rights: Government Support for Direct Sales from Field to Government	Charumathi S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
29	Promoting Farmer Rights: Government Support for Direct Sales from Field to Government	Gomathi N	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
30	Promoting Farmer Rights: Government Support for Direct Sales from Field to Government	Uma mageshwari U	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

31	Enhancing Coal Mining Safety with Arduino-Based Monitoring System	Janaki D	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
32	Enhancing Coal Mining Safety with Arduino-Based Monitoring System	Sanjay R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
33	Enhancing Coal Mining Safety with Arduino-Based Monitoring System	Swetha R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
34	Soldier Health Monitoring & Tracking System Using IoT and LoRa WAN	Dhamodharan k	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
35	Soldier Health Monitoring & Tracking System Using IoT and LoRa WAN	Mahesh Babu K	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
36	Soldier Health Monitoring & Tracking System Using IoT and LoRa WAN	Tholkappiyan B	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
37	Smart Energy Management System Using PZEM-004T and Node MCU	Abinaya M	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
38	Smart Energy Management System Using PZEM-004T and Node MCU	Kaviya A	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
39	Smart Energy Management System Using PZEM-004T and Node MCU	Thatchayani V	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
40	Automatic Solar-Based Floor Cleaning Robot Using Arduino and Ultrasonic Sensor	Chandana priya R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

41	Automatic Solar-Based Floor Cleaning Robot Using Arduino and Ultrasonic Sensor	Karthik N	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
42	Automatic Solar-Based Floor Cleaning Robot Using Arduino and Ultrasonic Sensor	Prathaba Ruthiran	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
43	Efficient Patient Scheduling OP Sheet and Slot Booking Solution for Hospitals	Arun raj R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
44	Efficient Patient Scheduling OP Sheet and Slot Booking Solution for Hospitals	Arul mani K	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
45	Efficient Patient Scheduling OP Sheet and Slot Booking Solution for Hospitals	Siva prakash S	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
46	Promoting Farmer Rights: Government Support for Direct Sales from Field to Government	Sabarinathan V	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
47	Promoting Farmer Rights: Government Support for Direct Sales from Field to Government	Sarmitha R	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
48	Promoting Farmer Rights: Government Support for Direct Sales from Field to Government	Vignesh P	8	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
49	IoT-Based Fingerprint Attendance Using ESP8622	Aishwarya I	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
50	IoT-Based Fingerprint Attendance Using ESP8622	Anees Fathima M	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

51	IoT-Based Fingerprint Attendance Using ESP8622	Kalaimathi P	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
52	Controlling Home Appliances in Telegram App Using Raspberry Pi	Boomika N	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
53	Controlling Home Appliances in Telegram App Using Raspberry Pi	Swetha T	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
54	Controlling Home Appliances in Telegram App Using Raspberry Pi	Narmatha	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
55	Controlling Home Appliances in Telegram App Using Raspberry Pi	Ishwarya M	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
56	IoT-Based Menu Ordering System	Indhuja A	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
57	IoT-Based Menu Ordering System	Indhumathi N	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
58	IoT-Based Menu Ordering System	Noorul Famitha A	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
59	IoT-Based Menu Ordering System	Vijayasi Y	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
60	Air Pollution Monitoring System	Vimala P	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

61	Air Pollution Monitoring System	Minnala P	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
62	Air Pollution Monitoring System	Malini S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
63	Air Pollution Monitoring System	Monisha A	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
64	Smart Home Safety System	Harish Babu H	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
65	Smart Home Safety System	Kanagavel M	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
66	Smart Home Safety System	Divya Dharsan S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
67	Smart Home Safety System	Aravindhan V	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
68	Smart Home Safety System	Sharuk E	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
69	Voice-Based Email System for Visual Impairments	Swetha R	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
70	Voice-Based Email System for Visual Impairments	Malin S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

71	Voice-Based Email System for Visual Impairments	Sujitha S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
72	Voice-Based Email System for Visual Impairments	Lalitha V	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
73	Coal Mining Safety System	Diwakar	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
74	Coal Mining Safety System	Navin Raj Kumar S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
75	Coal Mining Safety System	Aravind V	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
76	Coal Mining Safety System	Kamalesh S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
77	Coal Mining Safety System	Arun R	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
78	Smart Security System (RF Transmitter/Receiver)	Thirupathy G	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
79	Smart Security System (RF Transmitter/Receiver)	Silambarasan S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
80	Smart Security System (RF Transmitter/Receiver)	Ragul G	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

81	Smart Security System (RF Transmitter/Receiver)	Bhavan S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
82	Smart Security System (RF Transmitter/Receiver)	Nethaji R	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
83	Eye-Controlled Cursor Using Computer Vision	Sudhan M	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
84	Eye-Controlled Cursor Using Computer Vision	Avinash S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
85	Eye-Controlled Cursor Using Computer Vision	Gopal E	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
86	Eye-Controlled Cursor Using Computer Vision	Logaprasanth P.S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
87	Eye-Controlled Cursor Using Computer Vision	Akash V	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
88	Radar System Using Ultrasonic Sensor and Arduino	Monisha E	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
89	Radar System Using Ultrasonic Sensor and Arduino	Ramya U	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
90	Radar System Using Ultrasonic Sensor and Arduino	Sakthi S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

91	Radar System Using Ultrasonic Sensor and Arduino	Reshmi S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
92	Distance Measurement Using Ultrasonic Sensor	Nehemya	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
93	Distance Measurement Using Ultrasonic Sensor	Mohamed Khalith R	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
94	Distance Measurement Using Ultrasonic Sensor	Ajay V	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
95	Distance Measurement Using Ultrasonic Sensor	Prathap K	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
96	Distance Measurement Using Ultrasonic Sensor	Akash T	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
97	Recognizing Facial Expression Through Tracking	Lokesh Kumar R	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
98	Recognizing Facial Expression Through Tracking	Balaji M	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
99	Recognizing Facial Expression Through Tracking	Ganesh K	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0
100	Recognizing Facial Expression Through Tracking	Ashutosh Kumar H	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

101	Recognizing Facial Expression Through Tracking	Hemanathan S	6	International Research Journal of education of Education and Technology	International Research Journal of education of Education and Technology ISSN 2581-7795 ISBN:978-93-340-6066-9	6	5	0

(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	Accident detection and Alert system	Chandru S	8	PERIIT	ICRCT23	0	0	0
2	Smart phone operated multipurpose agriculturak robot	Karthick Kumar M	8	PERIIT	ICRCT23	0	0	0
3	A dual band MIMO Dielectic Resonator antenna for Wimax /WLAN Applications	Golda Faith T	8	PERIIT	ICRCT23	0	0	0
4	Cutting edge technology for real time human motion detection mnad tracking using IOT	Kartheek Varma K	8	PERIIT	ICRCT23	0	0	0
5	Object detection using openCV and arduino	Kaviya E S	8	PERIIT	ICRCT23	0	0	0
6	A Novel on AI Based diabetic retiniopathy detection using retinal images	Prakruthi.M A	8	PERIIT	ICRCT23	0	0	0
7	An Android based portable smart CANE for visually impaired people	Vinoth kumar R	8	PERIIT	ICRCT23	0	0	0
8	Home automation using IOT Device	Nidheesh raj S	6	PERIIT	ICRCT23	0	0	0
9	Smoke detector	Vidhya S	6	PERIIT	ICRCT23	0	0	0
10	IOT Based patient health monitoring system	Ashwin B	6	PERIIT	ICRCT23	0	0	0

(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	Smart coastline alert system using RSSI	Angelo Jude	8	TVIRA	(JSCER) ISSN NO:2708-1079	3	2	0
2	Smart coastline alert system using RSSI	J Narayanan	8	TVIRA	(JSCER) ISSN NO:2708-1079	3	2	0
3	Smart coastline alert system using RSSI	Inthran R S	8	TVIRA	(JSCER) ISSN NO:2708-1079	3	2	0
4	Private agro provincial report system for trading centers	Barathwaj K R	8	TVIRA	(JSCER) ISSN NO:2708-1079	3	2	0
5	Private agro provincial report system for trading centers	Prawin Chander	8	TVIRA	Journal Of Science,(JSCER) ISSN NO:2708-1079	3	2	0
6	Private agro provincial report system for trading centers	Rinoza K	8	TVIRA	(JSCER) ISSN NO:2708-1079	3	2	0
7	Railway track crack detection using GPS	M Shreya	8	PERIIT	ICRCT'22	0	0	0
8	Railway track crack detection using GPS	B Madhu	8	PERIIT	ICRCT'22	0	0	0
9	Railway track crack detection using GPS	R S S Priya	8	PERIIT	ICRCT'22	0	0	0
10	Automatic waste segression system	Chandana Priya	8	PERIIT	ICRCT'22	0	0	0
11	Automatic waste segression system	Charumathi	8	PERIIT	ICRCT'22	0	0	0
12	Automatic waste segression system	Uma mageshwari	8	PERIIT	ICRCT'22	0	0	0

5 FACULTY INFORMATION (100) Total Marks 99.85

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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.G.Nallathambi	ANHPN0109K	NA	M.E. and Ph.D.	Anna University	Information & Communication Engineering	01/06/2022	4.2	Professor	Professor	01/06/2022	Regular	Yes		No	
2	Dr.A.V.Mayakkannan	AHZPM9418Q	NA	M.E. and Ph.D.	Sathyabama Institute of Science and Technology (Sathyabama University)	Power Electronics	01/06/2021	3.8	Professor	Professor	01/06/2021	Regular	No	28/02/2025	No	
3	Dr.R.Dinesh kumar	ALVPD7251L	NA	M.E. and Ph.D.	St.Peter's Institute of Higher Education and Research	Information & Communication Engineering	03/08/2022	2.11	Associate Professor	Associate Professor	03/08/2022	Regular	Yes		No	
4	Dr.K.Rajmohan	BCIPR3092J	NA	M.E. and Ph.D.	Annamalai University	Electronics & Instrumentation Engineering	03/10/2024	0.9	Associate Professor	Associate Professor	03/10/2024	Regular	Yes		No	
5	Dr.K.Neelima	AUPPK1754N	NA	M.E. and Ph.D.	Bengaluru University	Information & Communication Engineering	01/08/2022	3	Associate Professor	Associate Professor	01/08/2022	Regular	No	31/07/2025	No	
6	Mr.K.S.Senthil Kumar	FVLPS6647Q	NA	M.Tech	B. S. Abdur Rahman Crescent Institute Of Science And Technology	Communication System	07/09/2020	4.10	Assistant Professor	Assistant Professor		Regular	Yes		No	
7	Mr.L.Saravanan	AFLPL2335P	NA	M.E.	Anna University	Information & Communication Engineering	01/09/2022	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No	
8	Mr.G.Gokul Surendra Kumar	BIMPG6750L	NA	M.E.	Anna University	Mechatronics	01/07/2021	5.1	Assistant Professor	Assistant Professor		Regular	Yes		No	

9	Mrs.S.Shobana	ESIPS8438C	NA	M.E.	Vels University (Vels Institute of Science, Technology & Advanced Studies)	Communication System	01/08/2019	7	Assistant Professor	Assistant Professor		Regular	Yes		No	
10	Mrs.S.Priya	DDDPP4432A	NA	M.E.	Anna University	VLSI Design	01/07/2022	4.1	Assistant Professor	Assistant Professor		Regular	Yes		No	
11	Mr.B.Balaji	BLUPB9131K	NA	M.Tech	Singhania University	VLSI Design	19/02/2024	1.4	Assistant Professor	Assistant Professor		Regular	Yes		No	
12	Mrs.A.Mahalakshmi	BLAPM8814L	NA	M.E.	Anna University	Applied Electronics	16/09/2024	0.9	Assistant Professor	Assistant Professor		Regular	Yes		No	
13	Mrs.M.Vickneswari	AIGPV3162J	NA	M.E.	Anna University	Applied Electronics	16/09/2024	0.9	Assistant Professor	Assistant Professor		Regular	Yes		No	
14	Mrs.A.Sindhuja	PLCPS6443B	NA	M.E.	Anna University	Control and Instrumentation Engineering	16/09/2024	0.9	Assistant Professor	Assistant Professor		Regular	Yes		No	
15	Dr.S.China Venkateswarlu	AUXPS4150Q	NA	M.Tech and Ph.D.	Jawaharlal Nehru Technological University	Information & Communication Engineering	02/08/2021	1.11	Professor	Professor	09/08/2023	Regular	No	31/07/2023	No	
16	Dr.Udayakumar Naluguru	ANDPN1548G	NA	M.Tech and Ph.D.	Sri Venkateswara University	Embedded Systems	01/08/2022	2.9	Associate Professor	Associate Professor	01/08/2022	Regular	No	31/05/2025	No	
17	Mr.V.Narasimman	AKRPN2382F	NA	M.E.	Sathyabama Institute of Science and Technology	Applied Electronics	22/05/2023	2	Assistant Professor	Assistant Professor		Regular	No	31/05/2025	No	
18	Mrs.S.Mahalakshmi	BNCPM6267K	NA	M.E.	Anna University	Communication System	01/07/2019	5.6	Assistant Professor	Assistant Professor		Regular	No	11/01/2025	No	
19	Dr.M.Ramkumar Prabhu	AMKPR5416M	NA	M.E. and Ph.D.	Bharath University	Microwave Engineering	01/07/2021	4	Professor	Professor	01/07/2021	Regular	No	30/06/2025	No	
20	Dr.G.Charulatha	AVRPC8255H	NA	M.E. and Ph.D.	Anna University	Image Processing	01/02/2019	5.3	Associate Professor	Associate Professor	09/02/2021	Regular	No	31/05/2024	No	
21	Dr.M.Durairaj	AACPD6740J	NA	M.E. and Ph.D.	Anna University	Wireless Power Transfer	08/02/2021	4.3	Associate Professor	Associate Professor	08/02/2021	Regular	No	31/05/2025	No	

22	Dr.Kurtideepa Bhol	CHGPB5049F	NA	M.Tech and Ph.D.	Vellore Institute of Technology	VLSI Design	05/10/2020	3.9	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No	
23	Ms.S.DhivyaBharathi	BXXPD2719Q	NA	M.E.	Anna University	Applied Electronics	02/12/2019	3.5	Assistant Professor	Assistant Professor		Regular	No	31/05/2023	No	
24	Ms.V.Sharnya	DGUPS9406R	NA	M.Tech	Anna University	Applied Electronics	09/12/2019	4.5	Assistant Professor	Assistant Professor		Regular	No	31/05/2024	No	
25	Ms.B.Sundari	CQFPS2867G	NA	M.E.	Anna University	Applied Electronics	03/12/2018	4.5	Assistant Professor	Assistant Professor		Regular	No	31/05/2023	No	
26	Mr.K.Kannadasan	BZZPK8333B	NA	M.E.	Anna University	Applied Electronics	02/01/2017	6.4	Assistant Professor	Assistant Professor		Regular	No	31/05/2023	No	
27	Mrs.J.AbishaBenelyn	AVHPA7307C	NA	M.E.	Anna University	Communication System	19/06/2013	8	Assistant Professor	Assistant Professor		Regular	No	30/06/2021	No	
28	Ms.K.LakshmiPriya	AJEPL2770M	NA	M.E.	Anna University	VLSI Design	08/12/2020	3.7	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No	
29	Ms.M.Renuga	BAOPR4321Q	NA	M.E.	Sathyabama University	Applied Electronics	10/10/2020	4.9	Assistant Professor	Assistant Professor		Regular	No	31/07/2025	No	
30	Ms.B.Kaleeswari	BKWPB5712P	NA	M.E.	B.S.Abdur Rahman University	VLSI Design	01/09/2021	2.4	Assistant Professor	Assistant Professor		Regular	No	31/01/2024	No	
31	Ms.Angelin Flashy	FSTPA3992D	NA	M.E.	St.Peter's Institute of Higher Education and Research	VLSI Design	01/07/2022	1.11	Assistant Professor	Assistant Professor		Regular	No	31/05/2024	No	
32	Ms. V.Vennisa	AUVPV6533H	NA	M.Tech	Sastra University	Communication System	05/01/2019	4.4	Assistant Professor	Assistant Professor		Regular	No	31/05/2023	No	
33	Mr.T.Satish	CPWPS2761B	NA	M.E.	Anna University	Applied Electronics	01/07/2021	1.10	Assistant Professor	Assistant Professor		Regular	No	31/05/2023	No	
34	Mr.Raja Pandiyan	BMSPR8007L	NA	M.E.	Anna University	Communication System	01/07/2019	3.11	Assistant Professor	Assistant Professor		Regular	No	31/05/2023	No	
35	Dr.R.Rajeswari	BHLPR7279B	NA	M.Tech and Ph.D.	Anna University	Information & Communication Engineering	01/07/2022	4.1	Associate Professor	Associate Professor	01/07/2022	Regular	Yes		Yes	
36	Mrs.K.Revathi	AXKPR3818G	NA	M.E.	Sathyabama University	Applied Electronics	03/07/2023	3.1	Assistant Professor	Assistant Professor		Regular	Yes		No	
37	Mrs.S.Steniffer Jebaruby	KKZPS0583R	NA	M.E.	Anna University	Applied Electronics	01/08/2022	4	Assistant Professor	Assistant Professor		Regular	Yes		No	
38	Ms.G.Rajeswari	DJAPG9635P	NA	M.E.	Anna University	Communication System	03/07/2023	3.1	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

Electronics & Communication 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	60	1	60	2	60	6
3rd Year	60	2	60	6	120	8
4th Year	60	6	120	8	120	9
Sub-Total	**180**	**9**	**240**	**16**	**300**	**23**
Total	**189**		**256**		**323**	

Grand Total	189	256	323

PG

No. of PG Programs in the Department 2

Applied Electronics			
Year of Study	**CAY(2024-25)**	**CAYm1(2023-24)**	**CAYm2 (2022-23)**
	Sanction Intake	**Sanction Intake**	**Sanction Intake**
1st Year	12	12	12
2nd Year	12	12	12
Total	**24**	**24**	**24**

Communication Systems			
Year of Study	**CAY(2024-25)**	**CAYm1(2023-24)**	**CAYm2 (2022-23)**
	Sanction Intake	**Sanction Intake**	**Sanction Intake**
1st Year	12	12	18
2nd Year	12	18	18
Total	**24**	**30**	**36**

Grand Total	48	54	60

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 2

Electronics & Communication EngineeringApplied ElectronicsCommunication Systems

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1.B	61	62	66
UG1.C	62	66	128
UG1.D	66	128	129
UG1: Electronics & Communication Engineering	**189**	**256**	**323**
PG1.A	12	12	12
PG1.B	12	12	12
PG1: Applied Electronics	**24**	**24**	**24**
PG2.A	12	12	18
PG2.B	12	18	18
PG2: Communication Systems	**24**	**30**	**36**
DS=Total no. of students in all UG and PG programs in the Department	237	310	383
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=** 237	**S2=** 310	**S3=** 383
DF=Total no. of faculty members in the Department	18	24	28
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 18	**F2=** 24	**F3=** 28
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= 20**
Student Faculty Ratio (SFR)=S/(TF)	**SFR1= 13.17**	**SFR2= 12.92**	**SFR3= 13.68**
Average SFR for 3 years	**SFR= 13.26**		

Average SFR for three assessment years : 13.26

Assessment SFR : 30

5.2 Faculty Qualification (25)

Institute Marks : 24.85

Year	X	Y	RF	FQ = 2.5 x [(10X + 4Y) / RF)]
2024-25(CAY)	7	11	11.00	25.91
2023-24(CAYm1)	10	14	15.00	26.00
2022-23(CAYm2)	10	18	19.00	22.63

Average Assessment : 24.85

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	3.00	5.00	8.00	11.00
CAYm1(2023-24)	2.00	3.00	3.00	6.00	10.00	15.00
CAYm2(2022-23)	2.00	3.00	4.00	7.00	13.00	18.00
Average Numbers	1.67	2.67	3.33	6.00	10.33	14.67

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. S. M. Soukath Ahamed	Techanical Head	DADB-German Academy of Digital Education	Up skilling Course on 5G communication Technology	50.00
2	Mr. Krishnan Ravishankar	Techanical Head	Harrison Assessments, Solution Partner	Scientific Career Planning	50.00

(CAYm2) 2022-23

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. G. Gopinath & Mr. B. Prabhu	Techanical Head	Shri Harshika Institute of Technical and Health Education	Mobile Technology	50.00
2	Mr. Erwin Sutanto	Techanical Head	University Airlangga	Digital Electronics	50.00

(CAYm3) 2021-22

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. V. S. Rajan	Director	Aadhityaa Infomedia Technology	Internet of Things	50.00
2	Mr. Vivek Packiaraj	Director	Microchip Technology	Chip Technologies	50.00

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).	11	15	19
AF=The no. of available faculty members in the Department including allied Departments	18	24	28
A= The no. of faculty members at the current institute with less than 1 year of experience (A in AF)	0	0	0
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)	4	4	4
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)	4	7	7
E= The no. of faculty members at the current institute with more than 4 years of experience (E in AF)	8	11	14
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 R Rajeswari	ISTE	Life member
2	Dr R Rajeswari	INSTITUTION OF ENGINEERS	Life Member
3	Dr R Rajeswari	IAENG	Life Member
4	Dr K Rajmohan	IAENG	Life Member
5	Mr K S Senthil Kumar	IAENG	Life Member
6	Mrs S Steniffer Jebaruby	IAENG	Life Member
7	Mrs K Revathi	IAENG	Life Member
8	Mrs S Shobana	IAENG	Life 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	Dr G Nallathambi	Practical Aspects of Communication Engineering with Hands-on	28/07/2023	Virtual Mode	Vidya Academy of Science and Technology
2	Dr A V Mayakkannan	Empowering Educators in the Age of Artificial Intelligence	04/08/2023	Coimbatore	Nehru Institute of Technology
3	Dr M Ramkumar Prabhu	IoT Security & Cloud Platforms	06/09/2023	Erode	Surya Engineering College
4	Ms.V.Sharnya	Guest Lecture on Discrete Time Signal Processing	21/09/2023	Chennai	TJS Engineering College
5	Ms.B.Sundari	5G Technologies	09/10/2023	Bengaluru	New Horizon College of Engineering
6	Mrs S Steniffer Jebaruby	From RTL to Prototype: Verilog Design & Verification for Hardware Innovation	15/04/2024	Chennai	R.M.D. Engineering College
7	Dr.G. Charulatha	Emerging Hardware, Wireless and AI Design	29/04/2024	Virtual Mode	Sairam Engineering College

(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.A.V.Mayakkannan	Virtual FDP on Embedded and IoT	16/09/2022	Virtual Mode	Sathyabama University
2	Dr Udayakumar Naluguru	Metacognitive Teaching Learning Process using ICT Tools	22/08/2022	Bengaluru	New Horizon College of Engineering
3	Dr M Ramkumar Prabhu	Wireless Networks and Virtualizations	12/08/2022	Virtual Mode	Sairam Engineering College
4	Dr.G.Nallathambi	Cognitive radio and future wireless communication technologies	07/10/2022	Coimbatore	CARE College of Engineering
5	Ms.V.Sharnya	Emerging trends in electronics and communication for IoT applications	21/10/2022	Virtual Mode	B.V. Raju Institute of Technology
6	Ms.B.Sundari	Guest Lecture on Special Function ICs	04/11/2022	Coimbatore	CARE College of Engineering
7	Ms.B.Kaleeswari	Modern Tools for Teaching and Learning-	15/11/2022	Virtual Mode	Sairam Engineering College
8	Dr.G. Charulatha	Guest Lecture on An Future Perspective on Artificial Intelligence	24/03/2023	Salem	SONA College of 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 A V Mayakannan	IoT for Intelligent Applications	23/07/2021	Chennai	Dr. M.G.R. Educational and Research Institute
2	Mr.Raja Pandiyan	Guest Lecture on CupCarbon simulators, Raspberry Pi, and AWS-based IoT security services	16/08/2021	Virtual Mode	Mahatma Gandhi Institute of Technology
3	Dr S Chinna Venkateswarlu	Robotics, Embedded Systems & AI	23/08/2021	Virtual Mode	Amal Jyothi College of Engineering
4	Dr. M. Ramkumar Prabhu	Smart Embedded Systems for Real-world Engineering Applications	04/10/2021	Virtual Mode	AVS College of Technology
5	Dr.G. Charulatha	Expert Talk on Smart Technologies and IoT in Engineering: Innovations and Applications	08/11/2021	Virtual Mode	Sairam Engineering College
6	Dr.M.Durairaj	Research and industry-oriented pipelines for Embedded Applications	26/11/2021	Virtual Mode	New Horizon College of Engineering
7	Dr. Kurtideepa Bhol	Recent trends in VLSI chip devices and circuits for sensor applications	18/03/2022	Virtual Mode	CARE College of Engineering
8	Mr.K.S.Senthil Kumar	Guest Lecture on Integration of renewable energy technology and smart systems	25/04/2022	Virtual Mode	SONA College 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)
L Saravanan	5.00	5.00	0.00
M Vickneswari	5.00	0.00	0.00
A Sindhuja	5.00	0.00	0.00
A Mahalakshmi	5.00	0.00	0.00
B Balaji	5.00	0.00	0.00
Dr R Rajeswari	5.00	0.00	0.00
S Priya	5.00	5.00	0.00
S Mahalakshmi	5.00	5.00	0.00
B Kaleeswari	0.00	5.00	5.00
M Renuga	0.00	5.00	5.00
Dr G Charulatha	0.00	5.00	5.00
Dr R Dinesh Kumar	0.00	5.00	0.00
S Dhivya Bharathi	0.00	5.00	5.00
S Dhivya Bharathi	5.00	5.00	5.00
Dr M Ramkumar Prabhu	5.00	5.00	5.00
Gokul Surendra Kumar	0.00	5.00	5.00
Dr Krutideepa Bhol	0.00	5.00	0.00
Dr M Durairaj	5.00	5.00	5.00
B Lavanya	0.00	0.00	5.00
K Lakshmi Priya	0.00	5.00	5.00
Dr Rekha	0.00	0.00	5.00

Dr G Chinnadurai	0.00	0.00	5.00
B Sundari	0.00	0.00	5.00
V Sharnya	0.00	0.00	5.00
K. Kannadasan	0.00	0.00	5.00
K. S. Senthil Kumar	0.00	0.00	5.00
M Somasekar	0.00	0.00	5.00
N Rajapandian	0.00	0.00	5.00
Sum	55.00	70.00	90.00
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).	11.85	15.50	19.15
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	Mr.K.S.Senthil Kumar	VLSI for Beginners	SIMPLILEARN	Completed
2	Mr.L.Saravanan	Programming Languages	INFOSYS	Completed
3	Mr.G.Gokul Surendra Kumar	Programming Languages	INFOSYS	Completed
4	Mrs.S.Shobana	Programming for IoT	SIMPLILEARN	Completed
5	Mrs.S.Priya	Basic Electronics	COURSERA	Completed
6	Mrs.K.Revathi	Emerging Technologies	INFOSYS	Completed
7	Ms.G.Rajeswari	Programming for IoT	SIMPLILEARN	Completed
8	Mrs.S.Steniffer Jebaruby	Introduction to Embedded System	COURSERA	Completed
9	Dr.G. Charulatha	Embedded C for Beginners	UDEMY	Completed
10	Dr.Udayakumar Naluguru	Internet of Things (IoT) Security for Beginners	SIMPLILEARN	Completed
11	Dr.M.Durairaj	Embedded System Design with Keil & Proteus Software Tools	UDEMY	Completed
12	Ms. S.DhivyaBharathi	Digital Systems and Logic Gates	SIMPLILEARN	Completed
13	Ms.V.Sharnya	Core Computer Science	INFOSYS	Completed
14	Ms.B.Sundari	STM32 Microcontroller Programming Essentials	GREAT LEARNING	Completed
15	Mr.K.Kannadasan	Network & Infrastructure	SIMPLILEARN	Completed
16	Ms.B.Kaleeswari	Basic Electronics	COURSERA	Completed
17	Ms. V.Vennisa	Core Computer Science	INFOSYS	Completed
18	Mr.T.Satish	Signal Processing	SIMPLILEARN	Completed
19	Mr.Raja Pandiyan	Embedded C Foundations	GREAT LEARNING	Completed
20	Mrs.S.Mahalakshmi	Embedded C Foundations	COURSERA	Completed
21	Mr.K.S.Senthil Kumar	Digital Systems and Logic Gates	SIMPLILEARN	Completed
22	Mr.G.Gokul Surendra Kumar	Basic Electronics	COURSERA	Completed
23	Mrs.S.Shobana	Signal Processing	SIMPLILEARN	Completed
24	Dr. Kurtideepa Bhol	Internet of Things (IoT)	INFOSYS	Completed
25	Ms.K.Lakshmi Priya	Network & Infrastructure	SIMPLILEARN	Completed
26	Ms.M.Renuga	Introduction to Embedded System	COURSERA	Completed
27	Ms. S.DhivyaBharathi	Internet of Things (IoT)	INFOSYS	Completed
28	Ms.V.Sharnya	Signal Processing	SIMPLILEARN	Completed
29	Ms.B.Sundari	Introduction to Electronics	COURSERA	Completed

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	Next-Generation Semiconductor Design	08.07.2024	5 days	1. Dr. C. Ganesh, Associate Professor, Dhanalakshmi Srinivasan College of Engineering.	65
2	Quantum Communications and Cryptography	24.02.2025	5 days	1.Mr.J Suresh Kumar, Senior Analyst,, CTS.	55

(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	Unlocking the potential of AI: Journey from Industry to space	17.07.2023	5 days	1. Mr. M. Deepan Raj Senior Technical Head, HCL Technologies	50
2	Industrial IoT (IIoT) & Cyber-Physical Systems	26.02.2024	5 days	1. Dr.P.T.Sharavannan Team Lead, Sella Software Pvt. Ltd	52

(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	Diverse Applications of Research	04.07.2022	5 days	1. Dr. V. Suresh, Assistant Professor-EEE, Easwari Engineering College	55
2	Natural language processing (NLP) interfaces for smart electronic devices.	30.02.2023	5 days	1. Mr Francis David, Assistant Professor, DACE	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	Ms S Mahalakshmi	Developing a Microcontroller Driven RSSI Controlled Prisoner Escape Management System	2024	Open research	-
2	Dr.A.V.Mayakkannan	Hackathon	23.10.2023	Chennai	-
3	Dr. M. Ramkumar Prabhu	Hackathon	23.10.2023	Chennai	-
4	Dr.M.Durairaj	Hackathon	23.10.2023	Chennai	-
5	Mr.L.Saravanan	Hackathon	23.10.2023	Chennai	-
6	Mr.G.Gokul Surendra Kumar	Hackathon	23.10.2023	Chennai	-
7	Mrs.S.Shobana	Hackathon	23.10.2023	Chennai	-
8	Mrs.S.Priya	Hackathon	23.10.2023	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.G. Charulatha	Hackathon	18/04/2022	Chennai	-
2	Dr.M.Durairaj	Hackathon	18/04/2022	Chennai	-
3	Dr.Neelima	Hackathon	18/04/2022	Chennai	-
4	Dr.Udayakumar Naluguru	Hackathon	18/04/2022	Chennai	-
5	Mr.G.Gokul Surendra Kumar	Hackathon	18/04/2022	Chennai	-
6	Mrs.S.Shobana	Hackathon	18/04/2022	Chennai	-
7	Mrs.S.Priya	Hackathon	18/04/2022	Chennai	-
8	Mrs.S.Steniffer Jebaruby	Hackathon	18/04/2022	Chennai	-
9	Dr. Kurtideepa Bhol	Hackathon	18/04/2022	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. Kurtideepa Bhol	Hackathon	14/09/2021	Chennai	-
2	Ms.K.Lakshmi Priya	Hackathon	14/09/2021	Chennai	-
3	Ms.M.Renuga	Hackathon	14/09/2021	Chennai	-
4	Ms. S.DhivyaBharathi	Hackathon	14/09/2021	Chennai	-
5	Ms.V.Sharnya	Hackathon	14/09/2021	Chennai	-
6	Ms.B.Sundari	Hackathon	14/09/2021	Chennai	-
7	Mr.K.Kannadasan	Hackathon	14/09/2021	Chennai	-
8	Ms.B.Kaleeswari	Hackathon	14/09/2021	Chennai	-
9	Ms. V.Vennisa	Hackathon	14/09/2021	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	Mrs K Revathy	Mobile app development	Techknots Academy Pvt. Ltd	5 days	Guided students project
2	S Steniffer Jebaruby	Cloud Computing with Machine Learning	SRM Institute of Science and Technology , Ramapuram	3 days	Guided students project
3	Mr.L.Saravanan	AI Enabled Software Development	SRM Institute of Science and Technology, Kattankulathur	5 days	Guided students project
4	Dr.Udayakumar Naluguru	Developing Cyber Security Models using Deep Learning techniques	Hindustan Institute of Technology and Science, Chennai	5 days	Enhanced Technical Skills
5	Dr.M.Durairaj	Embedded Technologies	Adhityaa Info Media Technologies	5 days	Enhanced Technical Skills
6	Mr.K.S.Senthil Kumar	Deep Learning	Pumo Technovation India Pvt Ltd	3 days	Guided students project
7	Ms.M.Renuga	Course On Internet Of Things	Adventure Solution Pvt Ltd	5 days	Guided students project
8	Dr.R.Rajeswari	Developing core competencies in IoT	VEI Technologies	5 days	Guided students and published in Journal
9	Mr K S Senthil Kumar	Low Power VLSI for wearable health tech	Retech Solutions Private Ltd	5 days	Enhanced Technical Skills
10	Mr.G.Gokul Surendra Kumar	Embedded Systems	Adventure Solutions Private Ltd	3 days	Guided students project
11	S Priya	Smart Home IoT	Adventure Solutions Private Ltd	3 days	Guided students project
12	Mrs.S.Mahalakshmi	Design of Electronics Circuit using ECAD and ORCAD	Jaya Engineering College, Chennai	5 days	Enhanced Research Skills & create awareness to students
13	Dr.Udayakumar Naluguru	Embedded and IoT Applications	Retech Solutions Private Ltd	5 days	Enhanced Research Skills & create awareness to students
14	Dr.M.Durairaj	Real Time Operating System and Secure Boot	Hindustan Institute of Technology and Science, Chennai	5 days	Guided students project
15	Mrs.S.Shobana	Embedded Systems	Retech Solutions Private Ltd	3 days	Guided students project
16	Ms K Lakshmi Priya, AP	IoT and VLSI Techniques	Kaashiv Info Tech	3 days	Guided students project
17	Dr.Dineshkumar	Telematics Technology	Adventure SolutionPvt Ltd	5 days	Guided students project
18	Ms.B.Kaleeswari	Industrial Design ECAD	Pumo Technovation India Pvt Ltd	5 days	Effectively guided students in project development
19	Dr.G. Charulatha	Robotics and Modern Automation	Techknots Academy Pvt.Ltd	5 days	Guided students project
20	Dr.Udayakumar Naluguru	Generative Digital Signal Processing	SRM Institute of Science and Technology & Ramapuram	5 days	Guided project
21	Dr.M.Durairaj	Advance Deep Learning Techniques	Trios Technologies Pvt Ltd	5 days	Guided students project
22	Mr.K.S.Senthil Kumar	PCB Design and Signal Integrity	Hindustan Institute of Technology andScience, Chennai	3 days	Effectively guide students in project development Enhanced Technical Skills

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	27	38	11
2	No. of peer reviewed conference papers published	28	39	6
3	No. of books/book chapters published	0	7	1

6.2.2 Development Activities (10)

Institute Marks : 10.00

Table No. 6.2.2.1: Development Activities.

Academic year: 2024-2025

S.N.	Country & Application No.	Name of the Inventor(s)	Title	Date of Publication
1	India 202441089472 A	Dr R Rajeswari Dr G Nallathambi B Balaji G Gokul Surendra Kumar S Shobana	Energy Harvesting Communication Modules for IOT Devices	29.11.2024
2	India 202441048592	L Saravanan	Machine Learning Based Measurement of Ear Canal Movement and OFE Type Management	05.07.2024
3	India 202441069789	Mr.K.Senthil Kumar	Design and Implementation of Modified Rectangular Dual Band Antenna for ISM band Applications	20/09/2024
4	India 202441079609 A	Ms S Priya	Hardware Efficient Low Power Booth Multiplier for Signal Processing Applications	25/10/2024
5	India 202441087206 A	S Mahalakshmi	Intelligent Parking Solution for Sustainable Mobility using IoT based Sensor and LORAWAN Wireless Technology	22.11.2024
6	India 202441091288 A	K S Senthil Kumar	An Efficient Wireless Power Transfer System with Metasurface for 5G Applications	29.11.2024

Academic year: 2023-2024

S.N.	Country & Application No.	Name of the Inventor(s)	Title	Date of Publication
1	v. India 202441018039 v. India 202441026949 A	Mr.K.Senthil Kumar	v. Miniaturised Wideband Honeycomb shaped frequency selective surface (FSS) for mmWave 5G application v. Compact Wideband Octagonal Shaped Complementary Split Ring Resonator (CSRR) for sub -6GHz Fifth Generation Applications	v. 22/03/2024 v. 12/04/2024

Academic year: 2022-2023

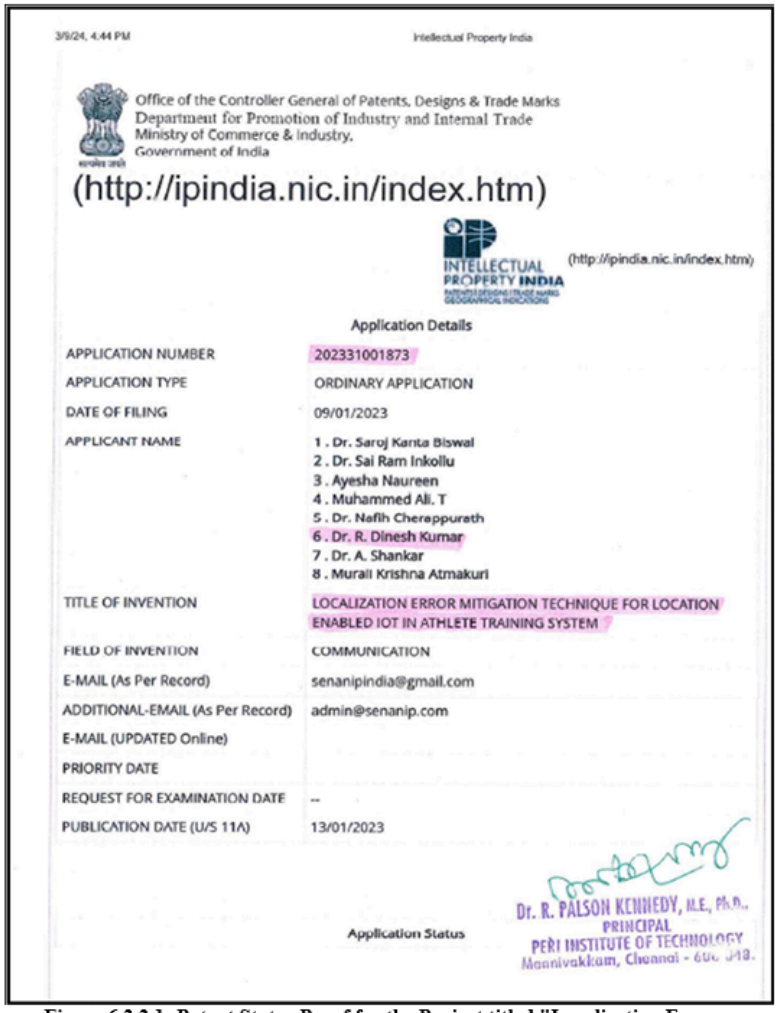
S.N.	Country & Application No.	Name of the Inventor(s)	Title	Date of Publication
1	v. India 202331001873 v. India 20231005348 v. India 202341005350 v. India 20231007078	Dr.R.Dinesh Kumar	v. Localization Error Mitigation Technique for Location Enabled IOT in athlete training system v. An Adaptive fuzzy power controller based wind energy conversion system v. AI and ML based system for prediction of wind power for multi-turbine v. Architecture FPGA for nonlinear and morphological image filtering	v. 13.01.2023 v. 10.02.2023 v. 10.02.2023 v. 24.02.2023

2	India 202241058910 India 202241058911 India v. 202241058912	v. Dr.M.Ramkumar v. Dr.M.Durairaj v. Dr.R.Dinesh Kumar v. Mr.L.Saravanan vi. Mr.K.S.Senthilkumar v. Dr.G.Charulatha v. Ms.M. Renuga v. Ms.B.Kaleeswari v. Ms.K.Lakshmi priya v. Ms.S.Dhivya bharathi	Personalized Recommendation of Topics by influence analysis using support vector machine algorithm Virtual Cloth Fitting in 2D using Deep Learning Approach Artificial Intelligence (AI) Based Animal Recognition and Repellent System for Smart Farming DCNN Algorithm	v. 21.10.2022 v. 21.10.2022 v. 21.10.2022
3	India 20221075332	Dr.R.Dinesh Kumar	Monitoring E-Health Care system using AL techniques & methods	30.12.2022

Academic year: 2021-2022

S.N.	Country & Application No.	Name of the Inventor(s)	Title	Date of Publication
1	India 202241007568	Dr M Ramkumar Prabhu	Implementation of Effective Wideband Cavity Backed Patch Antenna for Air Surveillance Radar Application	25.02.2022
2	India 202241007993	Dr G Charulatha	IoT Based Secured and Energy Efficient Routing Protocols using Wireless Sensor Network (WSNs)	25.02.2022

3	India 2021105809	Dr M Ramkumar Prabu	Smart Spectacles with Display and Remainder Techniques	20.08.2021
4	India 20214131518	Dr M Ramkumar Prabu	IoT Based Crop Monitoring Scheme using Smart Device with Machine Learning Methodology	16.07.2021



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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)

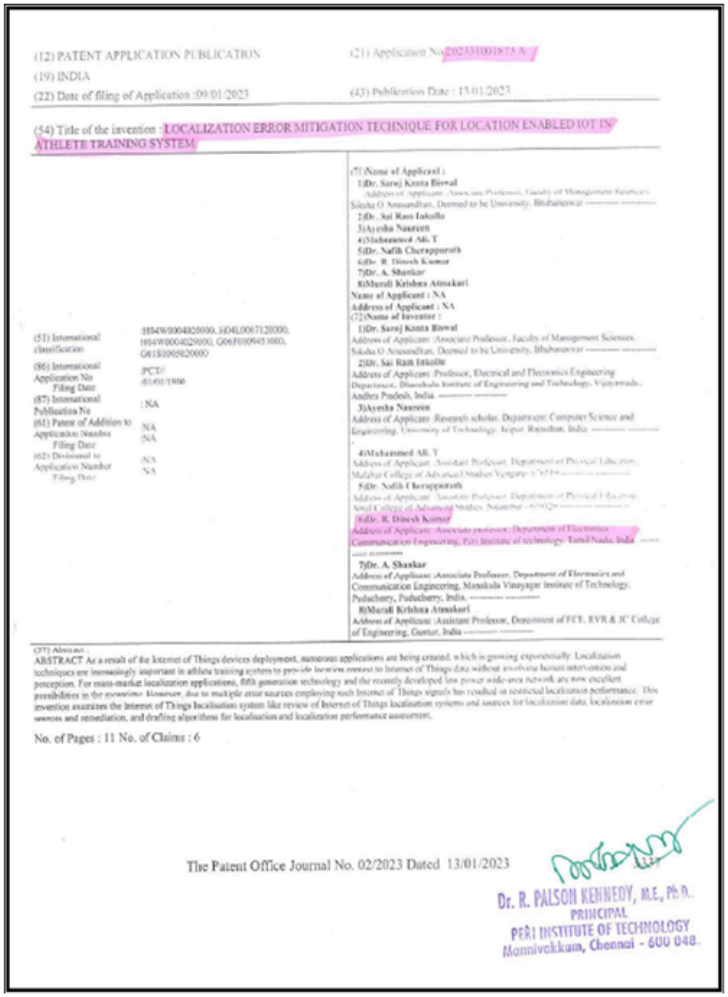
Application Details

APPLICATION NUMBER	202331001873
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	09/01/2023
APPLICANT NAME	1 . Dr. Saroj Kanta Biswal 2 . Dr. Sai Ram Inkollu 3 . Ayesha Naureen 4 . Muhammed Ali. T 5 . Dr. Nafih Cherappurath 6 . Dr. R. Dinesh Kumar 7 . Dr. A. Shankar 8 . Murali Krishna Atmakuri
TITLE OF INVENTION	LOCALIZATION ERROR MITIGATION TECHNIQUE FOR LOCATION ENABLED IOT IN ATHLETE TRAINING SYSTEM
FIELD OF INVENTION	COMMUNICATION
E-MAIL (As Per Record)	senanipindia@gmail.com
ADDITIONAL-EMAIL (As Per Record)	admin@senanip.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	13/01/2023

Application Status

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

Figure 6.2.2.1: Patent Status Proof for the Project titled "Localization Error Mitigation Techniques for Location-Enabled IoT in Athlete Training Systems."



(12) PATENT APPLICATION PUBLICATION (21) Application No:202331001875 A

(19) INDIA

(22) Date of filing of Application :09/01/2023 (43) Publication Date : 13/01/2023

(54) Title of the invention : LOCALIZATION ERROR MITIGATION TECHNIQUE FOR LOCATION ENABLED IOT IN ATHLETE TRAINING SYSTEM

(51) International classification : H04W0004020000, H04L0067120000, H04W0004029000, G06F0009451800, G01S0005020000

(86) International Application No : PCT/ Filing Date : 01/01/1900

(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)Dr. Saroj Kanta Biswal
Address of Applicant :Associate Professor, Faculty of Management Sciences, Siksha O Anusandhan, Deemed to be University, Bhubaneswar ---------- ----------
2)Dr. Sai Rani Inkollu
3)Ayesha Naureen
4)Muhammed Ali T
5)Dr. Nafih Cherappurath
6)Dr. R. Dinesh Kumar
7)Dr. A. Shankar
8)Bharati Krishna Atmakuri
Name of Applicant : NA
Address of Applicant : NA

(72) Name of Inventor :
1)Dr. Saroj Kanta Biswal
Address of Applicant :Associate Professor, Faculty of Management Sciences, Siksha O Anusandhan, Deemed to be University, Bhubaneswar ---------- ----------
2)Dr. Sai Rani Inkollu
Address of Applicant :Professor, Electrical and Electronics Engineering Department, Dhanekula Institute of Engineering and Technology, Vijayawada, Andhra Pradesh, India. ---------- ----------
3)Ayesha Naureen
Address of Applicant :Research scholar, Department Computer Science and Engineering, University of Technology Jaipur, Rajasthan, India. ---------- ----------
4)Muhammed Ali. T
Address of Applicant :Assistant Professor, Department of Physical Education, Malabar College of Advanced Studies Vengara 676319 ---------- ----------
5)Dr. Nafih Cherappurath
Address of Applicant :Associate Professor, Department of Physical Education, Sree Uthradom College of Advanced Studies, Nilambur - 679329 ---------- ----------
6)Dr. R. Dinesh Kumar
Address of Applicant :Associate professor, Department of Electronics Communication Engineering, PERI Institute of technology, Tamil Nadu, India ---------- ----------
7)Dr. A. Shankar
Address of Applicant :Associate Professor, Department of Electronics and Communication Engineering, Manakula Vinayagar Institute of Technology, Puducherry, Puducherry, India. ---------- ----------
8)Bharati Krishna Atmakuri
Address of Applicant :Assistant Professor, Department of ECE, EVR & JC College of Engineering, Guntur, India ---------- ----------

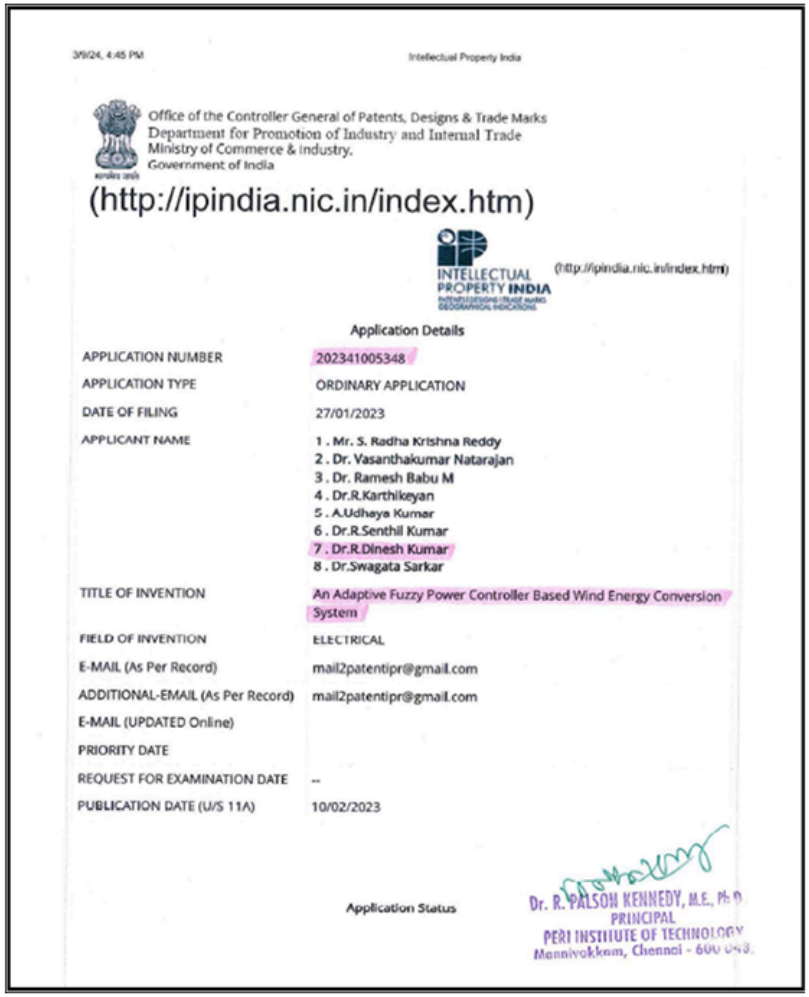
(57) Abstract :
ABSTRACT As a result of the Internet of Things devices deployment, numerous applications are being created, which is growing exponentially. Localization techniques are increasingly important in athlete training system to provide location context to Internet of Things data without involving human intervention and perception. For mass-market localization applications, fifth generation technology and the recently developed low power wide-area network are now excellent possibilities in the meantime However, due to multiple error sources employing such Internet of Things signals has resulted in restricted localization performance. This invention examines the Internet of Things localisation system like review of Internet of Things localisation systems and sources for localization data, localization error sources and remediation, and drafting algorithms for localisation and localization performance assessment.

No. of Pages : 11 No. of Claims : 6

The Patent Office Journal No. 02/2023 Dated 13/01/2023

Dr. R. PALSON KENNEDY, M.E., Ph.D.
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

Figure 6.2.2.2: Patent Publication Proof for the Project titled "Localization Error Mitigation Techniques for Location-Enabled IoT in Athlete Training Systems."



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Government of India

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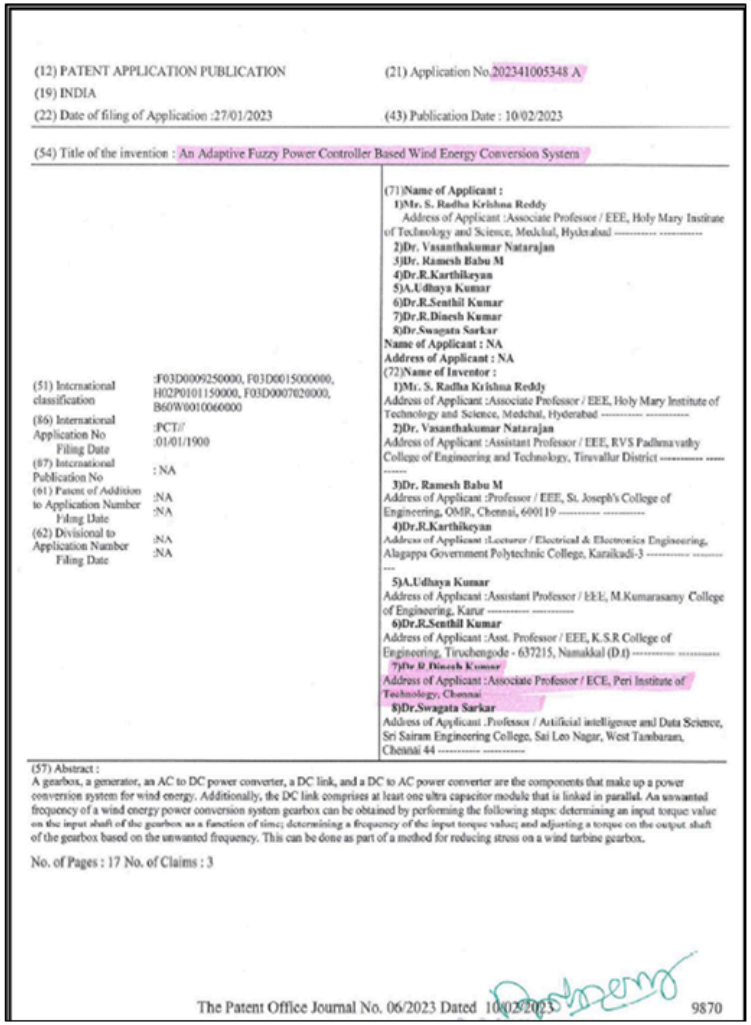
Application Details

APPLICATION NUMBER	202341005348
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	27/01/2023
APPLICANT NAME	1 . Mr. S. Radha Krishna Reddy 2 . Dr. Vasanthakumar Natarajan 3 . Dr. Ramesh Babu M 4 . Dr.R.Karthikeyan 5 . A.Udhaya Kumar 6 . Dr.R.Senthil Kumar 7 . Dr.R.Dinesh Kumar 8 . Dr.Swagata Sarkar
TITLE OF INVENTION	An Adaptive Fuzzy Power Controller Based Wind Energy Conversion System
FIELD OF INVENTION	ELECTRICAL
E-MAIL (As Per Record)	mail2patentipr@gmail.com
ADDITIONAL-EMAIL (As Per Record)	mail2patentipr@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	10/02/2023

Application Status

Dr. R. PALSON KENNEDY, M.E., Ph.D.
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

Figure 6.2.2.3.: Patent Status Proof for the Project titled "An Adaptive Fuzzy Power Controller Based Wind Energy Conversion System."



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/01/2023

(21) Application No.202341005348 A
(43) Publication Date : 10/02/2023

(54) Title of the invention : An Adaptive Fuzzy Power Controller Based Wind Energy Conversion System

(51) International classification :F03D0009250000, F03D0015000000, H02P0101150000, F03D0007020000, B60W0010060000
(86) International Application No Filing Date :PCT// :01/01/1900
(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

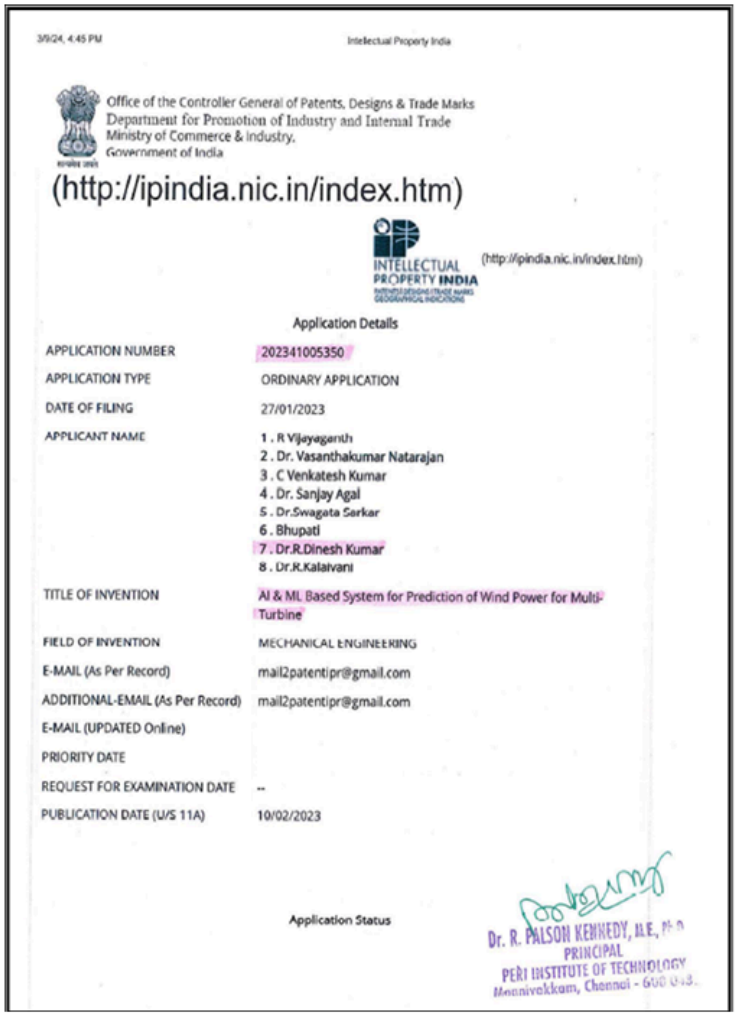
(71)Name of Applicant :
1)Mr. S. Radha Krishna Reddy
Address of Applicant :Associate Professor / EEE, Holy Mary Institute of Technology and Science, Medchal, Hyderabad ---------- ----------
2)Dr. Vasanthakumar Natarajan
3)Dr. Ramesh Babu M
4)Dr.R.Karthikeyan
5)A.Udhaya Kumar
6)Dr.R.Senthil Kumar
7)Dr.R.Dinesh Kumar
8)Dr.Swagata Sarkar
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
1)Mr. S. Radha Krishna Reddy
Address of Applicant :Associate Professor / EEE, Holy Mary Institute of Technology and Science, Medchal, Hyderabad ---------- ----------
2)Dr. Vasanthakumar Natarajan
Address of Applicant :Assistant Professor / EEE, RVS Padhmavathy College of Engineering and Technology, Tiruvallur District ---------- ----------
3)Dr. Ramesh Babu M
Address of Applicant :Professor / EEE, St. Joseph's College of Engineering, OMR, Chennai, 600119 ---------- ----------
4)Dr.R.Karthikeyan
Address of Applicant :Lecturer / Electrical & Electronics Engineering, Alagappa Government Polytechnic College, Karaikudi-3 ---------- ----------
5)A.Udhaya Kumar
Address of Applicant :Assistant Professor / EEE, M.Kumarasamy College of Engineering, Karur ---------- ----------
6)Dr.R.Senthil Kumar
Address of Applicant :Asst. Professor / EEE, K.S.R College of Engineering, Tiruchengode - 637215, Namakkal (D.t) ---------- ----------
7)Dr.R.Dinesh Kumar
Address of Applicant :Associate Professor / ECE, Peri Institute of Technology, Chennai
8)Dr.Swagata Sarkar
Address of Applicant :Professor / Artificial intelligence and Data Science, Sri Sairam Engineering College, Sai Leo Nagar, West Tambaram, Chennai 44 ---------- ----------

(57) Abstract :
A gearbox, a generator, an AC to DC power converter, a DC link, and a DC to AC power converter are the components that make up a power conversion system for wind energy. Additionally, the DC link comprises at least one ultra capacitor module that is linked in parallel. An unwanted frequency of a wind energy power conversion system gearbox can be obtained by performing the following steps: determining an input torque value on the input shaft of the gearbox as a function of time; determining a frequency of the input torque value; and adjusting a torque on the output shaft of the gearbox based on the unwanted frequency. This can be done as part of a method for reducing stress on a wind turbine gearbox.

No. of Pages : 17 No. of Claims : 3

The Patent Office Journal No. 06/2023 Dated 10/02/2023 9870

Figure 6.2.2.4.: Patent Publication Proof for the Project titled "An Adaptive Fuzzy Power Controller Based Wind Energy Conversion System."



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Ministry of Commerce & Industry,
Government of India

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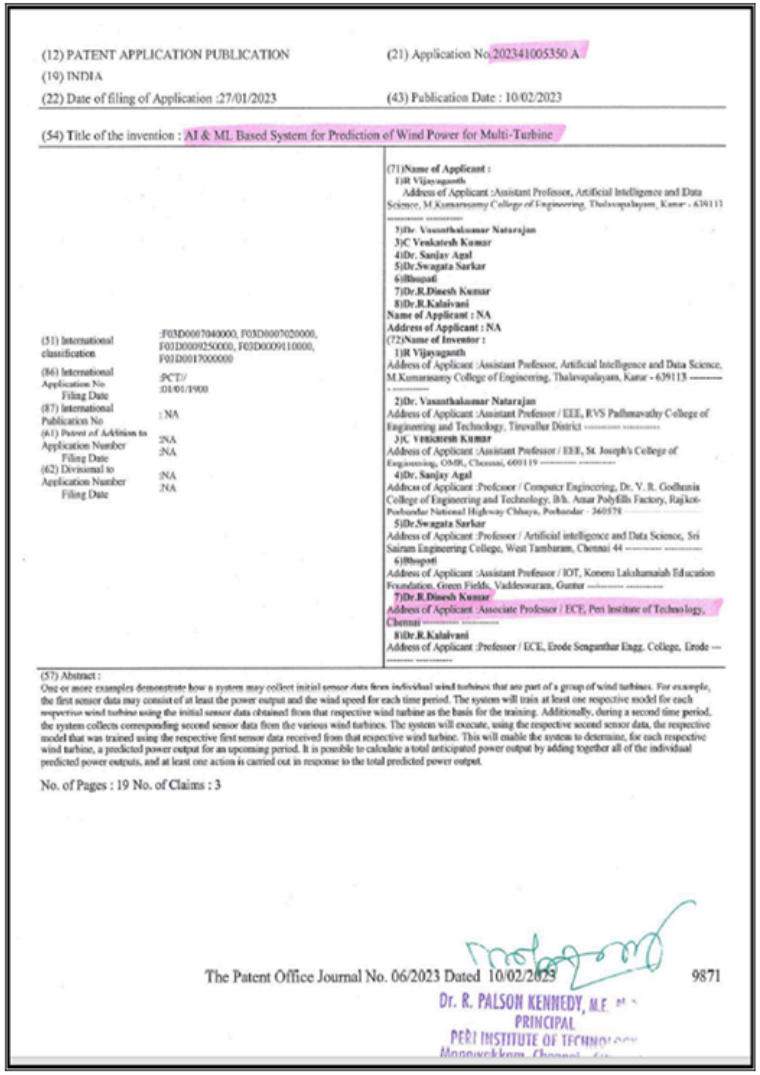
Application Details

APPLICATION NUMBER	202341005350
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	27/01/2023
APPLICANT NAME	1 . R Vijayaganth 2 . Dr. Vasanthakumar Natarajan 3 . C Venkatesh Kumar 4 . Dr. Sanjay Agal 5 . Dr.Swagata Sarkar 6 . Bhupati 7 . Dr.R.Dinesh Kumar 8 . Dr.R.Kalaivani
TITLE OF INVENTION	AI & ML Based System for Prediction of Wind Power for Multi-Turbine
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	mail2patentipr@gmail.com
ADDITIONAL-EMAIL (As Per Record)	mail2patentipr@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	10/02/2023

Application Status

Dr. R. PALSON KENNEDY, M.E., Ph.D
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

Figure 6.2.2.5.: Patent Status Proof for the Project titled "AI & ML Based System for Prediction of Wind Power for Multi Turbine."



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/01/2023

(21) Application No 202341005350 A
(43) Publication Date : 10/02/2023

(54) Title of the invention : AI & ML Based System for Prediction of Wind Power for Multi-Turbine

(51) International classification :F03D0007040000, F03D0007020000, F03D0009250000, F03D0009110000, F03D0017000000
(86) International Application No Filing Date :PCT// :01/01/1900
(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)R Vijayaganth
Address of Applicant :Assistant Professor, Artificial Intelligence and Data Science, M.Kumarasamy College of Engineering, Thalavapalayam, Karur - 639113 ---------- ----------
2)Dr. Vasanthakumar Natarajan
3)C Venkatesh Kumar
4)Dr. Sanjay Agal
5)Dr.Swagata Sarkar
6)Bhupati
7)Dr.R.Dinesh Kumar
8)Dr.R.Kalaivani
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
1)R Vijayaganth
Address of Applicant :Assistant Professor, Artificial Intelligence and Data Science, M.Kumarasamy College of Engineering, Thalavapalayam, Karur - 639113 ---------- ----------
2)Dr. Vasanthakumar Natarajan
Address of Applicant :Assistant Professor / EEE, RVS Padhmavathy College of Engineering and Technology, Tiruvallur District ---------- ----------
3)C Venkatesh Kumar
Address of Applicant :Assistant Professor / EEE, St. Joseph's College of Engineering, OMR, Chennai, 600119 ---------- ----------
4)Dr. Sanjay Agal
Address of Applicant :Professor / Computer Engineering, Dr. V. R. Godhania College of Engineering and Technology, B/h. Amar Polyfills Factory, Rajkot-Porbandar National Highway Chhaya, Porbandar - 360575 ----------
5)Dr.Swagata Sarkar
Address of Applicant :Professor / Artificial intelligence and Data Science, Sri Sairam Engineering College, West Tambaram, Chennai 44 ---------- ----------
6)Bhupati
Address of Applicant :Assistant Professor / IOT, Koneru Lakshmaiah Education Foundation, Green Fields, Vaddeswaram, Guntur ---------- ----------
7)Dr.R.Dinesh Kumar
Address of Applicant :Associate Professor / ECE, Peri Institute of Technology, Chennai ---------- ----------
8)Dr.R.Kalaivani
Address of Applicant :Professor / ECE, Erode Sengunthar Engg. College, Erode ---------- ----------

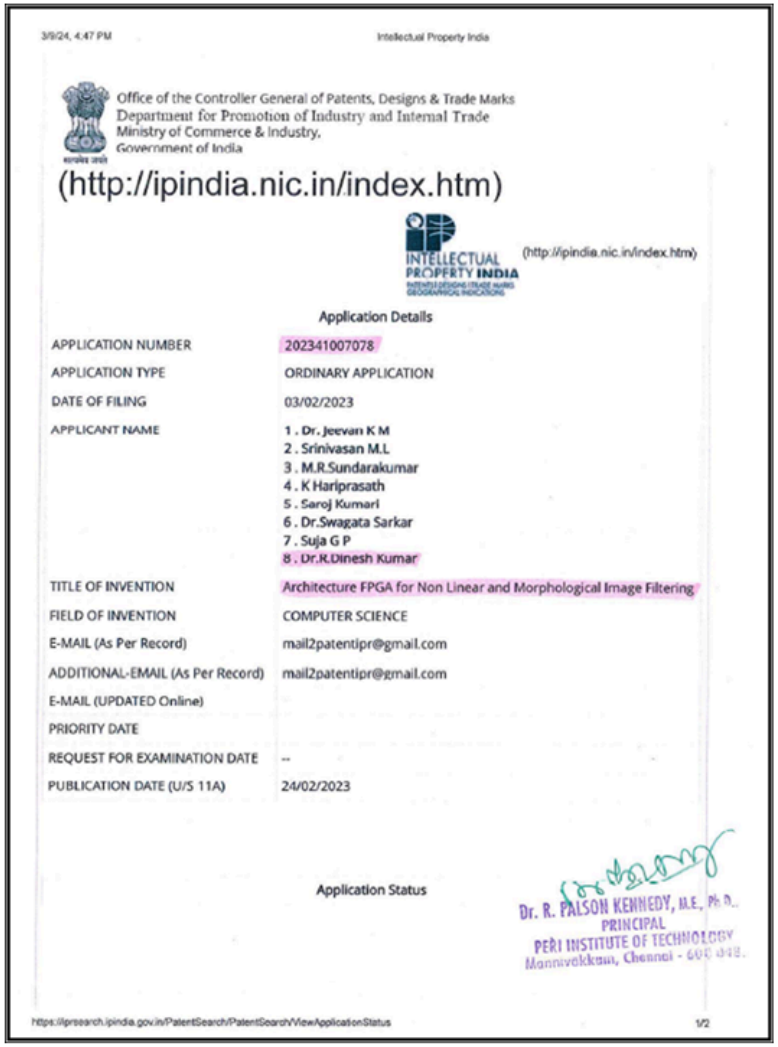
(57) Abstract :
One or more examples demonstrate how a system may collect initial sensor data from individual wind turbines that are part of a group of wind turbines. For example, the first sensor data may consist of at least the power output and the wind speed for each time period. The system will train at least one respective model for each respective wind turbine using the initial sensor data obtained from that respective wind turbine as the basis for the training. Additionally, during a second time period, the system collects corresponding second sensor data from the various wind turbines. The system will execute, using the respective second sensor data, the respective model that was trained using the respective first sensor data received from that respective wind turbine. This will enable the system to determine, for each respective wind turbine, a predicted power output for an upcoming period. It is possible to calculate a total anticipated power output by adding together all of the individual predicted power outputs, and at least one action is carried out in response to the total predicted power output.

No. of Pages : 19 No. of Claims : 3

The Patent Office Journal No. 06/2023 Dated 10/02/2023 9871

Dr. R. PALSON KENNEDY, M.E.
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY

Figure 6.2.2.6.: Patent Publication Proof for the Project titled "AI & ML Based System for Prediction of Wind Power for Multi Turbine."



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Ministry of Commerce & Industry,
Government of India

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Application Details

APPLICATION NUMBER	202341007078
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/02/2023
APPLICANT NAME	1 . Dr. Jeevan K M 2 . Srinivasan M.L 3 . M.R.Sundarakumar 4 . K Hariprasath 5 . Saroj Kumari 6 . Dr.Swagata Sarkar 7 . Suja G P 8 . Dr.R.Dinesh Kumar
TITLE OF INVENTION	Architecture FPGA for Non Linear and Morphological Image Filtering
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	mail2patentipr@gmail.com
ADDITIONAL-EMAIL (As Per Record)	mail2patentipr@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	24/02/2023

Application Status

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

Figure 6.2.2.7.: Patent Status Proof for the Project titled "Architecture FPGA for Non Linear and Morphological Image Filtering"

6.2.3 Sponsored Research Project (15) Institute Marks : 0.00

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
0	0	0	0	0	0	0.00
						Amount received (Rs.):0.00

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	00	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: 0.00

Note*:

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

6.2.4 Consultancy Work (15) Institute Marks : 6

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
0	0	0	0	0	0	0.00
						Amount received (Rs.):0.00

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
Dr.A.V.Mayakkannan	Mrs.S.Mahalakshmi	ECE	Personalized recommendation of topics by influence analysis using support vector machine algorithm	Prince Infotech	3 Months	1.20
Dr.M.Durairaj	Ms. V.Vennisa	ECE	Animal repellent system for smart farming using AI and Deep learning	Prince Infotech	3 Months	1.40
Dr. G.Charulatha	Dr. Kurtideepa Bhol	ECE	Virtual Cloth fitting in 2D	Prince Infotech	3 Months	9.34
						Amount received (Rs.):11.94

Total amount (Lacs) received for the past 3 years: 11.94

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 : 2.00

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

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
G Charulatha	Computer-Aided Design for Skin Disease Identification and Categorization using Image Processing	6 Months	0.50	0.50	Research findings
G Charulatha	□ Logistic Regression with Elliptical Curve Cryptography to Establish Secure IoT	6 Months	0.60	0.60	Research findings
			Amount received (Rs.): 1.10		

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

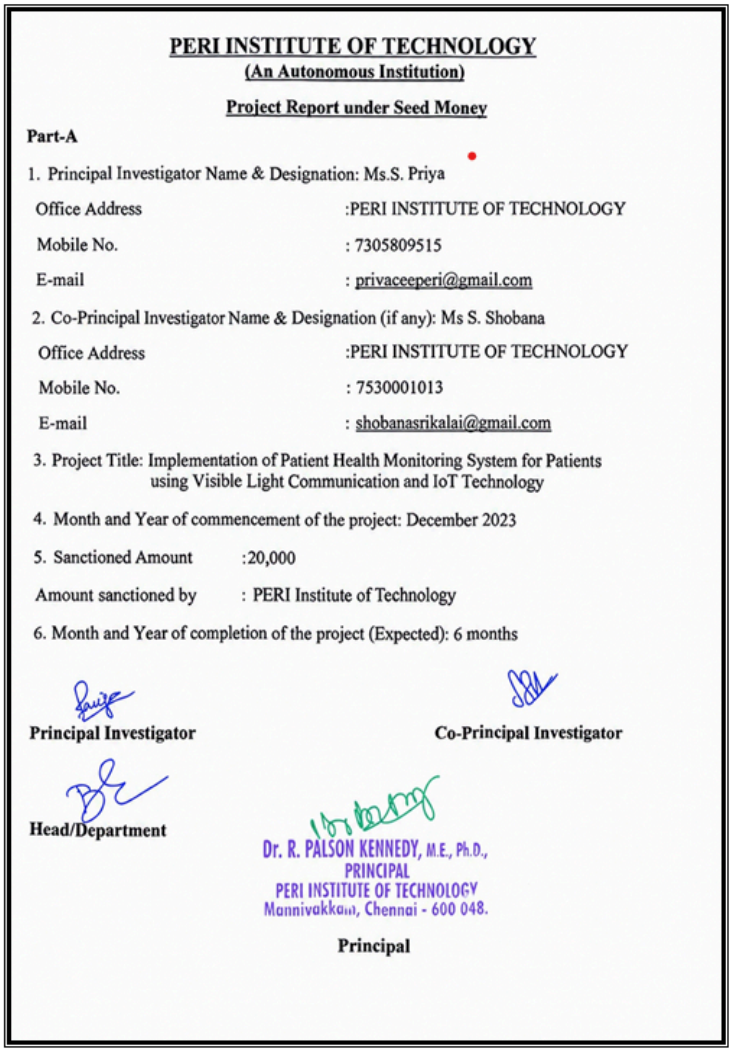
Total amount (Lacs) received for the past 3 years :

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 (Lacs)	Amount Utilized (Lacs)	Outcomes of the project
Academic year: 2023-2024						
1	Dr Neelima	Enhancing Coal Mining Safety with Arduino Based Monitoring System	6 Months	0.235	0.20	Hands-on research experience
2	Ms S Mahalakshmi	Developing a Microcontroller Driven RSSI Controlled Prisoner Escape Management System	6 Months	0.50	0.50	Technical skill developmen t
3	Ms S Priya	Implementation of Patient Health Monitoring System for Patients using Visible Light Communication and IoT Technology	6 Months	0.20	0.20	Solutions implemente d to solve a local environment al or social problem
Amount received (Rs.)					**90,000**	
Academic year: 2022-2023						
1	G Charulatha	V. Computer-Aided Design for Skin Disease Identification and Categorization using Image Processing	6 Months	0.50	0.50	Research findings
		V. Logistic Regression with Elliptical Curve Cryptography to Establish Secure IoT	6 Months	0.60	0.60	

2	Dr Dinesh Kumar	v. Linguistic Based Emotion Detection from Liver Social Media Data Classification using Metaheuristic Deep Learning Techniques v. Energy Efficient Weighted Probability Model Integrated Cloud-IoT Network to Increase Lifetime of the Network with Layered Architecture	6 Months 3 months	0.90 0.30	0.90 0.30	Solutions implemented to solve a local environmental or social problem
Amount received (Rs.)					**2,30,000**	
Total amount (Lacs) received for the past 3 years					**3.20**	



PERI INSTITUTE OF TECHNOLOGY
(An Autonomous Institution)

Project Report under Seed Money

Part-A

1. Principal Investigator Name & Designation: Ms.S. Priya

Office Address	:PERI INSTITUTE OF TECHNOLOGY
Mobile No.	: 7305809515
E-mail	: privaceeperi@gmail.com

2. Co-Principal Investigator Name & Designation (if any): Ms S. Shobana

Office Address	:PERI INSTITUTE OF TECHNOLOGY
Mobile No.	: 7530001013
E-mail	: shobanasrikalai@gmail.com

3. Project Title: Implementation of Patient Health Monitoring System for Patients using Visible Light Communication and IoT Technology

4. Month and Year of commencement of the project: December 2023

5. Sanctioned Amount :20,000

Amount sanctioned by : PERI Institute of Technology

6. Month and Year of completion of the project (Expected): 6 months

Principal Investigator **Co-Principal Investigator**

Head/Department

Dr. R. PALSON KENNEDY, M.E., Ph.D.,
PRINCIPAL
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai - 600 048.

Principal

Figure 6.2.5.1.: Sample Project Report under Seed Money of Project titled 'Implementation of Patient Health Monitoring System for Patients using Visible Light Communication and IoT Technology

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	Electronic Devi	30	Cathode-Ray C	60	Mrs. B. Hemala	Lab Assistant	B.E (ECE)
2	Linear Integrate	30	Cathode-Ray C	40	Mrs. B. Hemala	Lab Assistant	B.E (ECE)
3	Digital Signal P	30	Desktop Comp	40	Mr. S. Ashok K	Lab Technicia r	Diploma in ECI
4	Communicati o	30	Cathode-Ray C	40	Mrs. B. Hemala	Lab Assistant	B.E (ECE)
5	Networks Labo	30	Embedded trai	40	Mr. S. Ashok K	Lab Technicia r	Diploma in ECI
6	Microprocess o	30	8085 Micropro	30	Mr. S. Ashok K	Lab Technicia	Diploma in ECI

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	IIT Virtual Lab	Provides 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, PO4, PO5, PO12
2	Extended Learning	Provides access to online learning platforms such as GUVI and SkillRack, offering programming courses, coding exercises and problem-solving activities.	To enhance students' programming skills, logical thinking, analytical abilities and problem-solving skills through continuous coding practice and hands-on learning.	Throughout the semester	PO1, PO2, PO5, PO12
3	e-Learning Lounge	Provides access to educational videos from NPTEL, SWAYAM and EDUSAT	To enhance understanding through video-oriented teaching and learning	Throughout the semester	PO5, PO12, PSO1, PSO2
4	Departmental Library	Maintains a collection of textbooks, reference books, journals and project/seminar reports.	Maintains a curated collection of core textbooks, reference books, journals, and project reports relevant to the department. Located within the department, making it convenient for students and faculty to access learning materials without visiting the central library.	Throughout the semester	PO2, PO4, PO5, PO12, PSO1, PSO2, PSO3
5	Consumer Electronics (TV, Radio, Mobile Phone etc.,)	Provides practical training in testing and repairing electronic devices, identifying components and learning basic soldering and SMD handling techniques.	To enhance students' practical skills, troubleshooting abilities and understanding of electronic components through hands-on learning.	Throughout the semester	PO1, PO2, PO4, PO5, PO12, PSO1, PSO2
6	Multispecialty Seminar Hall	Equipped with a projector, speakers, microphone and computer.	To enhance students' practical knowledge and improve their understanding through technical presentations, discussions and laboratory demonstrations.	Throughout the semester	PO1, PO2, PO5, PO9, PO10, PO12, PSO1, PSO2

7.3 Maintenance of laboratories and overall ambiance (10)

Institute Marks : 10.00

i) Daily Maintenance

- All minor maintenance and troubleshooting activities are carried out by the respective laboratory technicians.
- Any system-related problems are reported to the centralized Computer Maintenance Cell (CMC) for necessary repairs.
- Major faults in laboratory equipment and computer systems are referred to authorized vendors or appropriate service agencies following the college maintenance procedures.
- Daily preventive maintenance of laboratory equipment is carried out by the laboratory technicians and lab in-charges.
- The power cards, CRO probes, connecting cables and other accessories are checked regularly to ensure proper functioning.
- Computers, keyboards, mice, CPUs and display units in the Network/Embedded and MPMC/LIC laboratories are checked for proper working condition.
- Daily cleaning of laboratory equipment, trainer kits, electronic instruments and work tables is carried out by the laboratory staff.
- CRO probes, power cards and other accessories in the MP/LIC, DSP/VLSI and Communication laboratories are inspected for physical damage and proper connections.
- Floor cleaning and mopping of laboratories are carried out by the housekeeping department.
- Students are instructed to handle electronic components, instruments and laboratory equipment carefully.
- Students are instructed to switch off the power supply and instruments after completing their experiments.
- Eating and drinking inside the laboratories are strictly prohibited.
- Proper ESD (Electrostatic Discharge) precautions are followed while handling sensitive electronic components and ICs.

ii)Weekly Maintenance

- Weekly maintenance of laboratory equipment is carried out to ensure their proper functioning and availability for laboratory experiments.
- The keyboards, mice, CPUs and display units in the Network/Embedded and MPMC/LIC laboratories are checked for proper working condition.
- CRO (Cathode Ray Oscilloscope), RPS/KPS (Regulated/Kit Power Supply) and Function Generators (FG) in the MP/LIC, DSP/VLSI and Communication laboratories are inspected and checked for proper functioning.
- The CRO probes, connecting cables, power supply units and accessories are checked for any damage or loose connections.
- Computers and associated peripherals are inspected for proper operation.
- Any faulty instruments, damaged accessories or non-working equipment are identified and reported to the respective lab in-charge.
- Weekly maintenance reports are prepared by the laboratory technician/lab instructor and submitted to the concerned lab in-charge for necessary action.

iii)Monthly Maintenance

- A monthly maintenance report is prepared, indicating the working condition of laboratory equipment, electronic components, consumables, non-consumables and furniture.
- The following major laboratory equipment is inspected periodically to ensure proper working condition:

  Network/Embedded Lab: Trainer Kits, Interface Kits and Desktop Boards.

  MPMC/LIC Lab: 8085 Microprocessor Kits, 8051 Microcontroller Kits, 8086 Microprocessor Kits and Keyboards.

  DSP/VLSI Lab: DSP Kits, Interface Kits and Desktop Boards.

  Communication Lab: Optical Kits, Communication Kits and Frequency Meters.

- Monthly inventory verification is carried out to ensure the availability and working condition of electronic components, ICs, sensors, cables, connectors and other laboratory consumables.
- The functional condition of microprocessor kits, microcontroller kits, DSP kits, communication kits and embedded system trainer boards is verified.
- The 5S audit (Sort, Set in Order, Shine, Standardize and Sustain) is conducted every month to ensure proper laboratory organization and cleanliness.
- The audit observations and compliance reports are submitted to the respective lab in-charges for necessary corrective action.
- UPS in-charge checks the battery condition, voltage level, water level (where applicable) and backup performance.
- Electrical safety, earthing connections, power distribution boards and leakage current protection systems are inspected.
- Faulty or damaged equipment is identified and reported to the Head of the Department for further action.

iv)Yearly Maintenance

- Stock verification is carried out every six months to confirm the availability, quantity and working condition of laboratory equipment, electronic components, consumables and non-consumables.
- Annual physical verification of all laboratory assets, including computers, CROs, function generators, regulated power supplies, microprocessor kits, microcontroller kits, DSP kits, communication kits, optical kits, interface kits and desktop boards, is conducted by the concerned lab in-charges and stock verification committee.
- Calibration of measuring instruments such as CROs, digital storage oscilloscopes, multimeters and frequency meters is carried out through authorized agencies wherever required.

- Annual servicing and preventive maintenance of major laboratory equipment, including CROs, function generators, RPS/KPS, UPS systems and trainer kits, are undertaken through authorized service agencies.
- The working condition of 8085, 8086 microprocessor kits, 8051 microcontroller kits, DSP kits and embedded system development boards is verified.
- Obsolete, damaged and non-repairable equipment are identified by the laboratory technicians in consultation with the lab in-charges, HOD and inspection committee.
- Scrap items in the laboratories are documented and submitted for disposal following the colleges established procedures.
- Annual maintenance records, equipment service reports, calibration certificates and stock verification reports are maintained by the department.
- Requirements for new equipment, replacement of damaged components and upgradation of existing laboratory facilities are assessed and submitted to the HOD for further approval.

v)Preventive Maintenance:

Laboratory Do's and Don'ts are displayed in all laboratories. Stock register is maintained in all the laboratories and audits are conducted by department stock verification committee to check the availability and working condition of the equipment.

vi)Breakdown Maintenance:

In case of equipment breakdown, servicing and repairs are carried out by engineers from authorized private service agencies. Approval for servicing the equipment is obtained from the HOD, Principal and Chairman as per the college procedure. The identified faults are rectified by the service engineers.

vii)Laboratory Discipline and Equipment Handling

- Students are required to sign the equipment issue register before collecting components or equipment.
- Components and equipment are verified against the register upon return.
- Chairs are arranged properly after completion of each laboratory session.

viii)Laboratory Ambience:

- Laboratories are spacious and provided with adequate ventilation and lighting.
- Internet connectivity and UPS backup are provided for laboratory computers.
- Lists of laboratory experiments are displayed in the respective laboratories.

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7.3. Maintenance of Laboratories and Overall Ambience

PERI INSTITUTE OF TECHNOLOGY (Autonomous)
Department of Electronics and Communication Engineering
Equipment / Lab Maintenance Sheet

Department	ECE	Date	27.12.24
Name of The Lab	MP &IC Lab	Reporting Month	Dec – 2024
Name of The Lab In-charge	Mr. Gokul Sundara Kumar	Name of the Lab Instructor	Mrs. Hemalatha

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	Power Card		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓		✓	✓			✓	✓
2	CRO Probe		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓		✓	✓			✓	✓
3	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	CRO					✓								✓					✓						✓							✓
2	RPS/KPS					✓								✓					✓						✓							✓
3	FG					✓								✓					✓						✓							✓
	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	8085 MP Kit									✓																						
2	8051 MC Kit									✓																						
3	8086 MP Kit									✓																						
4	Keyboards									✓																						
	Signature																															

Hemalatha

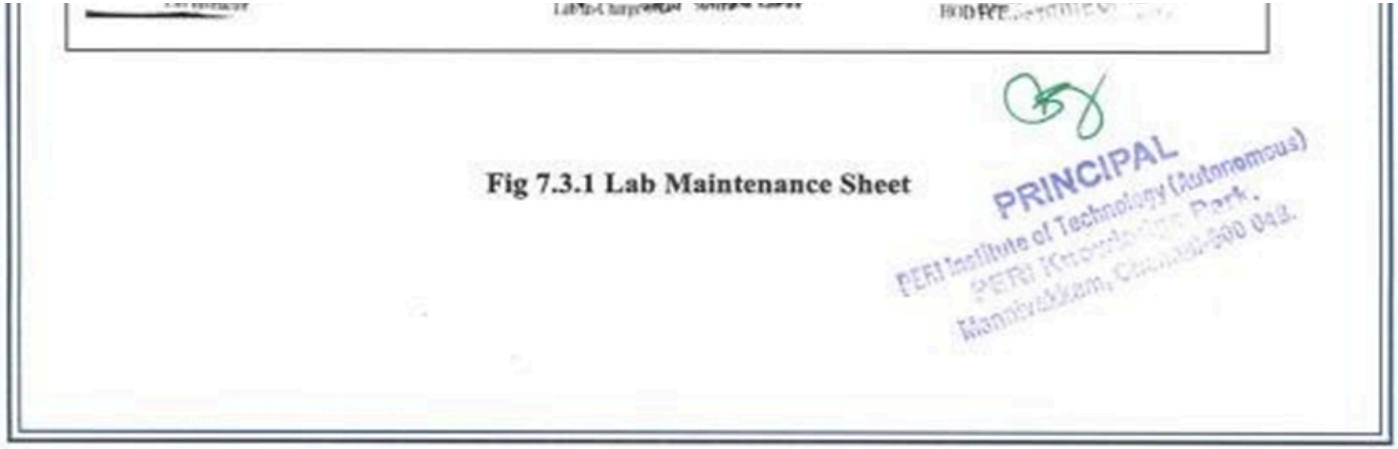


Fig 7.3.1 Lab Maintenance Sheet

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SERI Knowledge Park,
Mannivakkam, Chennai-600 048.

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PERI INSTITUTE OF TECHNOLOGY (Autonomous)
Department of Electronics and Communication Engineering
Breakdown Maintenance Sheet

Department	ECE	Date	23/12/24
Name of The Lab	Microprocessor Lab	Reporting Month	December
Name of The Lab In-charge	Mr. Gokul Surendra kumar	Name of the Lab Instructor	Mrs. Herradatha

Sl. No	Name of the Equipment	Details of Breakdown	Action Taken		Amount Spent in Rs.	Remarks	Signature of Lab in-charge	HOD Signature
			From	To				
1	up-8085	No program Execution	12/12/24	20/12/24	500/-	Good		
2	up-8086	In Correct output	13/12/24	20/12/24	600/-	Good		
3	up-8051	No memory read/write	12/12/24	20/12/24	700/-	Good		

B. Herradatha
Lab Instructor

Lab In-Charge
G. Gokul Surendra kumar

Head of the Department
ELECTRONICS AND COMMUNICATION ENGINEERING
PERI INSTITUTE OF TECHNOLOGY

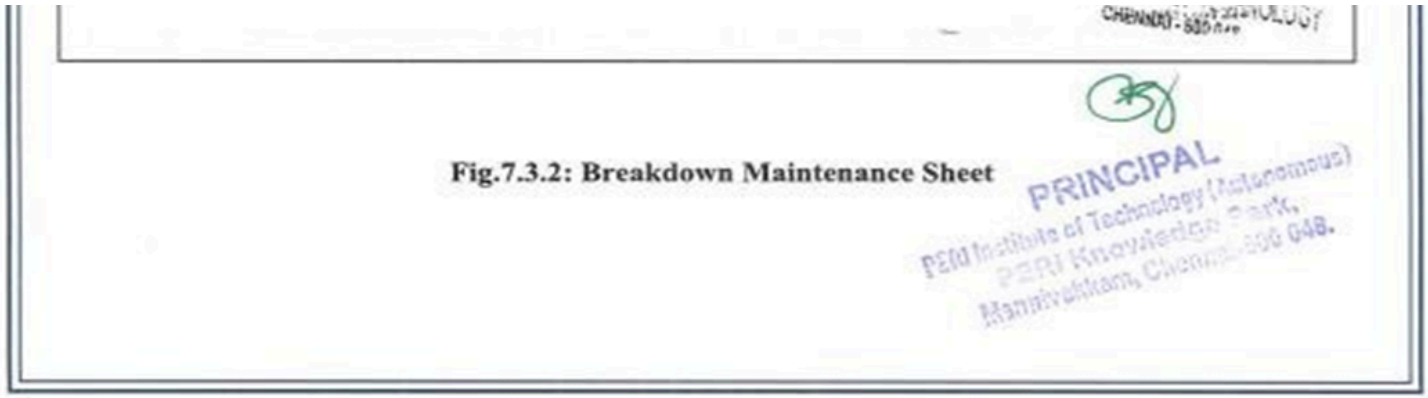


Fig.7.3.2: Breakdown Maintenance Sheet

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10

STOCK REGISTER

Name of Articles Cathode Ray oscilloscope Cost Rate

Date	PARTICULARS	V.No. or Bill No	RECEIPT Quantity		ISSUED Quantity		BALANCE Quantity	
05-05-11	Cathode Ray Oscilloscope (30MHz) SASTHA's No-4/203, Venkateswaran St, Madhavaram Main Road, Vellikal, Chennai – 117.	214	03		03		NIL	
			Total	38,475.00				
			VAT@4%	1,539.00				
			Grand Total	40014.00				
29-12-12	Cathode Ray oscilloscope (30MHz) Sastha's No-4/203, Venkateswaran St, Madhavaram Main Road, Vellaikal, Chennai-100	299	01		01		NIL	
			Total	14,060.00				
			VAT@5%	703.00				

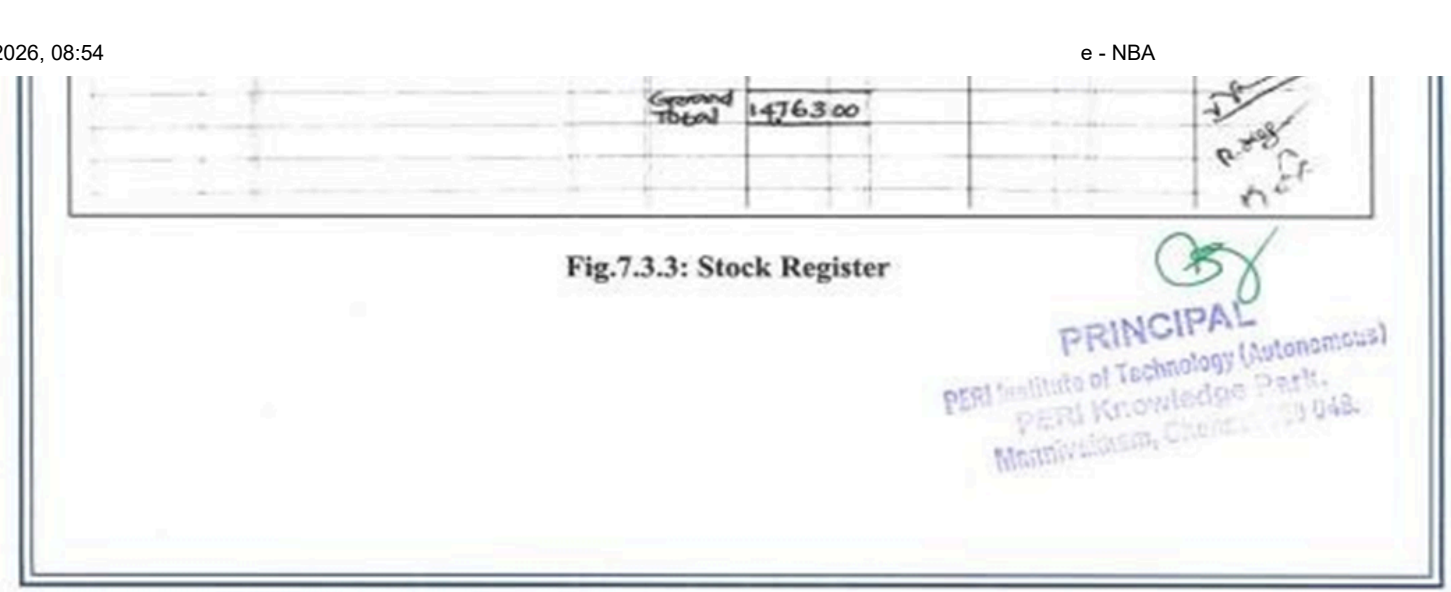


Fig.7.3.3: Stock Register

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Mannivakkam, Chennai-600 048.

7.4 Safety measures in laboratories (10)

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Electronic Devices and Circuits Laboratory	i. Switch off the power supply before making or modifying circuit connections. ii. Ensure proper earthing of all laboratory equipment and workbenches. iii. Avoid touching live circuits and exposed electrical connections. iv. Know the location of the fire extinguisher and first aid box and how to use them during emergencies. Fire extinguisher is in working condition, with an expiry date of 03.01.2027. v. Report damaged equipment, loose connections or electrical faults immediately to the faculty member or laboratory technician. vi. Avoid eating, drinking and unnecessary movement inside the laboratory. vii. Wear lab coat and shoes. viii. Do not remove, exchange or relocate laboratory components and equipment without permission. ix. Rings, bangles and other metal accessories should be removed before handling electrical equipment
2	Linear Integrated Circuits Laboratory	i. Switch off the power supply before inserting or removing ICs from the circuit. ii. Ensure correct power supply polarity and voltage levels before switching ON the circuits. iii. Handle ICs carefully and use proper ESD (Electrostatic Discharge) precautions. iv. Know the location of the fire extinguisher and first aid box and how to use them during emergencies. v. Report damaged equipment, loose connections or electrical faults immediately to the faculty member or laboratory technician. vi. Avoid eating, drinking and unnecessary movement inside the laboratory. vii. Wear lab coat and shoes. viii. Do not remove, exchange or relocate laboratory components and equipment without permission. ix. Rings, bangles and other metal accessories should be removed before handling electrical equipment.
3	Digital Signal Processing Laboratory	i. Ensure proper power connections and earthing for all computers and equipment. ii. Keep food and liquids away from computers and electronic equipment. iii. Switch off the equipment properly after completing the experiments. iv. Know the location of the fire extinguisher and first aid box and how to use them during emergencies. v. Avoid eating, drinking and unnecessary movement inside the laboratory. vi. Report damaged equipment, loose connections or electrical faults immediately to the faculty member or laboratory technician.
4	Communication Systems Laboratory	i. Ensure proper earthing of communication equipment and experimental setups. ii. Check all cables and connections before switching ON the equipment. iii. Avoid touching exposed terminals and RF connectors during operation. iv. Know the location of the fire extinguisher and first aid box and how to use them during emergencies. v. Avoid eating, drinking and unnecessary movement inside the laboratory. vi. Wear lab coat and shoes. vii. Report damaged equipment, loose connections or electrical faults immediately to the faculty member or laboratory technician.
5	Networks Laboratory	i. Ensure proper cable connections and avoid damaged network cables. ii. Keep computers, switches and networking equipment in a clean and ventilated environment. iii. Switch off the power supply before connecting or disconnecting hardware devices. iv. Know the location of the fire extinguisher and first aid box and how to use them during emergencies. v. Report damaged equipment, loose connections or electrical faults immediately to the faculty member or laboratory technician. vi. Wear lab coat and shoes.
6	Microprocessor and Microcontroller Laboratory	i. Switch off the power supply before connecting or removing interfacing kits and development boards. ii. Ensure correct power supply voltage and polarity for all microprocessor and microcontroller kits. iii. Ensure proper earthing and avoid handling electronic components with wet hands. iv. Know the location of the fire extinguisher and first aid box and how to use them during emergencies. v. Avoid eating, drinking and unnecessary movement inside the laboratory. vi. Wear lab coat and shoes. vii. Report damaged equipment, loose connections or electrical faults immediately to the faculty member or laboratory technician

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

Institute Marks : 10.00

The objective of these laboratories is to motivate and encourage students to undertake in-house projects. They provide space for students to develop and assemble mini and major projects, including projects in advanced technologies, preparing them for job readiness, problem-solving, and leadership in the industry.

Table No.7.5.1: List of project laboratory/research laboratory/Centre of Excellence

S. No	Name of the Laboratory	Details	Utilization
1.	Project Laboratory	Equipped with embedded system development kits, microcontroller and microprocessor kits, and free open-source embedded and VLSI software tools for programming, simulation, design and project development.	UG students utilize the laboratory for mini projects, major projects, hardware implementation, prototype development and participation in technical competitions
2.	Research and Innovation Laboratory	Xilinx ISE 9.1i, Xilinx Vivado 2025.2, ModelSim 10.1d	UG / PG students and faculty members utilize the laboratory for research work, project development, experimentation and innovation activities.
		Scilab v2.0	
		Keil µvision 5, STM32CubeIDE 2.2.0, LPC2148 ARM7-based microcontroller kits	
		Python version 3	
		PSpice 23.1 software for implementation of power circuits	
		LTspice 26.1.1, KiCad 10.0.8	
		Internet of 1000 mbps and Wi-Fi of 35mbps	

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Fig. 7.5.1: Project Laboratory



Fig.7.5.2: Research and Innovation Laboratory

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

8.1.1 Action Taken on CO's Attainment 2021-2025 Batch

1. CO-wise Attainment of Selected Courses

Course Code	Course Name	CO1 (%)	CO2 (%)	CO3 (%)	CO4 (%)	CO5 (%)
MA3355	Random Process and Linear Algebra	40.81	41.44	40.53	41.12	41.70
EC3353	Electronic Devices and Circuits	49.09	49.72	48.55	49.73	50.18
EC3452	Electromagnetic Fields	52.42	50.68	49.75	52.96	52.72
EC3451	Linear Integrated Circuits	54.74	54.89	55.16	55.43	55.14

2. Plan of Action to Bridge the Gaps / Improvement

S.No.	Course Code & Name	COs identified for improvement	Plan of Action
1	MA3355 – Random Process and Linear Algebra	CO1–CO5 (All below 60%)	Provide intensive remedial coaching on probability, random variables, random processes, correlation and spectral densities, vector spaces, and eigen-value problems. Conduct rigorous problem-solving sessions, assign unit-wise practice worksheets, and run short diagnostic tests after every unit.
2	EC3353 – Electronic Devices and Circuits	CO1–CO5 (All below 60%)	Reinforce concepts in PN junction and BJT/MOSFET characteristics, biasing, small-signal analysis, multistage and differential amplifiers, feedback, and oscillators. Introduce circuit simulation tools, conduct numerical problem-solving sessions, and provide mock test series.
3	EC3452 – Electromagnetic Fields	CO1–CO5 (All below 60%)	Provide remedial coaching on electrostatic fields, magneto-statics, Maxwells equations, and electromagnetic wave propagation. Introduce visual simulation software tools, conduct numerical problem-solving sessions, and assign unit-wise practice worksheets.
4	EC3451 – Linear Integrated Circuits	CO1–CO5 (All below 60%)	Strengthen concepts in op-amp characteristics, linear and non-linear applications, active filters, 555 timer, PLL, data converters, and voltage regulators. Provide design-oriented problems, simulation-based practice, and unit-wise mock tests to push attainment above the 60% target.

3. Implementation

S.No.	Course Code & Name	Implementation of Action
1	MA3355 – Random Process and Linear Algebra	Conducted additional tutorial classes on random variables and stationary processes. Issued step-by-step solved problem sheets for linear transformations, eigenvalues, and inner product spaces. Offered structured individual guidance and peer mentoring sessions to lower-performing students.
2	EC3353 – Electronic Devices and Circuits	Held dedicated tutorial sessions on biasing and small-signal equivalent models. Conducted simulation-based demonstrations of amplifier and oscillator circuits. Distributed practice worksheets and assigned supplementary laboratory exercises for weaker students.
3	EC3452 – Electromagnetic Fields	Conducted additional numerical tutorial classes mapping static fields to time-varying wave concepts. Issued step-by-step problem sheets for vector calculus setups and Maxwells derivations. Offered structured individual guidance sessions to lower-performing students.
4	EC3451 – Linear Integrated Circuits	Held tutorial sessions on op-amp circuit design and waveform generators. Conducted simulation-aided demonstrations of filters, PLL, and ADC/DAC circuits. Issued design problem sheets and assigned short quizzes after each unit.

4. Consolidated CO-wise Gap Identification

Course	Lowest CO	Attainment (%)	Highest CO	Attainment (%)	Observation
MA3355	CO3	40.53%	CO5	41.70%	All five COs are well below the 60% threshold and nearly uniform, indicating a foundational gap in the mathematical concepts across the cohort. Demands a baseline shift in instructional scaffolding.
EC3353	CO3	48.55%	CO5	50.18%	All COs fall roughly 10 points short of the target. CO3 is the weakest, pointing to difficulty in amplifier analysis and design problems.
EC3452	CO3	49.75%	CO4	52.96%	All COs remain below 60%, with CO3 the weakest. Field-theory and wave-propagation problem solving needs sustained reinforcement.
EC3451	CO1	54.74%	CO4	55.43%	All COs are close to, but still below, the 60% target (about 5 points short). Attainment is uniform, so targeted design practice can close the gap quickly.

The institutional Course Outcome (CO) attainment evaluation for the 2021-2025 batch was assessed against the established 60% program target benchmark.

Attainment gaps were flagged in all four selected courses, namely MA3355 (Random Process and Linear Algebra) at 41.12%, EC3353 (Electronic Devices and Circuits) at 49.45%, EC3452 (Electromagnetic Fields) at 51.71%, and EC3451 (Linear Integrated Circuits) at 55.07%, where average attainment across CO1–CO5 fell below the target.

MA3355 shows the widest gap, representing a structural conceptual bottleneck, while EC3451 is closest to the benchmark. To bridge the identified gaps, targeted remedial plans were deployed. These adjustments emphasized extra tutorial classes, simulation-aided visual breakdowns, custom-designed numerical worksheets, individual peer mentorship slots, and short-form diagnostic test series.

8.1.1 Action Taken on CO's Attainment 2020-2024 Batch

1. CO-wise Attainment of Selected Courses

Course Code	Course Name	CO1 (%)	CO2 (%)	CO3 (%)	CO4 (%)	CO5 (%)
MA8451	Probability and Random Processes	45.56	36.89	46.17	45.65	46.80

2. Plan of Action to Bridge the Gaps / Improvement

S.No.	Course Code & Name	COs identified for improvement	Plan of Action
1	MA8451 – Probability and Random Processes	CO1–CO5 (All below 60%)	Provide intensive remedial coaching on probability and random variables, standard distributions, two-dimensional random variables, random processes, correlation and spectral densities, and linear systems with random inputs. Conduct rigorous problem-solving sessions, assign unit-wise practice worksheets, and run short diagnostic tests after every unit, with special focus on CO2.

3. Implementation

S.No.	Course Code & Name	Implementation of Action
1	MA8451 – Probability and Random Processes	Conducted additional tutorial classes on random variables, joint distributions and stationary processes. Issued step-by-step solved problem sheets for correlation, spectral density and linear-system problems. Offered structured individual guidance and peer mentoring sessions to lower-performing students.

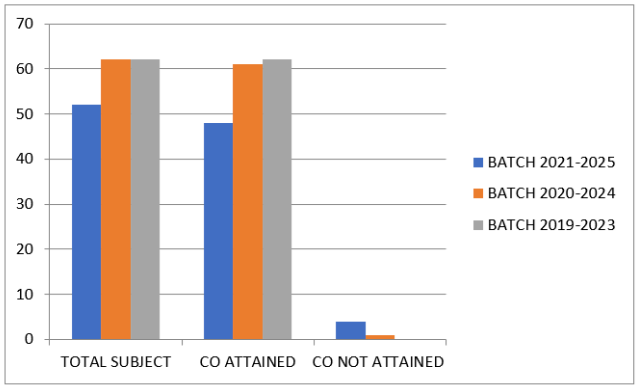
4. Consolidated CO-wise Gap Identification

Course	Lowest CO	Attainment (%)	Highest CO	Attainment (%)	Observation
MA8451	CO2	36.89%	CO5	46.80%	All five COs are below the 60% threshold, with CO2 the weakest, about 23 points short of the target. Attainment is low across the course, indicating a gap in the fundamentals of probability and random processes. Sustained reinforcement and unit-wise practice are needed.

The institutional Course Outcome (CO) attainment evaluation for the 2020-2024 batch was assessed against the established 60% program target benchmark.

An attainment gap was flagged in the selected course, namely MA8451 (Probability and Random Processes) at 44.21%, where average attainment across CO1–CO5 fell below the target.

MA8451 shows a wide gap, with CO2 (36.89%) as the weakest outcome and CO5 (46.80%) as the strongest, representing a conceptual bottleneck in probability and random-process fundamentals. To bridge the identified gap, targeted remedial plans were deployed. These adjustments emphasized extra tutorial classes, simulation-aided visual breakdowns, custom-designed numerical worksheets, individual peer mentorship slots, and short-form diagnostic test series.



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 2019-2023 Batch

POs	Target level	Attainment level	Observations
PO1: Engineering Knowledge			
PO1	**3**	**2.5**	**Attainment is low (below level 2.00) in the following subjects:** Communicative English; Fundamentals of Data Structures In C; Environmental Science and Engineering; Communication Networks; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Wireless Networks; Hospitality Management **Observations :** 1. Students are not exposed to basic fundamental in the mathematical /Problem Oriented Subjects. 2. Students find it difficult to solve design related subjects. 3. Basic knowledge of analysis is not well understood. 4. Subject involves both analysis and design which confuses. 5. Solving design procedure problems found to be lengthy at times. 6. Diploma (Lateral Entry) Students find difficulty in solving higher integration problems.

Actions

1. Additional classes to be conducted to introduce Electronics and Communication engineering fundamentals.

2. More design and analysis classes to be taught in tutorial classes.

3. More emphasis on mathematical basics to be given in the previous course.

4. Practical approach of teaching to be adapted.

5. More problems will be given for practice.

PO2: Problem Analysis

Attainment is low (below level 2.00) in the following subjects:

Engineering Chemistry; Engineering Graphics; Fundamentals of Data Structures In C; Environmental Science and Engineering; Communication Networks; Renewable Energy Sources; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Hospitality Management

PO2 **3** **2.35**

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics

2. Students find it difficult to solve the engineering problems

3. Basic knowledge of design is not well understood

4. Subject involves both analysis and design

5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce Electronics and Communication Engineering fundamentals.

2. More design classes to be taught in tutorial classes.

3. More emphasis on mathematical basics to be given in the previous course.

4. Practical approach of teaching to be adapted.

5. More problems will be given as part of assignment and the same will be monitored on a regular basis.

6. Regularly appearing questions will be solved in the classes.

PO3: Design / Development of Solutions

			Attainment is low (below level 2.00) in the following subjects:
PO3	**3**	**1.93**	Communicative English; Engineering Mathematics-I; Engineering Physics; Engineering Chemistry; Engineering Mathematics–II; Fundamentals of Data Structures In C; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Probability and Random Processes; Circuits Design and Simulation Laboratory; Communication Networks; Communication Networks Laboratory; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management; Embedded Laboratory

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics

2. Students find it difficult to solve the engineering problems

3. Basic knowledge of design is not well understood

4. Subject involves both analysis and design

5. Solving design problems found to be lengthy

Actions

1. Core subjects are taught with the help of NPTEL video presentations.

2. Additional classes to be conducted to introduce Electronics and Communication Engineering fundamentals.

3. More design classes to be taught in tutorial classes.

4. More emphasis on mathematical basics to be given in the previous course.

5. Practical approach of teaching to be adapted.

6. More problems will be given for assignment practice.

PO4: Conduct Investigations of Complex Problems

			Attainment is low (below level 2.00) in the following subjects:
PO4	**3**	**1.83**	Engineering Mathematics-I; Engineering Physics; Engineering Chemistry; Engineering Mathematics–II; Basic Civil and Mechanical Engineering; Linear Algebra and Partial Differential Equations; Fundamentals of Data Structures In C; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Probability and Random Processes; Environmental Science and Engineering; Circuits Design and Simulation Laboratory; Computer Architecture and Organization; Communication Networks; Communication Systems Laboratory; Communication Networks Laboratory; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management; Embedded Laboratory

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics

2. Students find it difficult to solve the engineering problems

3. Basic knowledge of design is not well understood

4. Subject involves both analysis and design

5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce Electronics and Communication engineering fundamentals.

2. More emphasis on mathematical basics to be given in the previous course.

3. Practical approach of teaching to be adapted.

4. More problems will be given for practice.

5. Conduction of Science Fest and motivating students to prepare/build prototype models.

PO5: Engineering Tool Usage

			Attainment is low (below level 2.00) in the following subjects:
PO5	**3**	**1.74**	Engineering Physics; Engineering Chemistry; Engineering Mathematics–II; Linear Algebra and Partial Differential Equations; Fundamentals of Data Structures In C; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Digital Communication; Computer Architecture and Organization; Communication Networks; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management; Satellite Communication

Observations :

1. Time bound constraints.

2. Lateral entry Students are not exposed to basic of Engineering.

3. Basic knowledge of design is not well understood.

4. Solving circuit design and simulation problems found to be lengthy.

Actions

1. Additional classes to be conducted to introduce practical knowledge.

2. Students should be given individual Systems to work on software's.

3. Use of Projector will be more beneficial.

4. More problems will be given for practice and conducting extra classes.

PO6: The Engineer and the World

			Attainment is low (below level 2.00) in the following subjects:
PO6	**3**	**1.66**	Engineering Chemistry; Engineering Mathematics–II; Basic Civil and Mechanical Engineering; Fundamentals of Data Structures In C; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Interpersonal Skills/Listening & Speaking; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Environmental Science and Engineering; Circuits Design and Simulation Laboratory; Linear Integrated Circuits Laboratory; Digital Communication; Discrete-Time SignalProcessing; Computer Architecture and Organization; Communication Networks; Communication Systems Laboratory; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Principles of Management; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Embedded Laboratory; Professional Ethics in Engineering; Satellite Communication
			Observations : 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce basics.
2. More examples on the subject to be practiced by students in extra classes.
3. More problems will be given for practice.

PO7: Ethics

			No subject has attainment below level 2.00 for this outcome.
PO7	**3**	**2.26**	**Engineering Mathematics–II; Circuit Analysis; Interpersonal Skills/Listening & Speaking; Environmental Science and Engineering; Principles of Management** Attainment is satisfactory across the mapped subjects; the practices below will be continued.

Actions

1. Additional classes to be conducted to introduce basics.
2. More examples on the subject to be practiced by students in extra classes.

3. More problems will be given for practice/Assignments.

PO8: Individual and Collaborative Team Work

Attainment is low (below level 2.00) in the following subjects:

Communicative English; Basic Civil and Mechanical Engineering; Interpersonal Skills/Listening & Speaking

PO8 3 2.35

Observations :

1. Lateral entry Students are not exposed to basic of engineering.

2. Students find it difficult to solve the engineering problems

Actions

1. Additional classes to be conducted to teach management based subjects.

2. Practical approach of teaching method should be adapted.

PO9: Communication

Attainment is low (below level 2.00) in the following subjects:

Engineering Mathematics-I; Circuit Analysis; Interpersonal Skills/Listening & Speaking; Environmental Science and Engineering; Principles of Management

PO9 3 2.35

Observations :

1. Students are not showing interest in Real time projects.

2. Students find it difficult to solve the engineering problems.

3. Basic knowledge of design is not well understood.

Actions

1. Additional classes to be conducted to motivate students to do projects.

2. Students should be sent to Industries to do project.

3. Students should be sent to other colleges/universities to contact higher resource persons.

4. Students should be sent to nearby testing centers to conduct any tests/experiments.

PO10: Project Management and Finance

			Attainment is low (below level 2.00) in the following subjects:
PO10	**3**	**1.78**	Linear Algebra and Partial Differential Equations; Fundamentals of Data Structures In C; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Discrete-Time SignalProcessing; Total Quality Management; Communication Systems Laboratory; Microprocessors and Microcontrollers; Wireless Communication; Principles of Management; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management; Embedded Laboratory; Satellite Communication
			Observations :
			1. Solving design problems found to be lengthy.

Actions

1. More problems will be given for practice.

PO11: Life-Long Learning

			Attainment is low (below level 2.00) in the following subjects:
PO11	**3**	**1.94**	Engineering Physics; Engineering Chemistry; Electronic devices; Linear Algebra and Partial Differential Equations; Fundamentals of Data Structures In C; Signals and Systems; Digital Electronics; Control Systems Engineering; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Linear Integrated Circuits; Environmental Science and Engineering; Circuits Design and Simulation Laboratory; Computer Architecture and Organization; Communication Networks; Renewable Energy Sources; Communication Systems Laboratory; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Principles of Management; Wireless Networks; Microprocessors and Microcontrollers Laboratory; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management; Satellite Communication
			Observations :
			1. Solving problems found to be lengthy.

Actions

1. More problems will be given for practice.

PSOs Attainment levels & actions for improvement

PSOs	Target level	Attainment level	Observations
PSO1: Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.			
PSO1	3.00	2.04	**Attainment is low (below level 2.00) in the following subjects:** Fundamentals of Data Structures In C; Fundamentals of Data Structures in C Laboratory; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Circuits Design and Simulation Laboratory; Communication Networks; Total Quality Management; Renewable Energy Sources; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Principles of Management; Wireless Networks; Microprocessors and Microcontrollers Laboratory; Professional Communication; VLSI Design Laboratory; Antennas and Microwave Engineering; Hospitality Management **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

PSO2: Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.

PSOs	Target level	Attainment level	Observations
PSO2	3.00	2.03	**Attainment is low (below level 2.00) in the following subjects:** Electronic devices; Circuits and Devices Laboratory; Engineering practices laboratory; Fundamentals of Data Structures In C; Electronic Circuits - I; Digital Electronics; Fundamentals of Data Structures in C Laboratory; Analog and Digital Circuits Laboratory; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Circuits Design and Simulation Laboratory; Digital Communication; Communication Networks; Renewable Energy Sources; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Principles of Management; Wireless Networks; Antennas and Microwave Engineering; Hospitality Management **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

PSO3: Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems.

PSOs	Target level	Attainment level	Observations
PSO3	3.00	2.03	**Attainment is low (below level 2.00) in the following subjects:** Electronic devices; Circuits and Devices Laboratory; Engineering practices laboratory; Fundamentals of Data Structures In C; Electronic Circuits - I; Digital Electronics; Fundamentals of Data Structures in C Laboratory; Analog and Digital Circuits Laboratory; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Circuits Design and Simulation Laboratory; Digital Communication; Communication Networks; Renewable Energy Sources; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Principles of Management; Wireless Networks; Antennas and Microwave Engineering; Hospitality Management **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

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

PO & PSO's Attainment 2020-2024 Batch

POs	Target level	Attainment level	Observations

PO1: Engineering Knowledge

PO1	**3**	**2.45**	**Attainment is low (below level 2.00) in the following subjects:** Communicative English; Probability and Random Processes; Communication Theory; Environmental Science and Engineering; Communication Networks; VLSI Design; Transmission Lines and RF Systems; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering **Observations :** 1. Students are not exposed to basic fundamental in the mathematical /Problem Oriented Subjects. 2. Students find it difficult to solve design related subjects. 3. Basic knowledge of analysis is not well understood. 4. Subject involves both analysis and design which confuses. 5. Solving design procedure problems found to be lengthy at times. 6. Diploma (Lateral Entry) Students find difficulty in solving higher integration problems.

Actions

1. Additional classes to be conducted to introduce Electronics and Communication engineering fundamentals.

2. More design and analysis classes to be taught in tutorial classes.

3. More emphasis on mathematical basics to be given in the previous course.

4. Practical approach of teaching to be adapted.

5. More problems will be given for practice.

PO2: Problem Analysis

PO2	**3**	**2.29**	**Attainment is low (below level 2.00) in the following subjects:** Engineering Chemistry; Engineering Graphics; Probability and Random Processes; Communication Theory; Environmental Science and Engineering; Communication Networks; Renewable Energy Sources; VLSI Design; Transmission Lines and RF Systems; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce Electronics and Communication Engineering fundamentals.

2. More design classes to be taught in tutorial classes.

3. More emphasis on mathematical basics to be given in the previous course.

4. Practical approach of teaching to be adapted.

5. More problems will be given as part of assignment and the same will be monitored on a regular basis.

6. Regularly appearing questions will be solved in the classes.

PO3: Design / Development of Solutions

PO3	**3**	**1.9**	**Attainment is low (below level 2.00) in the following subjects:** Communicative English; Engineering Mathematics-I; Engineering Physics; Engineering Chemistry; Engineering Mathematics–II; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Communication Networks; Communication Networks Laboratory; VLSI Design; Wireless Communication; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Embedded Laboratory **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Core subjects are taught with the help of NPTEL video presentations.

2. Additional classes to be conducted to introduce Electronics and Communication Engineering fundamentals.

3. More design classes to be taught in tutorial classes.

4. More emphasis on mathematical basics to be given in the previous course.

5. Practical approach of teaching to be adapted.

6. More problems will be given for assignment practice.

PO4: Conduct Investigations of Complex Problems

PO4	**3**	**1.8**	**Attainment is low (below level 2.00) in the following subjects:** Engineering Mathematics-I; Engineering Physics; Engineering Chemistry; Engineering Mathematics–II; Basic Electrical and Instrumentation Engineering; Linear Algebra and Partial Differential Equations; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Environmental Science and Engineering; Circuits Design and Simulation Laboratory; Computer Architecture and Organization; Communication Networks; Communication Systems Laboratory; Communication Networks Laboratory; VLSI Design; Wireless Communication; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Embedded Laboratory **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce Electronics and Communication engineering fundamentals.

2. More emphasis on mathematical basics to be given in the previous course.

3. Practical approach of teaching to be adapted.

4. More problems will be given for practice.

5. Conduction of Science Fest and motivating students to prepare/build prototype models.

PO5: Engineering Tool Usage

PO5	**3**	**1.72**	**Attainment is low (below level 2.00) in the following subjects:** Engineering Physics; Engineering Chemistry; Engineering Mathematics–II; Linear Algebra and Partial Differential Equations; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Digital Communication; Computer Architecture and Organization; Communication Networks; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering **Observations :** 1. Time bound constraints. 2. Lateral entry Students are not exposed to basic of Engineering. 3. Basic knowledge of design is not well understood. 4. Solving circuit design and simulation problems found to be lengthy.

Actions

1. Additional classes to be conducted to introduce practical knowledge.

2. Students should be given individual Systems to work on software's.

3. Use of Projector will be more beneficial.

4. More problems will be given for practice and conducting extra classes.

PO6: The Engineer and the World

PO6	**3**	**1.67**	**Attainment is low (below level 2.00) in the following subjects:** Engineering Chemistry; Basic Electrical and Instrumentation Engineering; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Fundamentals of Data Structures in C Laboratory; Interpersonal Skills/Listening & Speaking; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Environmental Science and Engineering; Circuits Design and Simulation Laboratory; Linear Integrated Circuits Laboratory; Digital Communication; Discrete-Time Signal Processing; Computer Architecture and Organization; Communication Networks; Communication Systems Laboratory; Microprocessors and Microcontrollers; VLSI Design; Wireless Communication; Principles of Management; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Embedded Laboratory; Professional Ethics in Engineering **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce basics.

2. More examples on the subject to be practiced by students in extra classes.

3. More problems will be given for practice.

PO7: Ethics

PO7	**3**	**2.39**	**No subject has attainment below level 2.00 for this outcome.** **Circuit Analysis; Interpersonal Skills/Listening & Speaking; Environmental Science and Engineering; Principles of Management** Attainment is satisfactory across the mapped subjects; the practices below will be continued.

Actions

1. Additional classes to be conducted to introduce basics.

2. More examples on the subject to be practiced by students in extra classes.

3. More problems will be given for practice/Assignments.

PO8: Individual and Collaborative Team Work

Attainment is low (below level 2.00) in the following subjects:

Communicative English; Engineering Physics; Basic Electrical and Instrumentation Engineering; Interpersonal Skills/Listening & Speaking

PO8 **3** **2.21**

Observations :

1. Lateral entry Students are not exposed to basic of engineering.

2. Students find it difficult to solve the engineering problems

Actions

1. Additional classes to be conducted to teach management based subjects.

2. Practical approach of teaching method should be adapted.

PO9: Communication

Attainment is low (below level 2.00) in the following subjects:

Circuit Analysis; Interpersonal Skills/Listening & Speaking; Linear Integrated Circuits; Environmental Science and Engineering; Principles of Management

PO9 **3** **2.35**

Observations :

1. Students are not showing interest in Real time projects.

2. Students find it difficult to solve the engineering problems.

3. Basic knowledge of design is not well understood.

Actions

1. Additional classes to be conducted to motivate students to do projects.

2. Students should be sent to Industries to do project.

3. Students should be sent to other colleges/universities to contact higher resource persons.

4. Students should be sent to nearby testing centers to conduct any tests/experiments.

PO10: Project Management and Finance

PO10	**3**	**1.74**	**Attainment is low (below level 2.00) in the following subjects:** Linear Algebra and Partial Differential Equations; Electronic Circuits - I; Signals and Systems; Digital Electronics; Control Systems Engineering; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Discrete-Time Signal Processing; Total Quality Management; Communication Systems Laboratory; Microprocessors and Microcontrollers; Wireless Communication; Principles of Management; Transmission Lines and RF Systems; Wireless Networks; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Optical Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management; Embedded Laboratory **Observations :** 1. Solving design problems found to be lengthy.

Actions

1. More problems will be given for practice.

PO11: Life-Long Learning

PO11	**3**	**1.87**	**Attainment is low (below level 2.00) in the following subjects:** Engineering Physics; Engineering Chemistry; Electronic devices; Linear Algebra and Partial Differential Equations; Signals and Systems; Digital Electronics; Control Systems Engineering; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Environmental Science and Engineering; Circuits Design and Simulation Laboratory; Computer Architecture and Organization; Communication Networks; Renewable Energy Sources; Communication Systems Laboratory; Microprocessors and Microcontrollers; VLSI Design; Principles of Management; Transmission Lines and RF Systems; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management **Observations :** 1. Solving problems found to be lengthy.

Actions

1. More problems will be given for practice.

PSOs Attainment levels & actions for improvement

PSOs	Target level	Attainment level	Observations
PSO1: Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.			
PSO1	**3.00**	**1.95**	**Attainment is low (below level 2.00) in the following subjects:** Fundamentals of Data Structures in C Laboratory; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Communication Networks; Total Quality Management; Renewable Energy Sources; VLSI Design; Principles of Management; Transmission Lines and RF Systems; Microprocessors and Microcontrollers Laboratory; VLSI Design Laboratory; Professional Communication; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management; Professional Ethics in Engineering **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

PSO2: Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.

PSOs	Target level	Attainment level	Observations
PSO2	3.00	1.97	**Attainment is low (below level 2.00) in the following subjects:** Electronic devices; Engineering practices laboratory; Electric Circuits Laboratory; Electronic Circuits - I; Digital Electronics; Fundamentals of Data Structures in C Laboratory; Analog and Digital Circuits Laboratory; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Digital Communication; Communication Networks; Renewable Energy Sources; VLSI Design; Principles of Management; Transmission Lines and RF Systems; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

PSO3: Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems.

PSOs	Target level	Attainment level	Observations
PSO3	3.00	1.97	**Attainment is low (below level 2.00) in the following subjects:** Electronic devices; Engineering practices laboratory; Electric Circuits Laboratory; Electronic Circuits - I; Digital Electronics; Fundamentals of Data Structures in C Laboratory; Analog and Digital Circuits Laboratory; Interpersonal Skills/Listening & Speaking; Probability and Random Processes; Electronic Circuits-II; Communication Theory; Linear Integrated Circuits; Circuits Design and Simulation Laboratory; Digital Communication; Communication Networks; Renewable Energy Sources; VLSI Design; Principles of Management; Transmission Lines and RF Systems; Embedded and Real Time Systems; Ad hoc and Wireless Sensor Networks; Antennas and Microwave Engineering; Hospitality Management **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

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

PO & PSO's Attainment 2021-2025 Batch

POs	Target level	Attainment level	Observations
PO1: Engineering Knowledge			
			Attainment is low (below level 2.00) in the following subjects: Professional English –I; Electrical and Instrumentation Engineering; Random Processes and Linear Algebra; C Programming and Data Structures; Electronic Devices and Circuits; Electromagnetic Fields; Linear Integrated Circuits; Communication Systems; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; Principles of Management
PO1	**3**	**2.22**	**Observations :** 1. Students are not exposed to basic fundamental in the mathematical /Problem Oriented Subjects. 2. Students find it difficult to solve design related subjects. 3. Basic knowledge of analysis is not well understood. 4. Subject involves both analysis and design which confuses. 5. Solving design procedure problems found to be lengthy at times. 6. Diploma (Lateral Entry) Students find difficulty in solving higher integration problems.

Actions

1. Additional classes to be conducted to introduce Electronics and Communication engineering fundamentals.

2. More design and analysis classes to be taught in tutorial classes.

3. More emphasis on mathematical basics to be given in the previous course.

4. Practical approach of teaching to be adapted.

5. More problems will be given for practice.

PO2: Problem Analysis

Attainment is low (below level 2.00) in the following subjects:

Engineering Chemistry; Physics for Electronics Engineering; Electrical and Instrumentation Engineering; Engineering Graphics; Random Processes and Linear Algebra; C Programming and Data Structures; Electronic Devices and Circuits; Electromagnetic Fields; Linear Integrated Circuits; Communication Systems; Environmental Sciences and Sustainability; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; Principles of Management

PO2 3 2.13

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics

2. Students find it difficult to solve the engineering problems

3. Basic knowledge of design is not well understood

4. Subject involves both analysis and design

5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce Electronics and Communication Engineering fundamentals.

2. More design classes to be taught in tutorial classes.

3. More emphasis on mathematical basics to be given in the previous course.

4. Practical approach of teaching to be adapted.

5. More problems will be given as part of assignment and the same will be monitored on a regular basis.

6. Regularly appearing questions will be solved in the classes.

PO3: Design / Development of Solutions

Attainment is low (below level 2.00) in the following subjects:

Professional English –I; Matrices and Calculus; Engineering Physics; Engineering Chemistry; Statistics and Numerical Methods; Physics for Electronics Engineering; Electrical and Instrumentation Engineering; C Programming and Data Structures; Electronic Devices and Circuits; C Programming and Data Structures Laboratory; Electromagnetic Fields; Linear Integrated Circuits; Communication Systems; Environmental Sciences and Sustainability; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; Principles of Management; Mechatronics

PO3 3 1.85

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics

2. Students find it difficult to solve the engineering problems

3. Basic knowledge of design is not well understood

4. Subject involves both analysis and design

5. Solving design problems found to be lengthy

Actions

1. Core subjects are taught with the help of NPTEL video presentations.

2. Additional classes to be conducted to introduce Electronics and Communication Engineering fundamentals.

3. More design classes to be taught in tutorial classes.

4. More emphasis on mathematical basics to be given in the previous course.

5. Practical approach of teaching to be adapted.

6. More problems will be given for assignment practice.

PO4: Conduct Investigations of Complex Problems

Attainment is low (below level 2.00) in the following subjects:

Matrices and Calculus; Engineering Physics; Engineering Chemistry; Statistics and Numerical Methods; Physics for Electronics Engineering; Circuit Analysis; C Programming and Data Structures; Electronic Devices and Circuits; Electromagnetic Fields; Linear Integrated Circuits; Communication Systems; Environmental Sciences and Sustainability; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; Principles of Management

PO4 3 1.81

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics

2. Students find it difficult to solve the engineering problems

3. Basic knowledge of design is not well understood

4. Subject involves both analysis and design

5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce Electronics and Communication engineering fundamentals.

2. More emphasis on mathematical basics to be given in the previous course.

3. Practical approach of teaching to be adapted.

4. More problems will be given for practice.

5. Conduction of Science Fest and motivating students to prepare/build prototype models.

PO5: Engineering Tool Usage

			Attainment is low (below level 2.00) in the following subjects:
PO5	**3**	**1.5**	Engineering Physics; Engineering Chemistry; Problem Solving and Python Programming; Statistics and Numerical Methods; Physics for Electronics Engineering; Engineering Graphics; C Programming and Data Structures; Electronic Devices and Circuits; Control Systems; Electromagnetic Fields; Communication Systems; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; VLSI Laboratory; Advanced Wireless Communication Techniques; Principles of Management

Observations :

1. Time bound constraints.

2. Lateral entry Students are not exposed to basic of Engineering.

3. Basic knowledge of design is not well understood.

4. Solving circuit design and simulation problems found to be lengthy.

Actions

1. Additional classes to be conducted to introduce practical knowledge.

2. Students should be given individual Systems to work on software's.

3. Use of Projector will be more beneficial.

4. More problems will be given for practice and conducting extra classes.

PO6: The Engineer and the World

			Attainment is low (below level 2.00) in the following subjects:
PO6	**3**	**1.43**	Engineering Chemistry; C Programming and Data Structures; Signals and Systems; Electronic Devices and Circuits; Control Systems; Electronic Devices and Circuits Laboratory; C Programming and Data Structures Laboratory; Electromagnetic Fields; Networks and Security; Communication Systems; Environmental Sciences and Sustainability; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; Advanced Wireless Communication Techniques; Wireless Sensor Network Design; Human Values and Ethics; Principles of Management; Project Work / Internship

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics

2. Students find it difficult to solve the engineering problems

3. Basic knowledge of design is not well understood

4. Subject involves both analysis and design

5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce basics.

2. More examples on the subject to be practiced by students in extra classes.

3. More problems will be given for practice.

PO7: Ethics

			No subject has attainment below level 2.00 for this outcome.
PO7	**3**	**0.7**	Circuit Analysis; C Programming and Data Structures; Professional Development; Electromagnetic Fields; Satellite Communication; Principles of Management; IT in Agricultural System
			Attainment is satisfactory across the mapped subjects; the practices below will be continued.

Actions

1. Additional classes to be conducted to introduce basics.

2. More examples on the subject to be practiced by students in extra classes.

3. More problems will be given for practice/Assignments.

PO8: Individual and Collaborative Team Work

			Attainment is low (below level 2.00) in the following subjects:
PO8	**3**	**0.82**	Statistics and Numerical Methods; Electrical and Instrumentation Engineering; Random Processes and Linear Algebra; C Programming and Data Structures; C Programming and Data Structures Laboratory; Professional Development
			Observations :
			1. Lateral entry Students are not exposed to basic of engineering.
			2. Students find it difficult to solve the engineering problems

Actions

1. Additional classes to be conducted to teach management based subjects.

2. Practical approach of teaching method should be adapted.

PO9: Communication

Attainment is low (below level 2.00) in the following subjects:

Professional English –I; Circuit Analysis; C Programming and Data Structures; C Programming and Data Structures Laboratory; Communication Systems Laboratory; Transmission lines and RF Systems; Satellite Communication

PO9 **3** **0.91**

Observations :

1. Students are not showing interest in Real time projects.

2. Students find it difficult to solve the engineering problems.

3. Basic knowledge of design is not well understood.

Actions

1. Additional classes to be conducted to motivate students to do projects.

2. Students should be sent to Industries to do project.

3. Students should be sent to other colleges/universities to contact higher resource persons.

4. Students should be sent to nearby testing centers to conduct any tests/experiments.

PO10: Project Management and Finance

Attainment is low (below level 2.00) in the following subjects:

PO10 **3** **1.09**

Statistics and Numerical Methods; C Programming and Data Structures; Control Systems; C Programming and Data Structures Laboratory; Electromagnetic Fields; Networks and Security; Linear Integrated Circuits; Digital Signal Processing; Communication Systems; Communication Systems Laboratory; Linear Integrated Circuits Laboratory; VLSI and Chip Design; VLSI Laboratory; Principles of Management

Observations :

1. Solving design problems found to be lengthy.

Actions

1. More problems will be given for practice.

PO11: Life-Long Learning

			Attainment is low (below level 2.00) in the following subjects: Engineering Physics; Engineering Chemistry; Physics for Electronics Engineering; Random Processes and Linear Algebra; C Programming and Data Structures; Electronic Devices and Circuits; Electronic Devices and Circuits Laboratory; Electromagnetic Fields; Networks and Security; Linear Integrated Circuits; Digital Signal Processing; Communication Systems; Environmental Sciences and Sustainability; Communication Systems Laboratory; Linear Integrated Circuits Laboratory; Wireless Communication; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; VLSI Laboratory; Artificial Intelligence and Machine Learning; Principles of Management **Observations :** 1. Solving problems found to be lengthy.
PO11	**3**	**1.65**	

Actions

1. More problems will be given for practice.

PSOs Attainment levels & actions for improvement

PSOs	Target level	Attainment level	Observations
PSO1: Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.			
			Attainment is low (below level 2.00) in the following subjects: C Programming and Data Structures; Signals and Systems; Electronic Devices and Circuits; Professional Development; Electromagnetic Fields; Linear Integrated Circuits; Communication Systems; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; Principles of Management; Project Work / Internship
PSO1	**3.00**	**1.38**	**Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

PSOs	Target level	Attainment level	Observations

PSO2: Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.

Attainment is low (below level 2.00) in the following subjects:

Engineering Practices Laboratory; C Programming and Data Structures; Electronic Devices and Circuits; Electronic Devices and Circuits Laboratory; Electromagnetic Fields; Linear Integrated Circuits; Communication Systems; VLSI and Chip Design; Transmission lines and RF Systems; Optical Communication and Networks; Satellite Communication; Image Processing; Wireless Sensor Network Design; Principles of Management

PSO2	**3.00**	**1.31**	

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics
2. Students find it difficult to solve the engineering problems
3. Basic knowledge of design is not well understood
4. Subject involves both analysis and design
5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

PSO3: Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems.

PSOs	Target level	Attainment level	Observations
PSO3	3.00	0.76	**Attainment is low (below level 2.00) in the following subjects:** Engineering Physics; Physics and Chemistry Laboratory; English Laboratory; Professional English–II; Statistics and Numerical Methods; Physics for Electronics Engineering; Circuit Analysis; Circuits Analysis Laboratory; Random Processes and Linear Algebra; Control Systems; C Programming and Data Structures Laboratory; Linear Integrated Circuits; Communication Systems; Communication Systems Laboratory; Wireless Communication; Transmission lines and RF Systems; Satellite Communication; Image Processing; Principles of Management; IT in Agricultural System; Summer internship

Observations :

1. Lateral entry Students are not exposed to basic of engineering mathematics
2. Students find it difficult to solve the engineering problems
3. Basic knowledge of design is not well understood
4. Subject involves both analysis and design
5. Solving design problems found to be lengthy

Actions

1. Additional classes to be conducted to introduce design subjects.
2. Practical approach of teaching design to be adapted.
3. More problems will be given for practice.

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

Institute Marks : 15.00

8.2 Academic audit

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.

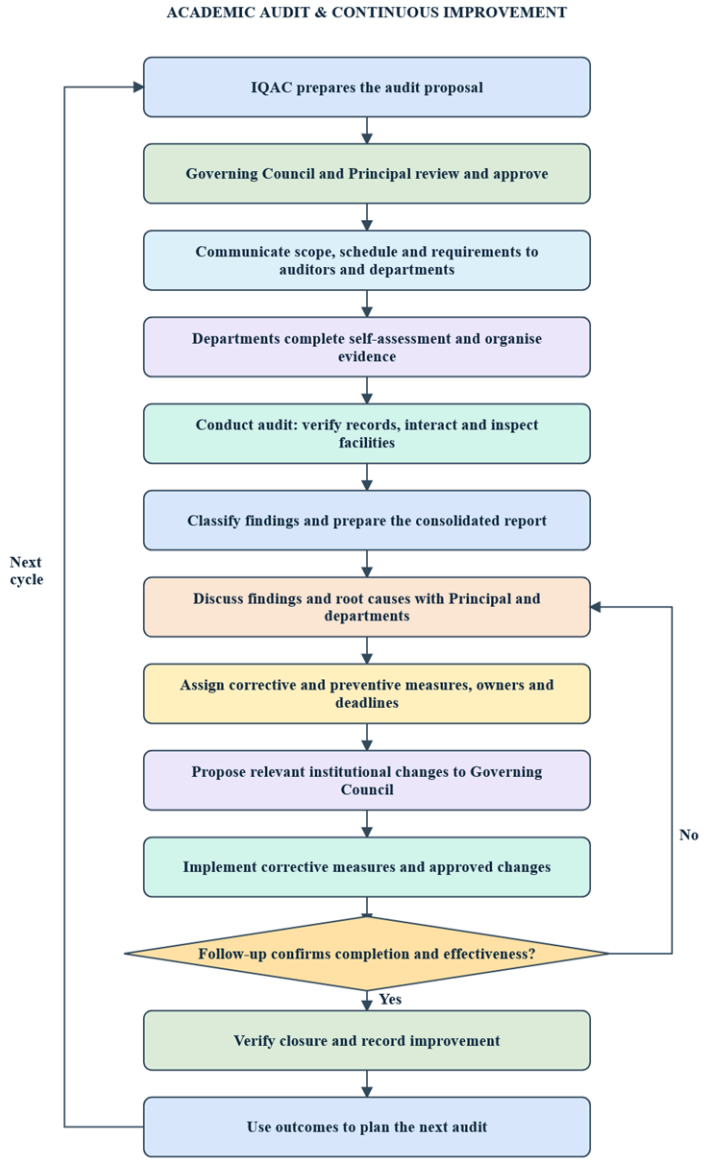
An action is closed after verification of completion and effectiveness. Actions requiring further intervention remain open and are reviewed again. The institutional closure record consolidates total findings, major and minor non-conformities closed, observations and improvement opportunities addressed, completed CAPA, pending actions and the next follow-up date.

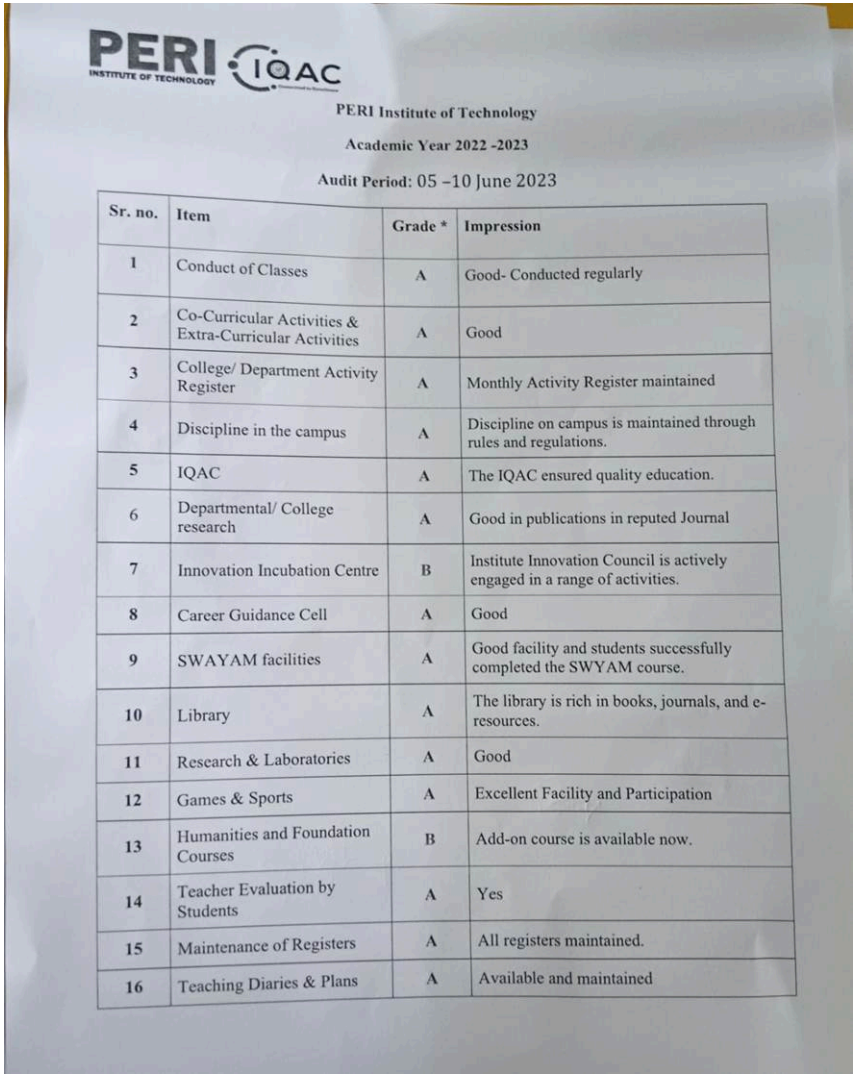
10.Linkage with continuous improvement

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.


ACADEMIC AUDIT & CONTINUOUS IMPROVEMENT
IQAC prepares the audit proposal
Governing Council and Principal review and approve
Communicate scope, schedule and requirements to auditors and departments
Departments complete self-assessment and organise evidence
Conduct audit: verify records, interact and inspect facilities
Classify findings and prepare the consolidated report
Discuss findings and root causes with Principal and departments
Assign corrective and preventive measures, owners and deadlines
Propose relevant institutional changes to Governing Council
Implement corrective measures and approved changes
Follow-up confirms completion and effectiveness?
No
Yes
Verify closure and record improvement
Use outcomes to plan the next audit
Next cycle



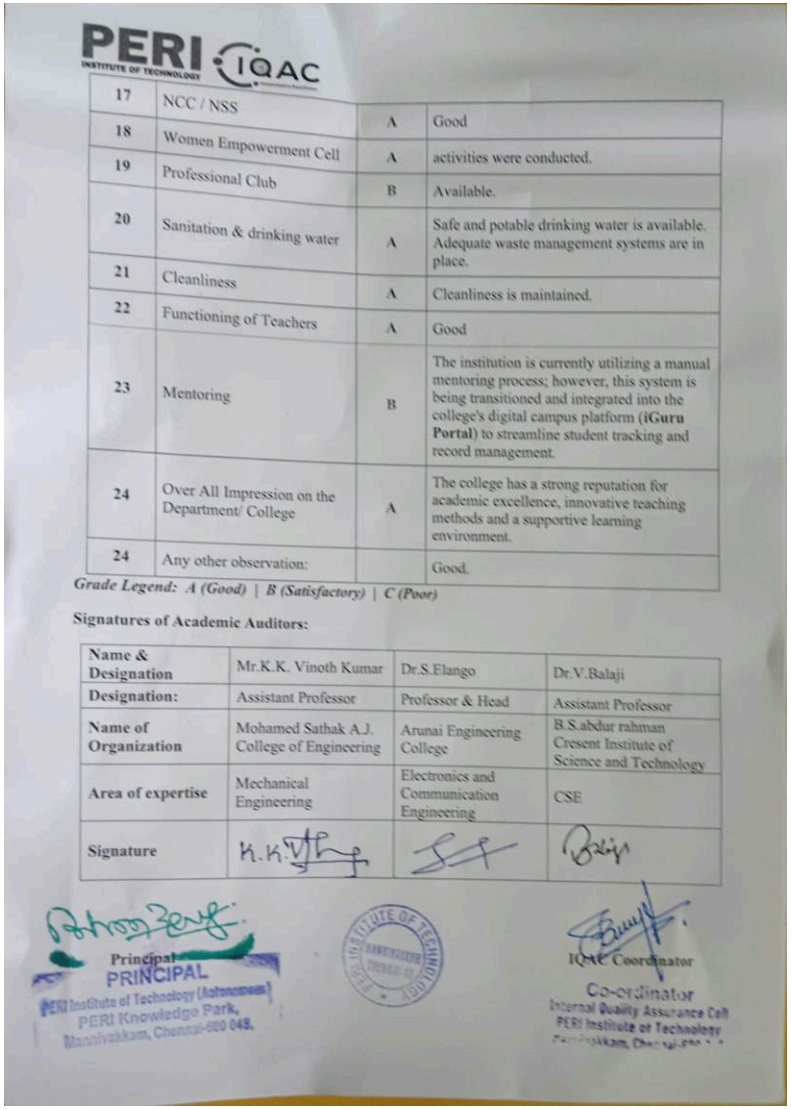
PERI INSTITUTE OF TECHNOLOGY IQAC

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 Cresent Institute of Science and Technology
Area of expertise	Mechanical Engineering	Electronics and Communication Engineering	CSE
Signature	K.K.V	S	

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	10.00	11.00	10.00
No. of publications in peer reviewed journals	27.00	38.00	11.00
No. of publications in conferences	28.00	39.00	6.00

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)	6.07	4.51	5.80
Academic Performance Index (API) of the Second-Year Students in the Program (Refer to section 4.4)	4.40	4.97	6.85
Academic Performance Index (API) of the Third-Year Students in the Program (Refer to section 4.5)	6.16	6.77	7.25

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')
Ms.V.Lakshmi	AHTPL5650K	M.Phil	Yes	27/05/2019	Mathematics	Assistant Professor	14/10/2020	Yes	Regular	
Ms.S.Nivedha	ARZPV1539R	M.Phil	Yes	01/06/2005	Mathematics	Assistant Professor	05/08/2024	Yes	Regular	
Ms.R.Meenu	HEXPR4210H	M.Phil	Yes	31/01/2011	English	Assistant Professor	21/06/2023	Yes	Regular	
Mr.M.Ramesh	ASIPR2152C	M.Phil	Yes	03/07/2014	Mathematics	Assistant Professor	02/06/2020	Yes	Regular	
Mr.G.Pugazhg	DIXPG1931A	M.Phil	No	10/08/2018	Physics	Assistant Professor	01/09/2022	Yes	Regular	
Dr.R. Ramya	BZJPR8064C	M.Phil	No	08/04/2021	Chemistry	Assistant Professor	21/09/2021	No	Regular	
Dr.A.Rajini	DVWPR2513D	Ph.D	No	27/02/2020	Tamil	Assistant Professor	05/07/2024	Yes	Regular	
Dr.S.Stalin Sat	JNHPS4494H	M.Phil	No	17/02/2016	Tamil	Assistant Professor	08/07/2021	Yes	Regular	
Ms. Prasanna I	CVVPP1594E	M.Phil	No	24/09/2012	Chemistry	Assistant Professor	01/09/2022	No	Regular	
Ms.G.Ruby	DKVPG9676N	M.Phil	No	23/07/2013	Chemistry	Assistant Professor	16/08/2023	Yes	Regular	
Ms.T.Thanga s	AYBPT9781G	M.Phil	No	04/09/2012	Chemistry	Assistant Professor	04/11/2024	Yes	Regular	
Dr.A.Mohamed	DQLPM8810E	Ph.D	No	10/07/2023	Mathematics	Assistant Professor	10/07/2023	Yes	Regular	
Mrs.G.Kanagai	ENPPK9652E	M.Phil	No	01/02/2017	Tamil	Assistant Professor	26/06/2023	Yes	Regular	
Dr.A.Govindara	AFEPG3658M	MCA and PhD	No	16/06/1995	Mathematics	Professor	14/02/2024	Yes	Regular	
Mrs.S.Abirami	BPNPA8781F	M.Phil	No	19/01/2019	English	Assistant Professor	06/07/2023	Yes	Regular	
Mrs.M.Shinika	HASPS3690P	M.Phil	No	28/01/2020	English	Assistant Professor	17/09/2026	Yes	Regular	

Ms. Pooja R	BVTPR2036J	MA	No	08/09/2017	English	Assistant Professor	19/11/2021	Yes	Regular	
Ms.M.Rajeswa	BKCPR4766F	M.Phil	No	02/09/2026	Mathematics	Assistant Professor	19/08/2024	Yes	Regular	
Mr.Anbumani k	BHCPA8404Q	MA	No	04/02/2021	English	Assistant Professor	05/08/2024	Yes	Regular	
Ms. Jeeva V	BNVPJ3929E	MA	No	20/05/2009	English	Assistant Professor	06/10/2020	Yes	Regular	
Mr. Balaji T N	AJOPB0859B	M.Sc. and PhD	No	12/08/2010	Chemistry	Professor	27/05/2019	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	4	2	19
2023-24(CAYm1)	480	24	9	3	32
2024-25(CAY)	600	30	13	4	37
				Average Percentage	29.50

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 the 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 course assessments (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 below 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

9.4 Training and Placement Support (10)

Institute Marks : 10.00

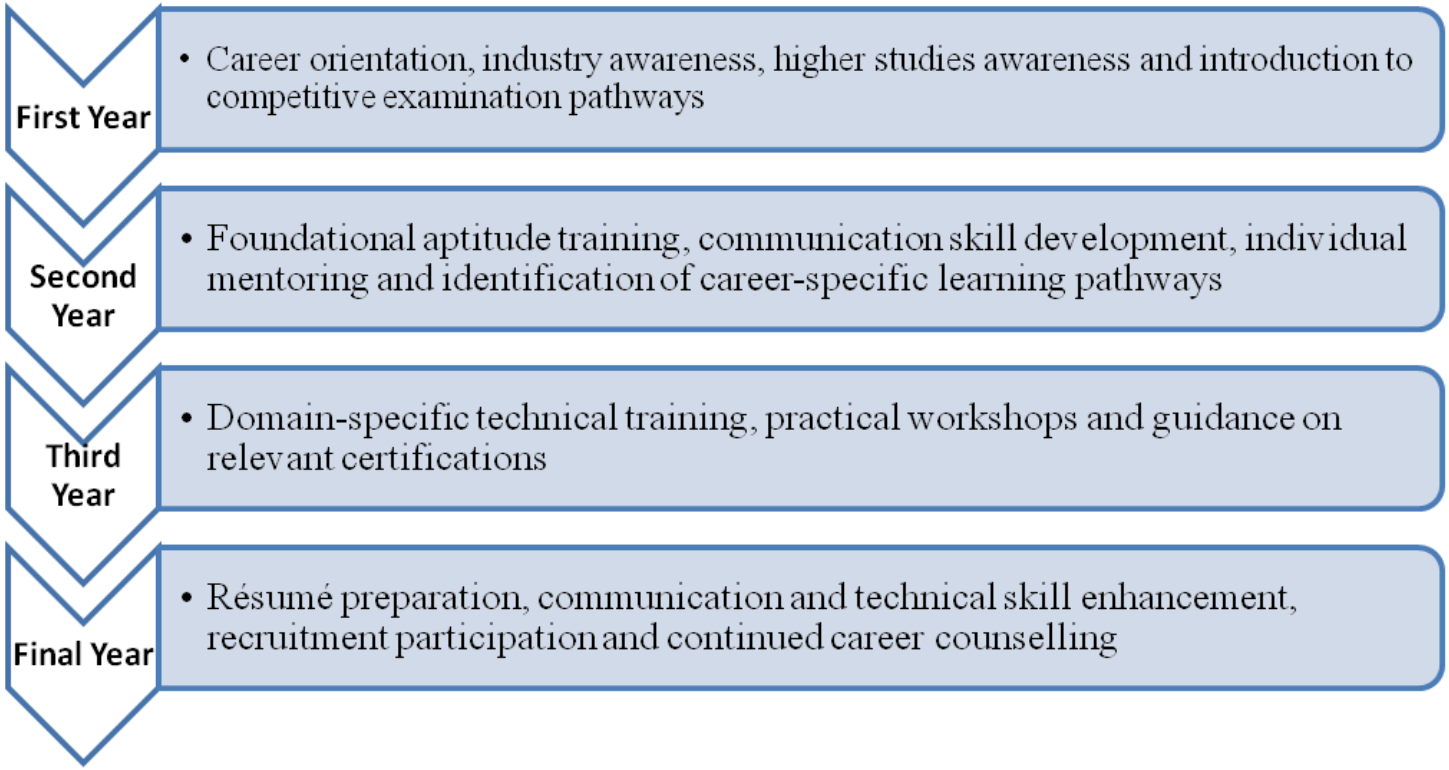
PERI Institute of Technology follows a structured, progressive approach to career guidance, skill development and placement preparation from the first year onwards. Faculty mentors, the Training and Placement Department and the Centre for Higher Studies work together to guide students towards employment, 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.

INTERNAL QUALITY ASSURANCE CELL

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

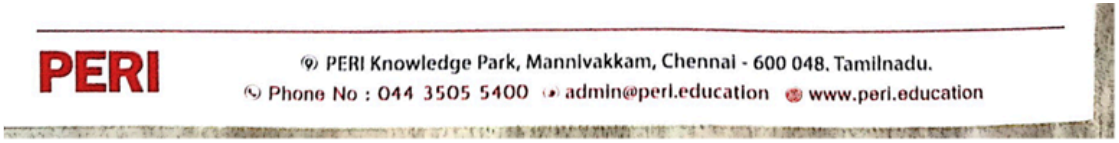
PERI
INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)

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	
11	Dr.Moorthy Veerasamy Controller of Examinations PERI Institute of Technology	Member	
12	Dr. R. Varadharajan Academic Advisor	Member	



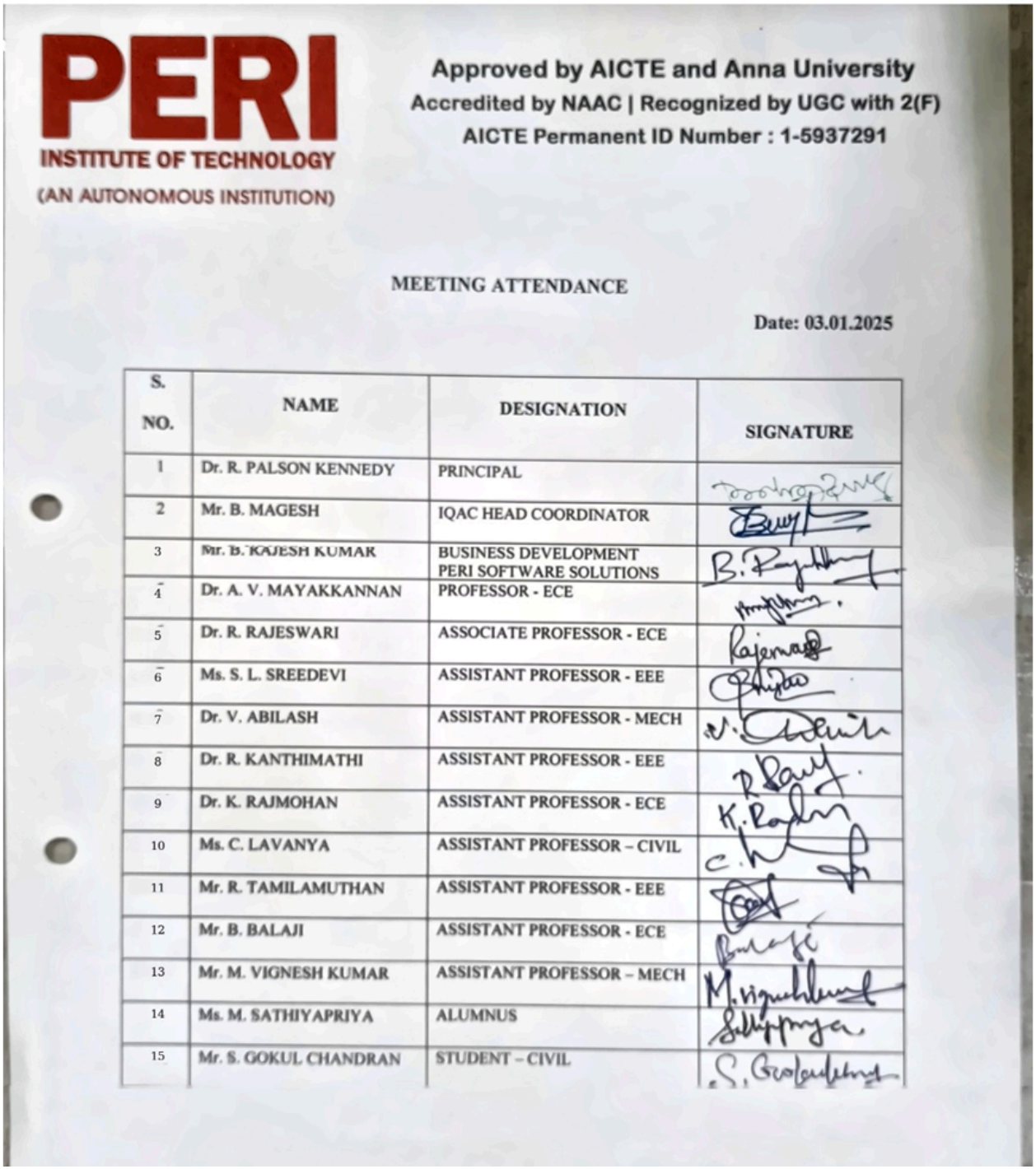
Key Responsibilities of the IQAC Members

- 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.

Admission Committee

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



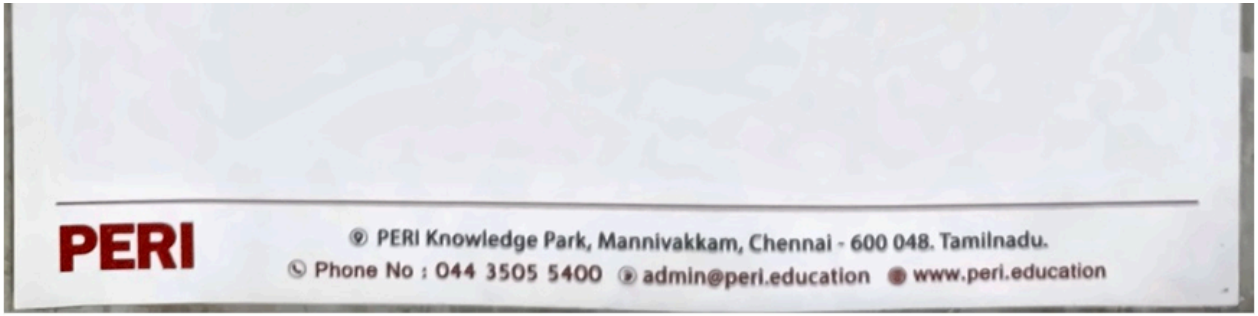
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AICTE Permanent ID Number : 1-5937291

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	



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.

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

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**	

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PERI KNOWLEDGE PARK
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PRINCIPAL

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PERI Knowledge Park,
Mannivakkam, Chennai-600 048.

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

Table 9.6.1.8 Members of Training and Placement Cell

S.No	Name	Designation	Position

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**	

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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.

No →

Refer to the designated body

Route sexual harassment, ragging and examination appeals to the designated committee or authority.

↓ **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.

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 66288797				Actual expenditure(till…):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
44530797	21758000	0	0	96896975	998	97091.16

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	3400000	3336278	1450000	1348133	6200000	6175781	1500000	1400500
Library	3950000	3880589	5500000	5458190	530000	539831	1200000	1104381
Laboratory equipment	3870000	3736684	2300000	2251792	3300000	3241803	0	0
Teaching and non-teaching staf	4550000	4546034	5300000	5260640	4500000	4440503	4500000	4412380
Outreach Programs	400000	386224	1400000	1382824	1400000	1315265	0	0
R&D	600000	592534	160000	151834	70000	60000	0	0
Training, Placement and Indust	1200000	1188384	1100000	1032163	4300000	4229153	650000	631414
SDGs	15000	14500	110000	105000	28000	27605	0	0
Entrepreneurship	150000	147841	75000	72000	730000	721216	0	0
Others, specify (Laoratory Cons	6000000	5799128	2500000	2499055	3300000	3298380	3800000	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 3941250		Actual expenditure (till…): 3837221.4		Total No. Of Students 140
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
3941250	3941250	3837221.4	97.3	27408.72

Table 2 :: CFYm1 2023-24

Total Budget 2836000		Actual expenditure (till…): 2756127		Total No. Of Students 163
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
2836000	2836000	2756127	97.1	16908.75

Table 3 :: CFYm2 2022-23

Total Budget 2092400		Actual expenditure (till…): 2067857		Total No. Of Students 156
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
2092400	2092400	2067857	98.8	13255.49

Table 4 :: CFYm3 2021-22

Total Budget 285500		Actual expenditure (till…): 278167		Total No. Of Students 160
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
285500	285500	278167	97.4	1738.54

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	690000	675538	990000	972541	0	0
Software	360000	347947.	250000	249905	198000	197902	95000	92580
SDGs	3750	3625	33000	31500	8400	8282	0	0

Support for faculty developmen	900000	869869.3	625000	624763	495000	494757	114000	111097
R & D	150000	148133.5	48000	45550	21000	18000	0	0
Industrial Training, Industry exp	1080000	1069545	990000	928947	215000	211457	19500	18942
(Laoratory Consumables, Main	480000	463930	200000	199924	165000	164919	57000	55548
Total	**3941250**	**3837221.4**	**2836000**	**2756127**	**2092400**	**2067858**	**285500**	**278167**

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.

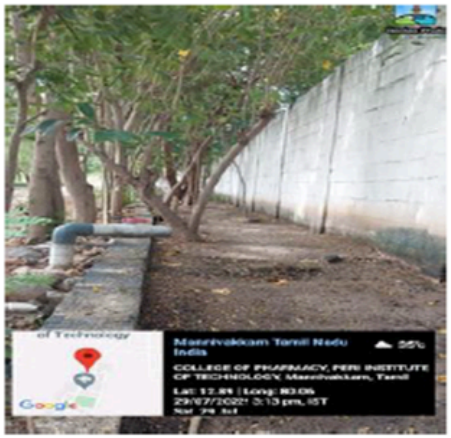
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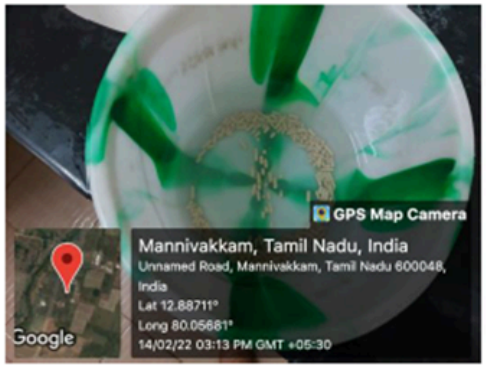
Water Sprinklers

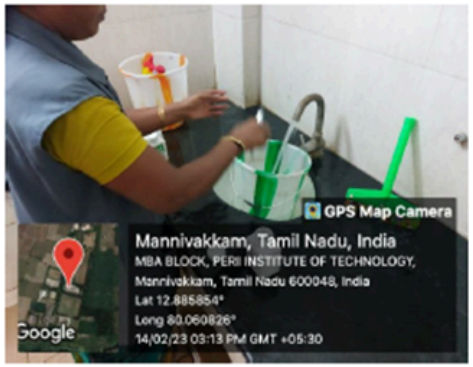


Recycled Waste Water Distribution to trees

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Waste Water recycling using Bacteria based method





Waste Water recycling using Bacteria based method

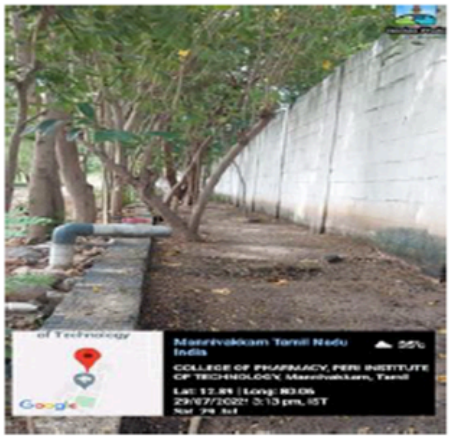
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Water Sprinklers



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

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School outreach and career guidance

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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.

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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.

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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.

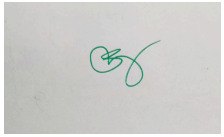
PSO1	Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.
PSO2	Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.
PSO3	Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems

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 21:43:00