NATIONAL BOARD OF ACCREDITATION

Data Capturing Points of the Program Applied for NBA Accreditation– Tier I/II UG (Engineering) Institute Programs

Program Name : Electrical and Electronics Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10763	**Date of Submission**: 07-08-2026

PART A- Profile of the Institute

A1.Name of the Institute: Dhanalakshmi Srinivasan Engineering College	
Year of Establishment : 2001	Location of the Institute: Perambalur
A2. Institute Address:No.3 Thuraiyur Road, Perambalur, Tamilnadu India	
City:Perambalur	State:Tamil Nadu
Pin Code:621212	Website:www.dsengg.ac.in
Email:dsengg_p28@yahoo.co.in	Phone No(with STD Code):04328-220444
A3. Name and Address of the Affiliating University (if any):	
Name of the University : AICTE	City: Chennai
State : Tamil Nadu	Pin Code: 600025
A4. Type of the Institution: Self-Supported Institute	
A5. Ownership Status: Self financing	

A6. Details of all Programs being Offered by the Institution:

- No. of UG programs: **17**
- No. of PG programs: **6**

Table No. A6.1: List of all programs offered by the Institute.

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Computer Application	PG	Master of Computer Application	2005	--	Computer Application
2	Engineering & Technology	UG	Aeronautical Engineering	2006	--	Aeronautical Engineering
3	Engineering & Technology	UG	Aerospace Engineering	2018	2023	Aerospace Engineering
4	Engineering & Technology	UG	Agricultural Engineering	2021	2025	Agricultural Engineering
5	Engineering & Technology	UG	Artificial Intelligence and Data Science	2020	--	Artificial Intelligence and Data Science
6	Engineering & Technology	UG	Biomedical Engineering	2005	--	Biomedical Engineering

7	Engineering & Technology	UG	Biotechnology	2022	2025	Biotechnology
8	Engineering & Technology	PG	CAD/CAM	2011	--	Mechanical Engineering
9	Engineering & Technology	UG	Chemical Engineering	2017	2025	Chemical Engineering
10	Engineering & Technology	UG	Civil Engineering	2008	--	Civil Engineering
11	Engineering & Technology	PG	Communication Systems	2006	--	Electronics and Communication Engineering
12	Engineering & Technology	PG	Computer Science and Engineering	2006	--	Computer Science and Engineering
13	Engineering & Technology	UG	Computer Science and Engineering	2001	--	Computer Science and Engineering
14	Engineering & Technology	UG	Computer Science and Engineering (Cyber Security)	2023	--	Computer Science and Engineering (Cyber Security)
15	Engineering & Technology	UG	Electrical & Electronics Engineering	2002	--	Electrical and Electronics Engineering
16	Engineering & Technology	UG	Electronics & Communication Engineering	2001	--	Electronics and Communication Engineering
17	Engineering & Technology	UG	Food Technology	2018	--	Food Technology
18	Engineering & Technology	UG	Information Technology	2001	--	Information Technology
19	Engineering & Technology	UG	Mechanical Engineering	2005	--	Mechanical Engineering
20	Engineering & Technology	UG	Pharmaceutical Engineering and Technology	2019	2025	Pharmaceutical Engineering and Technology
21	Engineering & Technology	PG	Power Electronics and Drives	2011	--	Electrical and Electronics Engineering
22	Engineering & Technology	UG	Robotics and Automation	2017	2025	Robotics and Automation
23	Management	PG	Master of Business Administration	2005	--	Management

A7. Programs to be considered for Accreditation vide this Application:

Table No. A7.1: List of programs to be considered for accreditation.

Name of the Department	**Having Allied Departments**	**Name of the Program**	**Program Level**
Electrical and Electronics Engineering	No	Electrical & Electronics Engineering	UG

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.
Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

No Record

PART-B: Program information

B1. Provide the Required Information for the Program Applied For:

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Electrical & Electronics Engineering	UG	2002 / --	60	Yes	2023	60	2023	AICTE	Granted accreditation for 3 years for the period (specify period)	2018	2021	2	4

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

List of the Allied Departments/Cluster and Programs:

B2. Detail of Head of the Department for the program under consideration:

A. Name of the HoD :	Dr. PARAMESWARI M
B. Nature of appointment:	Regular
C. Qualification:	M.E. and Ph.D.

B3. Program Details

Table No.B3.1: 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	120	120	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	47	63	122	78	43	62	64
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	6	20	36	41	11	13
N3=Separate division if any	0	0	0	0	0	0	11
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.	47	69	142	114	84	73	88

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

B4. Enrolment Ratio in the First Year

Table No. B4.1: 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	47	0	78.33
2023-24 (CAYm1)	60	63	0	105.00
2022-23 (CAYm2)	120	122	0	101.67

Average [(ER1 + ER2 + ER3) / 3] = 95.00≡ 20.00

B5. Success Rate of the Students in the Stipulated Period of the Program

Table No.B5.1: 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).	161.00	131.00	133.00
B=No. of students who graduated from the program in the stipulated course duration	57.00	53.00	77.00
Success Rate (SR)= (B/A) * 100	35.40	40.46	57.89

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 44.58

B6. Academic Performance of the First-Year Students of the Program

Table No.B6.1: Academic Performance of the First-Year Students of the Program.

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)

Mean of CGPA or mean percentage of all successful students(X)	8.01	8.20	8.38
Y=Total no. of successful students	48.00	62.00	45.00
Z=Total no. of students appeared in the examination	63.00	117.00	77.00
API [X*(Y/Z)]	6.10	4.35	4.90

Average API[(AP1+AP2+AP3)/3] : 5.12

B7: Academic Performance of the Second Year Students of the Program

Table No.B7.1: 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)	8.02	8.21	8.30
Y=Total no. of successful students	65.00	68.00	59.00
Z=Total no. of students appeared in the examination	82.00	81.00	85.00
API [X * (Y/Z)]	6.36	6.89	5.76

Average API [(AP1 + AP2 + AP3)/3] : 6.34

B8. Academic Performance of the Third Year Students of the Program

Table No.B8.1: 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)	7.44	7.02	7.40
Y=Total no. of successful students	64.00	58.00	54.00
Z=Total no. of students appeared in the examination	68.00	59.00	66.00
API [X*(Y/Z)]:	7.00	6.90	6.05

Average API [(AP1 + AP2 + AP3)/3] : 6.65

B9. Placement, Higher Studies, and Entrepreneurship

Table No.B9.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	161.00	131.00	133.00
X=No. of students placed	77.00	64.00	78.00
Y=No. of students admitted to higher studies	3.00	2.00	2.00
Z= No. of students taking up entrepreneurship	1.00	1.00	1.00

Placement Index(P) = (((X + Y + Z)/FS) * 100):	50.31	51.15	60.90

Average Placement Index = (P_1 + P_2 + P_3)/3: 54.12 Placement Index Points:

PART C: Faculty Details in Department and Allied Departments

(Data to be filled in for the Department and Allied Departments)

C1. Faculty details of Department and Allied Departments

Table No.C1: Faculty details in the Department for the past 3 years including CAY

Sr.No	Name of the Faculty	PAN No.	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?
1	Dr.ANBARASAN.K	XXXXXXX23H	M.E. and Ph.D.	NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI	PROCESS CONTROL AND INSTRUMNETATION	06/12/2005	19.6	Assistant Professor	Professor	18/06/2015	Regular	Yes		No
2	Dr. PARAMESWARI M	XXXXXXX82F	M.E. and Ph.D.	ANNA UNIVERSITY	ELECTRICAL ENGINEERING	01/06/2022	3	Professor	Professor	01/06/2022	Regular	Yes		Yes
3	Dr. RAJKUMAR A	XXXXXXX72N	M.E. and Ph.D.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	01/07/2024	0.11	Professor	Professor	01/07/2024	Regular	Yes		No
4	Dr.DANALAKSHMI D	XXXXXXX23E	M.E. and Ph.D.	KALASALINGAM UNIVERSITY	ELECTRICAL AND ELECTRONICS ENGINEERING	01/08/2023	1.10	Professor	Professor	01/08/2023	Regular	Yes		No
5	Ms.LAVANYA T	XXXXXXX45F	M.Tech	SASTRA UNIVERSITY	HIGH VOLTAGE ENGINEERING	20/06/2014	11	Assistant Professor	Associate Professor	21/06/2017	Regular	Yes		No
6	Ms.BHUVANESWARI M	XXXXXXX06Q	M.Tech	PRIST UNIVERSITY	POWER ELECTRONICS AND DRIVES	02/05/2022	3.1	Assistant Professor	Assistant Professor		Regular	Yes		No
7	Mr. VIJAYAKANTH K	XXXXXXX31Q	M.E.	ANNA UNIVERSITY	VLSI DESIGN	25/06/2009	16	Assistant Professor	Assistant Professor		Regular	Yes		No

8	Mr. ASAITHAMBI M	XXXXXXX56J	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	21/06/2012	13	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Mr. KRISHNAMOORTHI D	XXXXXXX68L	M.E.	ANNA UNIVERSITY	APPLIED ELECTRONICS	01/07/2016	8.11	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Mr. KATHAMUTHU M	XXXXXXX81J	M.Tech	SASTRA UNIVERSITY	INSTRUMENTATION AND CONTROL ENGINEERING	23/01/2018	7.5	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Ms. DURGA T	XXXXXXX12P	M.E.	ANNA UNIVERSITY	COMMUNICATION SYSTEMS	16/12/2019	6.7	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Mr. CHANDRASEKAR G	XXXXXXX71D	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	12/07/2013	11.11	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Ms. AMALI ARPUTHA MARY S	XXXXXXX04G	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	16/12/2019	5.6	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Mr. SATHISH R	XXXXXXX93C	M.E.	ANNA UNIVERSITY	POWER SYSTEM ENGINEERING	08/05/2023	2.1	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Ms. SARANYA N	XXXXXXX66J	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	17/05/2023	2.1	Assistant Professor	Assistant Professor		Regular	Yes		No
16	Ms. DEVIKA K	XXXXXXX38L	M.E.	ANNA UNIVERSITY	EMBEDDED SYSTEM TECHNOLOGIES	08/05/2023	2.1	Assistant Professor	Assistant Professor		Regular	Yes		No
17	Ms. ANUSUYA M	XXXXXXX39J	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	19/02/2024	1.4	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Ms. THENMOZHI T	XXXXXXX64N	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	08/05/2023	2.1	Assistant Professor	Assistant Professor		Regular	Yes		No
19	Ms. THAMIJUNISHA A	XXXXXXX14Q	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	02/05/2022	3.1	Assistant Professor	Assistant Professor		Regular	Yes		No
20	Mr. KAVIKUMAR C	XXXXXXX96F	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	19/05/2023	2.1	Assistant Professor	Assistant Professor		Regular	Yes		No

21	Ms. SURIYA P	XXXXXXX72P	M.E.	ANNA UNIVERSITY	SOLAR ENERGY	19/05/2023	2.1	Assistant Professor	Assistant Professor		Regular	Yes		No
22	Ms. AYSWARYA S	XXXXXXX79A	M.E.	ANNA UNIVERSITY	POWER SYSTEM ENGINEERING	08/05/2023	2	Assistant Professor	Assistant Professor		Regular	No	27/05/2025	No
23	Dr.SRINIVASAN K	XXXXXXX08E	M.E. and Ph.D.	ANNA UNIVERSITY	POWER ELECTRONICS AND INDUSTRIAL DRIVES	26/06/2019	6	Professor	Professor	26/06/2019	Regular	Yes		No
24	Dr.MURALIKRISHNAN G	XXXXXXX31N	M.E. and Ph.D.	ANNA UNIVERSITY	POWER SYSTEM ENGINEERING	02/05/2022	2	Associate Professor	Associate Professor	02/05/2022	Regular	No	25/05/2024	No
25	Mr.SELVAKUMARAN S	XXXXXXX27H	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	09/07/2009	14.10	Assistant Professor	Assistant Professor		Regular	No	25/05/2024	No
26	Dr.ARUNKUMAR N	XXXXXXX50Q	M.E. and Ph.D.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	21/06/2017	6.11	Assistant Professor	Associate Professor	24/01/2020	Regular	No	25/05/2024	No
27	Mr.VINOTHKUMAR V	XXXXXXX26E	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	01/07/2016	7.10	Assistant Professor	Assistant Professor		Regular	No	25/05/2024	No
28	Ms.NALINI S	XXXXXXX04R	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	18/07/2022	2.11	Assistant Professor	Assistant Professor		Regular	Yes		No
29	Mr.KANNAN R	XXXXXXX93N	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	26/06/2014	9.11	Assistant Professor	Assistant Professor		Regular	No	25/05/2024	No
30	Ms.ANANDHI S	XXXXXXX71H	M.Tech	ANNA UNIVERSITY	ENERGY CONSERVATION AND MANAGEMENT	26/06/2014	9.11	Assistant Professor	Assistant Professor		Regular	No	25/05/2024	No
31	Dr.LATHA R	XXXXXXX05Q	M.E. and Ph.D.	ANNA UNIVERSITY	INFORMATION AND COMMUNICATION ENGINEERING	18/06/2015	7.11	Professor	Professor	18/06/2015	Regular	No	26/05/2023	No
32	Dr.SUBA SEETHALAKSHMI V	XXXXXXX85B	M.E. and Ph.D.	ANNA UNIVERSITY	ELECTRICAL ENGINEERING	16/09/2020	2.8	Associate Professor	Associate Professor	16/09/2020	Regular	No	26/05/2023	No

33	Ms.PREETHA K	XXXXXXX92K	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	26/06/2014	8.11	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
34	Mr.VELMURUGAN D	XXXXXXX56E	M.E.	ANNA UNIVERSITY	VLSI DESIGN	24/01/2018	5.4	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
35	Mr.SANTHOSH KUMAR P L	XXXXXXX85P	M.Tech	AMRITA VISHWA VIDYAPEETHAM	CONTROL AND INSTRUMENTATION ENGINEERING	13/06/2018	4.11	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
36	Mr.PANDIYAN R	XXXXXXX75P	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	04/01/2021	2.4	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
37	Mr. PARAMASIVAN@VIGNESH C	XXXXXXX40J	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	23/12/2013	9.5	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
38	Mr. NAGENDRAN J	XXXXXXX73R	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	21/06/2012	10.11	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
39	Mr. KUMARAVEL D	XXXXXXX17R	M.E.	ANNA UNIVERSITY	POWER ELECTRONICS AND DRIVES	07/08/2020	2.9	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
40	Mr. BHARATH M	XXXXXXX01L	M.Tech	ANNA UNIVERSITY	POWER SYSTEM ENGINEERING	26/12/2018	4.4	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
41	Ms. KEERTHANA K	XXXXXXX48H	M.E.	ANNA UNIVERSITY	POWER SYSTEM ENGINEERING	16/12/2019	3.5	Assistant Professor	Assistant Professor		Regular	No	26/05/2023	No
42	Dr.VIJAY. M	XXXXXXX48R	M.E. and Ph.D.	ANNA UNIVERSITY	MANUFACTURING ENGINEERING	05/06/2023	2	Associate Professor	Associate Professor	05/06/2023	Regular	Yes		No

Table No.C2: Faculty details of Allied Departments for the past 3 years including CAY.

C2. Student-Faculty Ratio (SFR)

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)).

No. of UG Programs in the Department1 No. of PG Programs in the Department1

Table No.C2.1: Student-faculty ratio.

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	66	132	132
UG1.C	132	132	132
UG1.D	132	132	131
UG1: Electrical & Electronics Engineering	**330**	**396**	**395**
PG1.A	9	9	18
PG1.B	9	18	18
PG1: Power Electronics and Drives	**18**	**27**	**36**
DS=Total no. of students in all UG and PG programs in the Department	348	423	431
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=** 348	**S2=** 423	**S3=** 431
DF=Total no. of faculty members in the Department	25	29	31
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=** 25	**F2=** 29	**F3=** 31
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 13.92**	**SFR2= 14.59**	**SFR3= 13.90**
Average SFR for 3 years	**SFR= 14.14**		

C3. Faculty Qualification

- Faculty qualification index (FQI) = 2.5 * [(10X +4Y)/RF] where
- X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
- Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/ UGC norms.
- RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section C2 of this documents: (RF=S/20).

Table No.C3.1: Faculty qualification.

Year	X	Y	RF	FQ = 2.5 x [(10X + 4Y) / RF)]
2024-25(CAY)	6	19	17.00	20.00
2023-24(CAYm1)	7	22	21.00	18.81
2022-23(CAYm2)	7	24	21.00	19.76

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = 1/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents:.
- RF2= No. of Associate Professors required = 2/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- RF3= No. of Assistant Professors required = 6/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3
2024-25	1.00	5.00	3.00	1.00	11.00	19.00
2023-24	2.00	4.00	4.00	3.00	14.00	22.00
2022-23	2.00	4.00	4.00	3.00	14.00	24.00
Average	RF1=1.67	AF1=4.33	RF2=3.67	AF2=2.33	RF2=13.00	AF2=21.67

C5. Visiting/Adjunct Faculty/Professor of Practice

Table No. C5.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. S. Dharmalingam, Ph.D	Former General Manager	Bharath Heavy Electricals Limited, Tiruchirappalli, Tamil Nadu	Power System Protection	50.00
2	Mr. G. M. Rajendiran, AMIE., M.E	Former General Manager, Governing Council Member of Shasayee Institute of Technology	Bharath Heavy Electricals Limited, Tiruchirappalli, Tamil Nadu	Electrical Vehicle and Battery Management System	50.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. S. Dharmalingam, Ph.D	Former General Manager	Bharath Heavy Electricals Limited, Tiruchirappalli, Tamil Nadu	Industrial Electrical Wiring and Troubleshooting	50.00
2	Mr. G. M. Rajendiran, AMIE., M.E	Former General Manager, Governing Council Member of Shasayee Institute of Technology	Bharath Heavy Electricals Limited, Tiruchirappalli, Tamil Nadu	Energy Management and Audit	50.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. S. Dharmalingam, Ph.D	Former General Manager	Bharath Heavy Electricals Limited, Tiruchirappalli, Tamil Nadu	Special Machines	50.00
2	Mr.P. Arunraj	Deputy Manager	GSH India Private Limited, Chennai	Smart Grid Technology	50.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	32	27	36
2	No. of peer reviewed conference papers published	36	31	34
3	No. of books/book chapters published	27	24	20

C7. Sponsored Research Project

Table No. C7.1: List of sponsored research projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.K.Anbarasan	Mr.M.Kathamuthu	EEE	IoT-Based Smart Circuit Breaker Using Password and GSM	Nithium Engineering Solutions-Dindigul	2 years	1.20
Dr.M.Parameswari	Ms.A.Thamijunisha	EEE	Solar-Powered Automatic Street Lighting System with Energy Saving Mechanism	Vi Microsystems, Chennai.	1 year	2.00
Dr.M.Vijay	Mrs.T.Durga	EEE	Smart Distribution Board for Domestic and Industrial Use	Spark Technologies, Coimbatore	1 year	1.80
Dr.K.Srinivasan	Mrs.T.Durga	EEE	Wireless Power Transfer for Electric Vehicles	IndiGuard Systems Private Limited, Tanjavur	1 year	1.20
						Amount received (Rs.):6.20

(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
Dr.K.Anbarasan	Mr.M.Kathamuthu	EEE	workshop on Harvesting low Cost Renewable Energy Using Modern Controllers Based On Soft Computing Techniques	INSA Sponsored	5 days	0.50
Dr.K.Srinivasan	Ms.A.Thamijunisha	EEE	Electrical shock prevention system in Residential Circuits	Ilustrious Institute of Green Environment Private Linited (IIGEM), Chennai	2 years	1.00
Mr.G.Chandrasekar	Mr.V.Vinothkumar	EEE	Leakage Current Detection and Isolation for High Voltage Lines	IndiGuard Systems Private Limited, Tanjavur	2 year	1.80
Dr.M.Vijay	Mrs.T.Lavanya	EEE	Wireless Demand Side Load Management System	Vector India Private Ltd.,Hyderabad	1 year	1.00
Dr.N.Arunkumar	Mr.V.Vinothkumar	EEE	Design and Implementation of DC DC Converters for Electric Vehicles	Vi Micro Systems	1 year	1.00
						Amount received (Rs.):5.30

(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.K Anbarasan	Mr.M.Kathamuthu	EEE	Earth Fault and Overload Protection System for Industrial Equipment	IndiGuard Systems Private Limited, Tanjavur	1 year	1.50
Mr.K.Vijayakanth	Mrs.T.Durga	EEE	Smart Distribution Board for Domestic and Industrial Use	Quantanics Techserv Pvt. Ltd. Madurai	2 years	1.00
Mr.M.Asaithambi	Mrs.T.Lavanya	EEE	Wireless Demand Side Load Management System	Vector India Private Ltd. Hyderabad	2 years	0.80
Dr.N.Arunkumar	Mr.V.Vinothkumar	EEE	Design and Optimization of the PM array of brushless DC motor with minimum cogging torque for Electric vehicle applications	Orbit Controls and Services	1 year	1.80
Dr.S.Durairaj	Mrs.T.Lavanya	EEE	Skill and Personality Development Program Center(SPDC)	AICTE	3 years	12.23
Dr.K.Anbarasan	Mr.V.Vinothkumar	EEE	Advanced Reactive Power Management of Power networks	IEEE Madras section	1 years	0.25
						Amount received (Rs.):17.58

Total Amount (Lacs) Received for the Past 3 Years: 29.08

Note*:

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

C8. Consultancy Work

Table No. C8.1: List of consultancy projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.K.Anbarasan	Mr.M.Asaithambi	EEE	Electric Vehicle Charging Station Design	Lakshmi Electronics-Coimbatore	2 years	1.00
Dr.M.Parameswari	Mrs.T.Thenmozhi	EEE	Design and Implementation of Universal Converter	Swan Scientific Supplies-Madurai	2 years	0.50
Dr.M.Vijay	Mrs.N.Saranya	EEE	Multi-Functional PV Inverter with Low Voltage Ride Through and Constant	Q-Tek Devices- Trichy	2 year	0.75
Dr.K.Anbarasan	Mr.K.Vijayakanth	EEE	Vehicle Colision Detection System Using Arduino IDE with Ultrasonic Sensor	A2E and Traders-Trichy	1 years	1.18
Dr.K.Srinivasan	Mr.R. Sathish	EEE	Energy Harvesting Techniques for Low-Power Wireless Sensors	Vi Microsystems, Chennai	1.5 years	0.50
						Amount received (Rs.):3.93

(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
Dr.K Anbarasan	Mr.G.Chandrasekar	EEE	Implementation of ZigBee-GSM Based Home Security Monitoring and Remote Control System	Orbit Controls and Services	2 years	0.65
Dr.K.Srinivasan	Mr.R.Sathish	EEE	Energy Saving Project for Heating System with ZigBee Wireless Control Network	Sunfire Systems-Chennai	1.5 years	0.78
Dr.N.Arunkumar	Mr.M.Kathamuthu	EEE	Intelligent Temperature-Controlled Speed Adjustable Motor in Radiator Fan	Vi Microsystems, Chennai	2 years	0.98
Dr.M.Vijay	Mrs.T.Durga	EEE	Intelligent Temperature-Controlled Speed Adjustable Motor in Radiator Fan	Q-Tek Devices- Trichy	1 year	1.07
Dr.K.Anbarasan	Mr.K.Vijayakanth	EEE	Design and Implementation of DC- DC Converters for Electric Vehicles	A2E and Traders-Trichy	2 years	1.20
						Amount received (Rs.):4.68

(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
Mr.D.Krishnamoorthy	Mrs.T.Durga	EEE	Design and Optimization of the PM array of brushless DC Motor with minimum cogging torque for electric vehicle applications	Orbit Controls and Services	3 years	5.70
Dr.S.Durairaj	Mr.R.Kannan	EEE	Eminence of Electric Vehicle and Robotics in Agronomy	AICTE Training and Learning Academy	1 years	0.93
Dr.K.Anbarasan	Mr.M.Asaithambi	EEE	Harvesting low cost renewable energy using modern controllers based on soft computing techniques	Indian National Science Academy	1 year	0.50
Mr.J.Nagendran	Mr.D.Kumaravel	EEE	Design and Implementation of DC to DC Converters for Electric Vehicles	Vi Micro Systems	4 years	5.70
						Amount received (Rs.):12.83

Total amount (Lacs) received for the past 3 years: 21.44

Note*:

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

C9. Institution Seed Money or Internal Research Grant to its Faculty for Research Work

Table No. C9.1: List of faculty members received seed money or internal research grant from the Institution.

(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
Dr.K.Anbarasan	Drone-Based Emergency Response and Surveillance System.	12 months	1.00	1.00	Enhancing disaster management and Public safety. Developed prototype drone system; 1 working model, involved 2 M.E students.
Dr.M.Vijay	Real-time Public Transportation Safety and Alert System	10 months	0.40	0.40	Deployed demo model in local buses; improved student interest in embedded systems; 1 M.E project completed.
Dr.D.Danalakshmi	Child Safety Tracking frock and Geofencing System	8 months	0.60	0.60	Developed wearable child safety prototype, demonstrated in college level Science expo, 2 conference papers published
			Amount received (Rs.): 2.00		

(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
Dr.M.Parameswari	Smart waste management system for rural areas	1 year	0.50	0.50	1 prototype installed in a village, conference paper published, 1 UG project completed
Dr.K.Anbarasan	Data-Driven & IoT-Enabled Harvesting	1 year	1.40	1.40	2 UG projects completed , presented in national seminar.
Dr.N.Arunkumar	AI-Powered Smart Surveillance System with Anomaly Detection	1 year	0.80	0.80	Developed anomaly detection software, presented in national seminar, demo used in security systems course
			Amount received (Rs.): 2.70		

(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
Dr.K.Anbarasan	Advanced women safety system using Arduino and GPS.	I YEAR	1.00	1.00	Prototype developed and tested, shortlisted in state-level innovation fair
Dr.K.Srinivasan	Precision Irrigation Systems	I YEAR	0.80	0.80	Automated irrigation model built; supported 1 UG project; demo at AgriTech event
			Amount received (Rs.): 1.80		

Total amount (Lacs) received for the past 3 years : 6.50

PART D: Laboratory Infrastructure in the Department

(Data to be filled in for the Department)

D1. Adequate and Well-Equipped Laboratories, and Technical Manpower

Table No.D1.1: List of laboratories and technical manpower.

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Electrical Machines Laboratory	30	DC Shunt Motor,Three phase Alternator,DC Series Motor,DC Compound motor,DC Compound	100%	Mr.Baburajan.T	Technical Assistant	B.E
2	Power Electronics and Drives Laboratory	30	IGBT based three phase PWM inverter module,MOSFET based step up and step down	100%	Mr.Muruganandham.M	Technical Assistant	B.E

3	Electronics Laboratory	30	Digital IC Trainer Kit,Function Generator,Dual variable power supply,CRO,Digital Storage Oscilloscope	100%	Mrs. P.Saritha	Technical Assistant	Diploma
4	Control system laboratory	30	Kelvin double Bridge ,Anderson bridge,Maxwell's inductance Capacitance Bridge,OP-AMP Trainer kit,DAC standalone module,DC Position servo Trainer	100%	Mrs.Abinaya.s	Technical Assistant	Diploma
5	Power System Simulation Laboratory	30	Personal computers,MATLab,Laser & Dot matrix Printer,Server	100%	Mrs.Mageswari M	Technical Assistant	B.E

D2. Safety Measures in Laboratories

Table No. D2.1: List of various safety measures in laboratories.

Sr. No	Laboratory Name	Safety Measures
1	Electrical Machines Laboratory	• Ensure all electrical connections are checked by the lab in-charge / technician before switching ON the supply. • Always wear coat, insulated shoes and avoid loose clothing, jewels, or metallic accessories. • Do not touch rotating machine parts or exposed live terminals during experiments. • Use protective devices like fuses, circuit breakers, and proper earthing at all times. • Maintain a safe distance from high-voltage terminals. • Never bypass safety interlocks or protective devices. • Switch OFF supply immediately after completing the experiment. • Use fire extinguishers and first-aid kits in emergency conditions. • Report unusual noise, vibration, spark, or overheating of machines immediately. • Maintain general cleanliness and avoid clutter around machines and panels. •For minor injuries, use the first aid kit; for serious injuries, seek immediate medical help.
2	Power Electronics Laboratory	• Ensure all circuit connections are checked by the lab in-charge / technician before switching ON supply. • Always use proper-rated fuses, MCBs, and earthing for converters, inverters, and rectifiers. • Never touch live wires, exposed terminals, or heat sinks of power devices when supply is ON. • Wear insulated shoes and avoid metallic jewelry, rings, or watches during lab work. • Use isolation transformer while testing power converters to ensure operator safety. • Discharge capacitors properly after switching OFF supply to prevent electric shock. • Maintain safe clearance from high-voltage and high-current circuits. • Do not bypass protective devices, interlocks, or emergency cut-off switches. • Provide adequate cooling/ventilation for power devices (IGBTs, MOSFETs, thyristors, etc.). • Switch OFF supply immediately after completing the experiment or during abnormal conditions. • Report unusual sparks, burning smell, smoke, or component overheating immediately. • Use fire extinguishers (CO_2 type) and first-aid kits in emergency conditions. • Ensure all instruments (CRO/DSO probes, meters) are used within specified voltage/current ratings. • Maintain general cleanliness of the lab, avoid loose wires and clutter around panels. • Operate equipment only under the supervision of faculty or lab technician. •Clean up the workbench and dispose of damaged components properly.
3	Electronics Laboratory	• Ensure all circuit connections are checked by the lab in-charge / technician before switching ON supply. • Use low-voltage regulated DC power supplies; never exceed the rated voltage/current of components. • Do not touch live terminals, IC pins, or circuit boards when the power is ON. • Always check polarity while connecting diodes, capacitors, LEDs, and batteries. • Handle ICs, MOSFETs, and other semiconductor devices carefully to avoid damage due to static electricity (use anti-static wrist straps or mats if available). • Avoid short circuits in breadboards or PCBs by keeping connections neat and tight. • Do not overload resistors or other components beyond their power ratings. • Switch OFF the power supply immediately if components show smoke, spark, or overheating. • Keep oscilloscopes function generators, and multimeters within their specified voltage/current limits. • Never use damaged probes, wires, or power cords; replace them immediately. • Maintain a safe distance from high-voltage equipment (if used for special experiments). • Use fire extinguishers and first-aid kits in emergency conditions. • Always switch OFF the power supply and disconnect the circuit after completing experiments. • Maintain cleanliness on the workbench; avoid clutter of wires and components. • Work only under supervision of faculty or lab technician.

4	Power Systems Simulation Laboratory	• Ensure all computer systems, simulation software, and licensed tools are used only under faculty/lab in-charge supervision. • Verify input data before running simulations to avoid unrealistic results that may mislead experiments. • Use only authorized software and follow proper login credentials; do not tamper with system configurations. • Save simulation files and results periodically to prevent data loss due to power/system failure. • Avoid eating, drinking, or placing liquids near computers and simulation panels. • Do not overload the UPS or power sockets with unauthorized equipment. • Maintain proper grounding and surge protection for all computer systems and servers. • Report immediately if any abnormal heating, noise, or electrical smell is observed from systems or UPS. • Handle keyboards, mice, and other peripherals carefully; avoid rough use. • Keep external storage devices (USB, HDD) virus-free before connecting to lab systems. • Do not attempt to bypass licensed security features of the simulation software. • Switch OFF systems, UPS, and network devices properly after completing lab sessions. • Maintain general cleanliness; avoid clutter of wires and peripherals around workstations. • Follow proper file-naming conventions and maintain backups of project/simulation files. • Operate all systems only under the supervision of faculty/lab technician. * Use fire extinguishers and first-aid kits in emergency conditions.
5	Control system Laboratory	• Ensure all wiring and circuit connections are verified by the lab in-charge/technician before switching ON supply. • Use regulated DC power supplies and signal generators within specified voltage/current ratings. • Do not touch exposed terminals, rotating parts (in servo motors, DC motors), or live circuits while the system is energized. • Always switch OFF supply before modifying or reconfiguring experimental connections. • Use protective devices like fuses, MCBs, and proper earthing for all experimental setups. • Handle control panels, PID kits, and simulation modules carefully to avoid short circuits. • Keep CRO/DSO probes and measurement instruments within their rated input limits. • Ensure proper damping/load is connected before operating servo or motor control experiments. • Avoid sudden application/removal of load on machines to prevent instability or damage. • Report immediately if abnormal vibration, overheating, or unusual noise is observed in machines or controllers. • Do not bypass safety interlocks or emergency switches in experimental panels. • Maintain safe clearance from high-voltage terminals and moving mechanical parts. *Use fire extinguishers and first-aid kits in emergency conditions. • Always switch OFF supply and secure the setup after completing the experiment. • Keep fire extinguishers (CO_2 type) and first-aid kits readily available in the lab. • Work only under the supervision of faculty or lab technician.

D3. Project Laboratory/Research Laboratory

Project and Research laboratories:

The **Project and Research Laboratories** are equipped with a wide range of advanced **hardware and software tools** that cater to the needs of **Electrical and Electronics Engineering (EEE) students, faculty, and multidisciplinary departments**. These laboratories host facilities such as **DC and AC machines, transformers, power electronics converters, DSP/FPGA processors, microcontrollers, automation kits, and advanced control and instrumentation systems**. In addition, software platforms like **MATLAB/Simulink, PSPICE/ORCAD, PSIM, AUTOCAD, and embedded IDE tools** support simulation, modeling, and design activities. With this state-of-the-art infrastructure, students gain practical exposure to machine testing, power system analysis, electronic circuit design, embedded system development, and renewable energy integration. Faculty members actively utilize these resources to **guide student projects, conduct funded research, and develop innovative solutions in collaboration with other disciplines**. The laboratories are also accessible to students and researchers from other branches of engineering, encouraging **interdisciplinary learning, prototype development, and collaborative problem-solving**. This effective utilization ensures that the facilities not only strengthen academic learning but also foster **industry-oriented skills, entrepreneurship, and impactful research outcomes**.



S.No	Name of the Laboratory	Facilities	Utilization

1	Project Laboratory	DC Series Generator with Loading Arrangement	The laboratory is utilized for teaching, research, and project development in Electrical Machines, Power Electronics, Control Systems, Embedded Systems, Renewable Energy systems, Power Systems and Instrumentation. It provides students with hands-on experience, supports research-oriented activities, and promotes publication of technical papers in reputed journals. All equipment is effectively used for academic experiments, internal projects, and faculty-guided research work.

Induction Generator
Synchronous Motor
3 Phase Slip Ring Induction Motor with Loading Arrangement
3 Phase Squirrel Cage Induction Motor with Loading Arrangement
Single Phase 1 KVA Transformer
Single Phase 3 KVA Transformer
Three Phase 5 KVA Transformer
Megger, Oil Testing Kit (230V)
Power Drilling Machine
Function Generators
Ammeters, Voltmeters, Wattmeters & Multi-meters
PSIM Software
PSPICE Software
AUTOCAD
MATLAB
XILINX
IGBT based 3 Phase Induction Motor Control
TMS2407A Based DSP Trainer Kit
Resonant DC-DC Converter
DC Motor Fed by Chopper Module

DC Shunt Motor Control Fed from 3 Phase Fully Controlled Converter
DSP based Speed Control of BLDC Motor
Programmable Logic Devices
3 Phase Autotransformer
Isolation Transformer
PC Keyboard & LCD Display Card
Relay Card
PIC Microcontroller Kit
Stepper Motor Interface Board
Phase Shifting Transformer
Measurement of Iron Loss (Ring Specimen)
Pressure Transducer
LVDT Trainer Kit
Instrumentation Amplifier, Ballistic Type Galvanometer
Thermocouple
Digital Storage Oscilloscope
RTD Modules
Thermistors
Current Transformer
Torque Transducer
ADC / DAC Kits

Pulse Generator
Fixed Power Supply
Voltmeters, Ammeters
Decade Resistance, Capacitance, Inductance Boxes
Regulated Power Supplies
Cathode Ray Oscilloscope
Digital Multimeters, Wiring Kit
Interfacing Cards for Process Applications
8051 Microcontroller Kits with PC Interface
8-bit Microcontroller with Peripherals Support Software Tools
8-bit PIC Microcontroller with Peripherals Support Software Tools
16-bit Processors with Peripherals Support Software Tools
ARM Family Processors with IDE, Board Support Packages & Peripherals
DSP Processors with IDE, Board Support Packages & Peripherals
Xilinx/Altera CPLD Processor
Xilinx/Altera FPGA Processor
MPLAB IDE
IAR Embedded Workbench IDE
MATLAB

		PSPICE / ORCAD	
		KEIL IDE	
		CCS Compiler, Flash Magic	
		Converter Fed DC Motor	
		Chopper Fed DC Motor	
		Solar PV Module Trainer Kit	
		Wind Energy Trainer Kit	

Table B.7.5 Facilities & Utilization

Project and Research Laboratory – Equipment & Software Tools

S. No.	Equipment / Software	Purpose
1	MATLAB / Simulink	System modelling, simulation, and control system design
2	ORCAD / Multisim / PSpice	Circuit simulation and PCB design
3	LabVIEW	Instrumentation, measurement, and automation
4	DSP & FPGA Kits	Real-time digital control applications
5	Power Quality Analyzer	Power system diagnostics and analysis
6	IoT Modules (ESP32, Arduino, Raspberry Pi)	IoT-based smart energy and automation systems
7	DSO (Digital Storage Oscilloscope)	Waveform capture, signal and frequency analysis
8	Proteus	Embedded system design and circuit simulation
9	AutoCAD Electrical	Electrical system drafting and schematic design

Mini projects and capstone projects:

"The following projects were carried out by EEE students utilizing the facilities of the Project Laboratory. This laboratory serves as a creative and collaborative space that encourages students to explore emerging technologies and develop innovative solutions. Equipped with modern tools, development boards, sensors, and prototyping equipment, the Innovation Laboratory provides an ideal environment for project-based learning and experimentation. It supports students in transforming their ideas into working models across areas such as IoT, automation, smart energy systems, and embedded applications. The lab plays a crucial role in fostering innovation, critical thinking, and entrepreneurial mindset among students."

Academic year 2024-2025

S.NO	REGISTER NUMBER	NAME OF THE BATCH MEMBERS	MINI PROJECT TITLE	PO & PSO
1	810422105002	AASHA G	Power Theft Detection System for Energy Meters	PO1, PO2, PO3, PO5, PO6, PSO1, PSO2, PSO3
	810422105045	KAVIYA T		
	810422105059 810422105059	MONISHA J		
2	810422105083	SAKTHIVEL A	Power Theft Detection System for Energy Meters	PO1, PO2, PO3, PO5, PO6, PSO1, PSO2, PSO3
	810422105084	SANDHURU P		
	810422105109	TAMIZHARASAN G		
3	810422105085	SANGARI G	Micro Solar Inverter for Rural Applications	PO1, PO2, PO3, PO5, PO6, PO9 PSO1, PSO2, PSO3
	810422105095	SNEHA V		
	810422105110	THILLAI NAYAKI .R		

4	810422105121	VISHAL K	Automatic Power Factor Correction Unit	PO1, PO2, PO3, PO4, PO5 PSO1, PSO2, PSO3
	810422105122	VISHNUVARDAN G K		
	810422105123	YUGENDIRAN S		
5	810422105099	SRINATH V	Smart Load Sharing of Transformers	PO1, PO2, PO3, PO4, PO5, PO6 PSO1, PSO2, PSO3
	810422105100	SRIRAM K		
	810422105106	SUNIL T		

Academic year 2023-2024

S.NO	REGISTER NUMBER	NAME OF THE BATCH MEMBERS	MINI PROJECT TITLE	MAPPING WITH PO & PSO
1	810421105062	R SHIVASHREE	IoT-based Solar Panel Cleaning System	PO1, PO2, PO3, PO5, PO6, PSO1, PSO2, PSO3
	810421105066	SOBIYA .R		
	810421105070	R.SUSMITHA		
2	810421105311	GURU PRASAD S	Rainwater Level Detection System using Ultrasonic Sensors and Solar Pump	PO1, PO2, PO3, PO5, PO6, PSO1, PSO2, PSO3
	810421105313	ILAMPARITHI.M		
	810421105315	M. JAYAPRAKASH		

3	810421105312	HARI HARAN. T	IoT-based Home Automation System	PO1, PO2, PO3, PO4, PO5, PO6 PSO1, PSO2, PSO3
	810421105317	KARTHIKEYAN K		
	810421105318	KATHIRAVAN		
4	810421105328	RAJAVEL. V	IoT Enabled Smart Electric Vehicle Charging Station	PO1, PO2, PO3, PO5, PO6, PO6 PSO1, PSO2, PSO3
	810421105329	RAJESH. S		
	810421105330	RENGASAMY G		
5	810421105332	K.SANJEEV	Smart Fan Control System Based on Temperature and Humidity	PO1, PO3, PO4, PO5, PO6 PSO1, PSO2, PSO3
	810421105333	R.SRIDHAR		
	810421105334	A.VEDHANAYAGAM		

Academic year 2022-2023

S.NO	REGISTER NUMBER	NAME OF THE BATCH MEMBERS	MINI PROJECT TITLE	MAPPING WITH PO & PSO
1	DSUG20105020	MUTHUKUMAR P	Battery Management System for Electric Vehicles	PO1, PO2, PO3, PO4, PO5, PO6 PSO1, PSO2, PSO3
	DSUG20105021	MUKESH KUMAR G		
	DSUG20105022	MUTHUKUMAR P		

2	DSUG20105023	NAVEEN A	Speed Control of Induction Motor using V/f Method	PO1, PO2, PO3, PO4, PO5 PSO1, PSO2, PSO3
	DSUG20105024	NAVEEN A		
	DSUG20105025	PRADEEPAN R		
3	DSUG20105330	MUGESH M	Fire and Gas Detection System with Emergency Shutdown	PO1, PO3, PO4, PO5, PO6, PO6 PSO1, PSO2, PSO3
	DSUG20105331	NANDHAKUMAR		
	DSUG20105332	NAVEEN K		
4	DSUG20105335	RAHUL S	Smart Street Light using Motion Sensors	PO1, PO2, PO3, PO5, PO6, PO6 PSO1, PSO2, PSO3
	DSUG20105336	RAMESH V		
	DSUG20105340	SHAMEER AHAMED A		
5	DSUG20105343	SRINIVASAN R	Wind-Solar Hybrid Charging System for Rural Applications	PO1, PO2, PO3, PO5, PO6, PO6 PSO1, PSO2, PSO3
	DSUG20105344	SURENDHAR S		
	DSUG20105349	VIVEK V		

Hackathons and design challenges:

"The following hackathon and design challenge projects were undertaken by EEE students as part of their active involvement in the **Project and Research Laboratory** initiatives. These activities provided a dynamic platform for students to apply their technical knowledge, creativity, and problem-solving skills to real-world challenges. By engaging in competitive and collaborative environments, students were able to develop innovative solutions, enhance their teamwork and communication abilities, and gain exposure to emerging technologies and industry practices. The **Project and Research Laboratory's** resources and mentorship played a vital role in guiding students through the process of ideation, prototyping, and refining their projects to meet practical and impactful outcomes."

Academic year 2024-2025

S. No	Name of the students	Problem statement	State/National / International level	Date of Event	Name of the award if any
1	S.Dineshkumar A.Hareesh G.Aasha R.Harisudhan S.Ganesh	Uploaded solution in Smart India Hackathon Project Title: SI-H1584 AI Based acoustic wave monitoring of rail defects like cracks, fracture, prediction for rail wear, quality along with other parameters	National level	16.04.2025	Presented
2	B.Kalaiselvan V.Charudupta Hari C.Maheswaran V.Sangeetha B.Dhanush M.Logesh	Uploaded solution in Smart India Hackathon Project Title: SIH1576 Reduced carbon Emissions from thermal plant, developing ways of carbon capture and utilization through value added products	National level	16.04.2025	Presented
3	S.Suriya G.K.Vishnuvardhan V.Sivakumar R.Sundhar Rajan R.Thillai Nayaki	Presented in College level Ideation Hackathon Project Title:SIH1580 Wearable sensor for fall prevention.	National level	28.02.2025	Presented

Research Scholar Details (Including Other College Part-Time Scholars):

The **Project and Research Laboratory** serves as a state-of-the-art facility equipped with modern instruments, simulation tools, and experimental setups that cater to high-level research requirements. Research scholars actively utilize this laboratory to design, test, and validate innovative ideas in areas such as electrical machines, power systems, control systems, renewable energy technologies, and embedded electronics. The laboratory fosters an environment that encourages creativity, problem-solving, and technological advancement by providing access to advanced hardware and software platforms.

Collaborative projects with faculty members and industry experts further enhance the quality and applicability of the research, ensuring that outcomes are aligned with current industrial needs and emerging trends. This collaborative framework not only strengthens the research capabilities of scholars but also promotes the translation of theoretical concepts into practical, real-world solutions.

S.No	Scholar Name	Register Number	Department	Research Supervisor	Mode (Full-Time / Part-Time)	Area of Research	College Name	Year of Registration	Status (Ongoing/ Completed)
1	K.Vijayakanth	17144591111	EEE	Dr.Jebamalar	Part-Time	VLSI	Anna University, Chennai	2018	Ongoing
2	G.Chandrasekar	CH.EN.R4.EEE23001-PT	EEE	Dr. Lakshmanan	Part-Time	Electrical Vehicle	Amrita Vishwa Vidyapeetham,Chennai	2023	Ongoing
3	T.Durga	24239591136	EEE	Dr. M.Bhuvaneswari	Part-Time	Network	Anna University, Chennai	2024	Ongoing
4	R.Sathish	1023151014	EEE	Dr.V.Sekar	Part-Time	Electrical Vehicle	Dhanalakshmi srinivasan University,Trichy	2023	Ongoing
5	Mrs.Bhuvaneswari	25233597128	EEE	Dr.J.Mahil	Part-Time	Power Electronics	Anna University, Chennai	2025	On-going

Publication of research papers in SCI/Scopus journals and conferences.

“Several research papers were published by faculty members and research scholars based on the innovative work conducted in the Project and Research Laboratory. The outcomes of these research activities were disseminated through publications in reputed national and international journals, as well as presentations at prestigious conferences. These contributions not only enhanced the academic visibility of the department but also showcased its commitment to advancing knowledge in the fields of electrical and electronics engineering. The laboratory’s state-of-the-art facilities, combined with collaborative efforts between faculty, scholars, and industry partners, played a pivotal role in producing high-quality research that addressed contemporary challenges and emerging technological trends.”

S.No	Item	2024-25	2023-24	2022-23	2021-22
1	No. of peer reviewed journal papers published	33	32	27	36
2	No. of peer reviewed conference papers published	35	36	31	34
3	No. of books/book chapters published	25	27	24	20
Total		93	95	82	90

Development of prototypes/patents in emerging technologies:

“The **Project and Research Laboratory** plays a pivotal role in fostering innovation and entrepreneurship among faculty and students by providing the necessary infrastructure for the development of prototypes in cutting-edge domains such as renewable energy systems, embedded electronics, automation, and smart grid technologies. Equipped with modern testing equipment, advanced simulation software, and precision fabrication tools, the laboratory enables researchers to transform conceptual designs into functional models. This hands-on approach not only enhances technical competence but also encourages problem-solving skills and creativity. Leveraging these facilities, faculty and students have actively pursued the filing of patents in emerging technologies, thereby contributing to intellectual property generation and strengthening the institution’s research profile. Such activities bridge the gap between academia and industry by promoting innovation-driven solutions with potential commercial applications.”

S.No	Name of the student participants	Theme Name	Problem Statement	Event Description	Level	Date of the event	Organizing committee	Awards Received

1.	R.Sobhiya, M.Vishpriya, R.Susmitha	Rural & Urban development/ Manufacturing/ Engineering Technology	How might we design affordable and effective protective equipment, that can be easily integrated with conventional machinery in small industries to prevent accidents and improve worker safety?	Presented a Project in the title of “Enhanced Smart Safety Helmet for Industrial Workers”.	National Level	21/05/2025	Naan Mudhalvan Niral Thiruvizha 2.0, Government of Tamilnadu, Anna Univrsity, Chennai	Participated and awarded with Rupees 10000/-
2.	Ms. Bavishna A Ms.Gayathri A Ms. Pavithra P	-	-	Presented a Project in the title of “Wind and Solar Hybrid Power Generation System” at Project Expo organized by Eswari Engineering College, Chennai	National Level	04/04/2024		Participated and awarded with second prize

Patent Filing and Start-Up Incubation Support:

"The **Project and Research Laboratory** has played a pivotal role in fostering innovation and technical excellence among EEE students. Leveraging the state-of-the-art infrastructure and resources available in the lab, students have been able to explore cutting-edge technologies and apply theoretical concepts to practical applications. Under the Patent Filing and Start-Up Incubation Support initiative, several student-led projects have been conceptualized, developed, and refined within this laboratory environment. The facility provides mentorship, design tools, testing equipment, and a collaborative atmosphere that encourages creativity and entrepreneurship. As a result, the lab has become a foundation for nurturing patentable ideas and scalable start-up ventures in the fields of power electronics, embedded systems, renewable energy, automation, and IoT-based smart solutions."

Academic year 2022-2023

S.no	Name of Inventor	Date of filing of Application	Application No	Publication Date	Title of the invention
1	Dr.K.Anbarasan Dr.N.Arunkumar Mr.M.Asaithambi Mr.C.P.Vignesh Mr.V.Vinothkumar	19/07/2023	202341048474 A	01/09/2023	Machine Learning Based Smart HVAC Control System With Predictive
2	Dr. N.Arun kumar	24/02/2023	380061-001	Published	An IoT-Based trash fertilizer
3	Dr.M.Parameswari	06.10.2023	202341062406	Published	System and method to generate electrical energy from kinetic energy of moving vehicle using discriminant analysis.
4	Dr.M.Vijay	10.01.2025	202441104111A	Published	Center stand Mechanism for Two –Wheelers Offering Enhanced Convenience and Ease of use, and the method thereof

Faculty contribution in working models:

Academic year 2023-2024

S. No.	Name of the Faculty	Model Title	Objective	Outcomes
1	Dr. K. Anbarasan	Power Quality Improvement with Renewable Energy-Based System Using UPQC-FLC Techniques	To enhance power quality by integrating renewable energy sources using a Unified Power Quality Conditioner (UPQC) with Fuzzy Logic Control (FLC) for efficient disturbance mitigation.	Successfully demonstrated improved voltage stability and reduced harmonics in power systems using UPQC-FLC with renewable energy integration.

2	Dr. M. Parameswari	IoT-Based Smart Circuit Breaker Using Password and GSM	To develop a smart circuit breaker system that allows remote control and secure access via password authentication and GSM communication.	Successfully implemented a reliable IoT-enabled circuit breaker with password protection and real-time GSM alerts for enhanced electrical safety.
3	Dr.M.Parameswari	IoT based smart circuit breaker using password and GSM.	To develop a smart circuit breaker system that allows remote control and secure access via password authentication and GSM communication.	Successfully implemented a reliable IoT-enabled circuit breaker with password protection and real-time GSM alerts for enhanced electrical safety.
4	Dr.Srinivasan	Efficient Thermoelectric Energy Harvesting Through Solar Energy	To enhance energy harvesting efficiency by combining thermoelectric and solar energy conversion methods.	Demonstrated improved power output and efficiency using a hybrid thermoelectric-solar energy harvesting system.
5	Dr. M. Vijay	Wireless Transformer Load Monitoring System	To monitor the load on transformers wirelessly using sensors and IoT.	Data collected was used in a student research paper; model presented at a college symposium.
6	Dr. K. Anbarasan	Wind-Solar Hybrid Power Generation Model	To generate power using hybrid renewable energy sources.	Model displayed at TechFest; influenced a final-year renewable energy project batch.
7	Dr. A. Rajkumar	Home Automation Using IoT and Sensors	To automate home appliances using sensors and smartphone control.	Integrated into IoT practical sessions; led to student project funding by internal grant.

8	Mr. K. Vijayakanth	Advanced EV Charging Station Using Z-Source Quasi-Improved Boost-Zeta Converter with Energy Storage System	To design an advanced EV charging station incorporating a Z-source quasi-improved boost-zeta converter and energy storage for enhanced charging efficiency and power stability.	Successfully developed a high-efficiency charging station with improved voltage conversion, reduced harmonic distortion, and optimized energy storage for sustainable EV charging.
9	Mr.G.Chandrasekar	Smart Energy Meter with IoT	To monitor real-time energy usage and send data to the cloud for analysis.	Implemented as a lab prototype; inspired student mini-projects on energy analytics.
10	Mr.D.Krishnamoorthy	Smart Traffic Control Using Arduino	To manage traffic signals dynamically using real-time vehicle density data.	Used in internal competitions; promoted Arduino-based learning modules.
11	Mr. R. Sathish	Electric Vehicle Charging Station Prototype	To demonstrate a basic EV charging station with power metering.	Helped initiate an EV elective lab; supported UG student capstone projects.

Academic year 2022-2023

S. No.	Name of the Faculty	Model Title	Objective	Outcomes
1	Dr. K. Anbarasan	Intelligent Electrical Facult detection system using camera and sensors	To integrate camera-based monitoring (image processing) for identifying abnormal conditions (e.g., smoke, arc flash).	Successfully detected overloads and overheating using temperature/current sensors.

2	Dr.K Anbarasan	Miniature Model of Electrical Power Distribution System.	To demonstrate the flow of electrical power from generation points (simulated by the model) to various types of loads such as residential homes and small industries	Clear visualization of power transmission and distribution processes and components, aiding better conceptual understanding
3	Dr. M. Parameswari	Design & Implementation of AI-Powered Smart Inverter for Predictive Load Management & Solar Energy Optimization	To design and implement an AI-powered smart inverter for efficient load management and optimal utilization of solar energy.	Successfully developed a smart inverter that uses AI for predictive load forecasting and optimizes solar energy conversion for enhanced system efficiency and reduced energy wastage.
4	Dr. N.Arun kumar	Deep Learning Based Object detection for street light control with Energy management & Fault using IOT.	To design a deep learning-based system for street light control, integrating energy management and fault detection via IoT.	Successfully implemented a smart street light control system that uses deep learning for object detection, IoT for energy optimization, and real-time fault monitoring.
5	Dr. D. Danalakshmi	Automatic Railway Gate Control System	To prevent accidents by automating railway gate operation using sensors.	Prototype appreciated at an inter-college expo; used in control systems lab.
6	Dr. G. Muralikrishnan	Biometric Attendance System with RFID Backup	To track attendance using biometric and RFID technologies.	Deployed for trial in department office; supported student innovations in embedded systems.
7	Dr.K.Srinivasan	Automatic Power Factor Correction Panel	To improve power factor in real-time using capacitor banks	Demonstrated during technical fest; improved student understanding of real-time correction

8	Mr. M. Kathamuthu	Solar-Based Fuel Bridge Resonant Converter for EV	To design a solar-powered fuel bridge resonant converter for efficient energy conversion and charging of electric vehicles (EVs).	Successfully developed an energy-efficient system that utilizes solar power for EV charging, enhancing performance with resonant converter technology for smoother energy transfer.
9	Mr. G. Chandrasekar	Integrated Wireless Charging Receiver for Electric Vehicles Using Half-Bridge Inverter	To design an integrated wireless charging receiver system for electric vehicles, utilizing a half-bridge inverter for efficient power transfer.	Successfully developed a wireless charging receiver that optimizes energy conversion and improves charging efficiency for electric vehicles using half-bridge inverter technology.
10	Mrs. S. Amali Arputha Mary	Solar Street Light with Auto Dimming Feature	To conserve energy by dimming streetlights based on traffic density.	Selected for institutional innovation grant; inspired student research work.
11	Mr. M. Kathamuthu	Biometric Attendance System with RFID Backup	To track attendance using biometric and RFID technologies.	Deployed for trial in department office; supported student innovations in embedded systems.

Academic year 2021-2022

S. No.	Name of the Faculty	Model Title	Objective	Outcomes
1	Dr. K. Anbarasan	Hybrid Renewable PV–Fuel Cell EV Charging with Intelligent RNN-Based State-of-Charge Management	To develop a hybrid renewable energy system for EV charging, combining PV and fuel cell sources with intelligent RNN-based State-of-Charge (SOC) management.	Successfully implemented an optimized charging system that efficiently integrates PV and fuel cell energy with RNN-based SOC management, enhancing energy utilization and EV charging efficiency.

2	Dr.K Anbarasan	Miniature Model of Thermal Power Plant and Transmission System	To illustrate the process of power generation from thermal energy	Ability to identify key components of a thermal power plant and transmission system.
3	Dr.N.Arunkumar	Design of harmonic filters for supra harmonics suppression in power electronics dominated power system.	To design and implement harmonic filters aimed at suppressing supra-harmonics in power systems dominated by power electronics, improving power quality and system performance.	Successfully developed harmonic filters that effectively mitigate supra-harmonics, enhancing the overall power quality and reducing potential disturbances in power electronics-based systems.
4	Dr. R. Latha	Arduino-Based Fire Alert System	To detect fire and send alerts using sensors and GSM module.	Used in safety awareness workshop; base model for student startup idea.
5	Dr. K. Srinivasan	Home Automation Using IoT and Voice Control	To automate lighting and appliances using Alexa and IoT modules.	Showcased in inter-college expo; added as a case study in IoT elective course.
6	Dr.N.Arunkumar	Automatic Irrigation System Using Soil Sensor	To automate irrigation based on moisture content in soil.	Integrated in agricultural engineering outreach; model replicated by diploma students.
7	Dr.V.subha seethe lakshmi	Arduino-Based Fire Alert System	To detect fire and send alerts using sensors and GSM module.	Used in safety awareness workshop; base model for student startup idea.

8	Mrs. T. Durga	IoT-Enabled Water Monitoring in Smart Cities with Power Grid and Inverter-Based Harvesting	To design an IoT-based water monitoring system for smart cities, integrated with a power grid and inverter-based energy harvesting for sustainable operation.	Successfully developed an energy-efficient water monitoring system powered by renewable energy harvesting, offering real-time data and optimal resource management for smart cities.
9	Mr. M. Asaithambi	Smart IoT Monitoring of RF Energy Harvesting Techniques for Wireless Power Transfer System	To develop a smart IoT-based monitoring system for RF energy harvesting techniques in wireless power transfer systems to optimize energy efficiency.	Successfully implemented an IoT-enabled monitoring system that tracks RF energy harvesting, improving the efficiency and reliability of wireless power transfer systems.
10	Mr. M. Kathamuthu	Wind–Solar Hybrid Model	To generate renewable energy using a hybrid micro-grid setup.	Used in energy systems lab; supported student project on off-grid solutions.
11	Mr. V. Vinoithkumar	Overload Protection System for Home Wiring	To prevent damage due to current overdraw using relays and alarms.	Used in electrical safety awareness sessions; refined into student circuit design project.

"The project was supported through an internal research grant provided by the parent institution."

“The **Project and Research Laboratory** provided the necessary infrastructure and technical support for the successful execution of the project, which focused on innovative solutions in the field of electrical and electronics engineering. Utilizing its advanced equipment, simulation tools, and experimental setups, the research team was able to design, develop, and validate the proposed work efficiently. The project received **financial support through an internal research grant** offered by the parent institution, demonstrating the institute’s commitment to fostering a strong research culture. This funding not only facilitated the procurement of essential components and resources but also encouraged faculty and students to engage in high-impact research activities. The combined support of the laboratory’s facilities and institutional funding significantly enhanced the scope, quality, and outcome of the project, paving the way for further research and potential industry collaborations.”

Project Summary (2023–2024);

S.N.	Faculty Name	Project Title	Duration	Amount (Rs.)	Amount Utilized (Rs.)	Outcomes
1	Dr.K.Anbarasan	Drone-Based Emergency Response and Surveillance System	12 months	100000	100000	• Developed practical skills in drone design and programming • Gained hands-on experience in IoT integration and disaster management applications • Enhanced teamwork and project management skills
2	Dr. M. Vijay	Real-time Public Transportation Safety and Alert System	10 months	40,000	40,000	• Applied knowledge of real-time data processing and wireless communication • Improved problem-solving skills related to safety-critical systems • Learned system testing and field deployment techniques
3	Dr.D.Danalakshmi	Child Safety Tracking Frock and Geofencing System	8 months	60,000	60,000	• Gained experience in wearable electronics and geofencing technologies • Developed mobile application interface for tracking • Improved skills in embedded systems and sensor integration
Total				**200000**	**200000**	

Project Summary (2022–2023);

S.N.	Faculty Name	Project Title	Duration	Amount (Rs.)	Amount Utilized (Rs.)	Outcomes of the Project
1	Dr.M.Parameswari	Smart Waste Management System for Rural Areas	1 Year	50,000	50,000	• Students developed practical skills in IoT-based sensor integration • Implemented data collection and monitoring • Learned system design for rural applications

2	Dr.G.Muralikrishnan	Data-Driven & IoT-Enabled Harvesting	1 Year	1,40,000	1,40,000	• Gained hands-on experience in precision agriculture technologies • Applied data analytics for crop yield optimization • Improved skills in IoT sensor deployment and cloud data management
3	Dr. N. Arunkumar	AI-Powered Smart Surveillance with Anomaly Detection	1 Year	80,000	80,000	Applied machine learning techniques for anomaly detection • Developed real-time video processing skills • Enhanced understanding of AI model deployment in surveillance systems
Total				**2,70,000**	**2,70,000**	

Project Summary (2021–2022);

S.N.	Faculty Name	Project Title	Duration	Amount (Rs.)	Amount Utilized (Rs.)	Outcomes of the Project
1	Dr.K.Anbarasan	Advanced Women Safety System using Arduino and GPS	1 Year	100000	100000	• Students designed and implemented a GPS-based safety system • Developed skills in Arduino programming and mobile app integration • Improved understanding of embedded system design for safety applications
2	Dr.K.Srinivasan	Precision Irrigation Systems	1 Year	80,000	80,000	• Gained experience in IoT sensor networks for agriculture • Applied data-driven decision making for efficient irrigation • Developed ability to build low-cost precision irrigation solutions
Total				**1,80,000**	**1,80,000**	

Industry-collaborated R&D projects:

List of consultancy projects received from external agencies:

"The following advanced research projects were carried out by EEE staff members utilizing the facilities of the **Project and Research Laboratory**. This laboratory serves as a dedicated research hub equipped with modern instrumentation and high-end tools essential for conducting innovative and application-oriented research. With a focus on emerging areas such as power electronics, smart grid systems, embedded technologies, renewable energy systems, and industrial automation, the lab enables faculty members to pursue advanced investigations and contribute to scholarly advancements. The conducive research environment also supports collaboration, interdisciplinary work, and prototype development, aligning with institutional goals of academic excellence and technological innovation."

Project Summary (2023–24):

S.No	PI Name	No. of Projects	Project Title	Funding Agency	Amount (Rs.)
1	Dr. K.Anbarasan	1	Electric Vehicle Charging Station Design	Lakshmi Electronics- Coimbatore	1,00,000
2	Dr.M.Parameswari	1	Design and Implementation of Universal Converter	Swan Scientific Supplies-Madurai	50,000
3	Dr. M. Vijay	1	Multi-Functional PV Inverter with Low Voltage Ride Through and Constant Power Output Control system	Q-Tek Devices- Trichy	75,000
4	Dr. K.Anbarasan	1	Vehicle Colision Detection System Using Arduino IDE with Ultrasonic Sensor	A2E TRADERS,Trichy	1,18000
5	Dr.K.Srinivasan	1	Energy Harvesting Techniques for Low Power Wireless sensor	Vi Microsystems, Chennai	50,000
Total					**3,93,000**

Project Summary (2022–23):

S.No	PI Name	No. of Projects	Project Title	Funding Agency	Amount (Rs.)
1	Dr. K.Anbarasan	**1**	Implementation of ZigBee-GSM Based Home Security Monitoring and Remote Control System	Orbit Controls and Services	65000

1	Dr.K.Srinivasan	1	Programmable Switching Control for Industrial Automation	Sunfire Systems-Chennai	78000
2	Dr.N.Arunkumar	1	Intelligent Temperature-Controlled Speed Adjustable Motor in Radiator Fan	Vi Microsystems, Chennai	98000
3	Dr. M. Vijay	1	Intelligent Temperature-Controlled Speed Adjustable Motor in Radiator Fan	Q-Tek Devices- Trichy	1,07000
4	Dr. K.Anbarasan	1	Design and Implementation of DCDC Converters for Electric Vehicles	A2E TRADERS,TRICHY	1,20,000
Total					**4,68,000**

Project Summary (2021–22):

S.No	PI Name	No. of Projects	Project Title	Funding Agency	Amount (Rs.)
1	Mr.D.Krishnamoorthy	1	Design and Optimization of the PM array of brushless DC Motor with minimum cogging torque for electric vehicle applications	Orbit Controls and Services	5,70,000
2	Dr.S.Durairaj	1	Eminence of Electric Vehicle and Robotics in Agronomy	AICTE Training and Learning Academy	93,000
3	Mr.J.Nagendran	1	Design and Implementation of DC to DC Converters for Electric Vehicles	Vi Micro Systems	5,70,000
4	Dr.K.Anbarasan	1	Harvesting low cost renewable energy using modern controllers based on soft computing	Indian National Science Academy	50,000
Total					**12,83,000**

Funding proposals to government agencies (AICTE, DST, etc.):

"The following advanced research projects were carried out by EEE staff members utilizing the facilities of the **Project and Research Centre**. The centre is equipped with sophisticated tools, testing equipment, and simulation software that support high-level research and innovation. It provides an ideal environment for faculty to engage in cutting-edge research across various domains including power systems, control engineering, embedded systems, renewable energy technologies, and IoT-based applications. By facilitating experimentation, prototype development, and real-time validation, the centre plays a crucial role in enhancing the research capabilities of the department. It also promotes interdisciplinary collaboration and contributes to the development of impactful solutions aligned with current industrial and societal needs."

Academic year 2024-2025

TNSCST Student Project Scheme:

S.No	Guide Name & Designation	Project Title	Student Team Members	Discipline Code	Amount Sanctioned (₹)
789	Dr.M.Parameswari, Professor, Electrical and Electronics Engineering, Dhanalakshmi Srinivasan Engineering College, Perambalur – 621 212	IoT-based fire accident minimization in EV vehicle with multiple fault detection using AI	Gowtham J, Gowtham R, Karthikeyan K, Vinayagaragunathan S	EEE-596	7500

Sponsored Research Project:

S.NO.	PI name	Co-PI Names if any	Name of the Department where Project is sanctioned	Project title*	Name of the Funding agency	Duration of the project	Amount (Lacs)
2023-24							
1	Dr.K.Anbarasan	Mr.M.Kathamuthu	EEE	IoT-Based Smart Circuit Breaker Using Password and GSM	Nithium Engineering Solutions-Dindigul.	2 years	Rs.1,20,000

2	Dr.M.Parameswari	Ms.A.Thamijunisha	EEE	Solar-Powered Automatic Street Lighting System with Energy Saving Mechanism	*Vi Microsystems, Chennai.*	1 year	Rs.2,00,000
3	Dr.M.Vijay	Mrs.T.Durga	**EEE**	Smart Distribution Board for Domestic and Industrial Use	Spark Technologies, Coimbatore.	1 year	Rs.1,80,000
4	Dr.K.Srinivasan	Mrs.T.Durga	**EEE**	Wireless Power Transfer for Electric Vehicles	*IndiGuard Systems Private Limited, Tanjavur*	1 year	1,20,000
Total							**6,20,000**

S.NO.	**PI name**	**Co-PI Names if any**	**Name of the Department where Project is sanctioned**	**Project title***	**Name of the Funding agency**	**Duration of the project**	**Amount (Lacs)**
2022-23							
1	Dr.K.Anbarasan	Mr.M.Kathamuthu	EEE	Industrial Motor Monitoring and Control System Using IoT	Energia Technology, Trichy.	1.5 years	Rs.1,50,000
2	Dr.K.Srinivasan	Ms.A.Thamijunisha	EEE	Electrical shock prevention system in Residential Circuits	Ilustrious Institute of Green Environment Private Linited (IIGEM), Chennai.	2 years	Rs.1,00,000

3	Mr.G.Chandrasekar	Mr.V.Vinoithkumar	EEE	Leakage Current Detection and Isolation for High Voltage Lines.	*IndiGuard Systems Private Limited, Tanjavur*	2 year	Rs.1,80,000
4	Dr.M.Vijay	Mrs.T.Lavanya	EEE	Wireless Demand Side Load Management System.	Vector India Private Ltd.,Hyderabad	1 year	Rs.1,00,000
5	Dr.N.Arunkumar	Mr.V.Vinoithkumar	EEE	Design and Implementation of DC Converters for Electric Vehicles	Vi Micro Systems	1 year	Rs.1,00,000
Total							**6,30,000**

S.NO.	**PI name**	**Co-PI Names if any**	**Name of the Department where Project is sanctioned**	**Project title***	**Name of the Funding agency**	**Duration of the project**	**Amount (Lacs)**
2021-2022							
1	Dr.S.Durairaj	Mrs.T.Lavanya	EEE	Skill and Personality Development Program Center(SPDC)	AICTE	3 years	Rs.12,23,600
2	Dr.K.Anbarasan	Mr.V.Vinoith kumar	EEE	Advanced Reactive Power Management of Power networks	IEEE Madras section	1 years	Rs.25000

3	Dr.K Anbarasan	Mr.M.Kathamuthu	EEE	Earth Fault and Overload Protection System for Industrial Equipment.	*Indi Guard Systems Private Limited, Tanjavur.*	1 year	Rs.1,50,000
4	Mr.K.Vijayakanth	Mrs.T.Durga	EEE	Smart Distribution Board for Domestic and Industrial Use	Quantanics Techserv Pvt. Ltd. Madurai.	2 years	Rs.1,00,000
5	Mr.M.Asaithambi	Mrs.T.Lavanya	EEE	Wireless Demand Side Load Management System.	Vector India Private Ltd. Hyderabad	2 years	Rs.80,000
6	Dr.N.Arunkumar	Mr.V.Vinoithkumar	EEE	Design and Optimization of the PM array of brushless DC motor with minimum cogging torque for Electric vehicle applications	Orbit Controls and Services	1 year	Rs.1,80,000
Total							**17,58,600**
Total amount (Lacs) received for the past 3 years							**30,08,600**

Academic year 2022-2023:

S. No.	Particulars	Details
1	Title of the Workshop	Harvesting Low Cost Renewable Energy Using Modern Controllers Based on Soft Computing Techniques
2	Type of Workshop	Two Days National Level Workshop
3	Funding Agency	INSA, New Delhi
4	Fund Received	Rs. 50,000/-
5	Organized by	Department of Electrical and Electronics Engineering
6	Institution	Dhanalakshmi Srinivasan Engineering College (Autonomous), Perambalur
7	Dates of Event	18.11.2022 and 19.11.2022
8	Venue	Central Auditorium
9	Motto	To gain knowledge about recent Soft computing techniques for green energy
10	Chief Guest / Presiding Officer	Thiru. A. Srinivasan, Chancellor, Dhanalakshmi Srinivasan University
11	Number of Participants	60 (External Institutions) + 40 (DSEC Group) = **100 Participants**
12	Keynote Speakers	- Dr. S. Senthil Kumar (NIT, Trichy) - Dr. K. Ramash Kumar (Dr. NGP IT, Coimbatore) - Dr. Srinivasan Pradabane (NIT, Warangal) - Dr. J. Jawahar Babu (MITS, Annamaya)
13	Topics Covered	- Energy harvesting sources and topologies - Modern Controllers and Soft Computing Techniques - Low-cost systems in Renewable Energy - Applications of Soft Computing

14	Organizing Coordinators	Dr. Katherasan (Head, Robotics & Automation) Prof. C. Narayanan (Head, Biomedical Engineering)
15	Guidance By	Dr. M. Sridevi (Vice Principal), Dr. K. Velmurugan (COE), Dr. K. Anbarasan (Dean Academics)
16	Other Attendees	HoDs, faculty, students from various departments
17	Certificates & Kits	Participation kits and certificates were provided

Final year research projects:

"The following advanced research projects were undertaken by EEE students using the facilities of the **Project and Research Laboratory**. The laboratory provides a well-equipped and research-driven environment that encourages students to explore innovative ideas and develop technical solutions to real-world challenges. With access to advanced tools, instruments, and software platforms, students are empowered to conduct experimental investigations, prototype development, and system testing in key areas such as power electronics, automation, embedded systems, and smart energy technologies. This hands-on experience not only strengthens their practical skills but also nurtures a spirit of innovation, research aptitude, and readiness for higher studies or entrepreneurial

Academic Year 2023-24

S.NO	Register No	Name	Project Title	Project Guide	Project Type	Mapping with PO,PSO
1	810421105004	Anbarasan. P	Design & implementation of AI- powered smart inverter for predictive load management &solar Energy optimization	Dr.K.Anbarasan	Design and manufacturing	PO1,PO2,PO3,PO4,PO5, PO6,PO7, PO8,PO9, PO10,PO11,PO12,PSO1,PSO2, PSO3
	810421105012	Dhayanithi .S				
	810421105029	Kaviarasu R				
	810421105030	KilbertWilliam.A				

Academic Year 2022-23

2	810421105019	Gokul Raj R	Optimized energy Harvesting for Enhanced smart home IOT performance	Dr.M.Parameswari	Application based projects	PO1,PO2,PO3,PO4,PO5, PO6,PO7, PO8,PO9, PO10,PO11,PO12,PSO1,PSO2,PSO3
	810421105027	Kathiravan K				
	810421105042	Prasath S				
	810421105043	Prithivi Raj S				
3	81421105303	Aswini S	Iot Based Smart Circuit Breaker Using Password And Gsm	Dr.M.Parameswari	Industry based projects	PO1,PO2,PO3,PO4,PO5, PO6,PO7, PO8,PO9, PO10,PO11, PO12,PSO1, PSO2,PSO3
	81421105314	Janani S				
	81421105324	Nithya R				
4	810421105003	Abishek .S	Electric Vehicle to Vehicle Energy Transfer in Emergency using on-board converted	Dr.Danalakshmi	Research based projects	PO1,PO2, PO3,PO4, PO5, PO6,PO7, PO8,PO9, PO10, PO11,PO12, PSO1,PSO2, PSO3
	810421105026	Karthik Raj .K				
	810421105041	Prasanth .K				
	810421105050	Rajesh V				
5	810421105018	Gokul .J	Optimized maximum Efficiency point tracking for Bidirectional Non-Inverter Buck- Boost Converter	Dr.Danalakshmi	Research based projects	PO1,PO2, PO3,PO4, PO5,PO6, PO7,PO8, PO9,PO10, PO11,PO12,PSO1,PSO2,PSO3
	810421105033	Logesh. S				
	810421105051	Ramaraj. M				
	810421105052	Ranjith. K				

6	810421105025	Kalaiselvan .K	Mastering Energy: A Design Guide for Efficient management in self-powered sensor	Dr.K.Srinivsan	Design and manufacturing	PO1,PO2, PO3,PO4, PO5, PO6,PO7, PO8,PO9, PO10,PO11,PO12,PSO1,PSO2,PSO3
	810421105006	Ankit Kumar				
	810421105055	Ruthran .C				
	810421105058	Saravanan Kumar .P				
7	810421105015	Dinesh Kumar. S	Advanced EV charging station using Z-source Quantic improved boost zeta Converter with Energy storage system	Dr A.Rajkumar	Product based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810421105022	Jayasurya. M				
	810421105028	Kathiravan .R				
	810421105053	Retheshwaran. M				
8	810421105062	Shivashree r	Efficient thermoelectric energy harvesting through solar energy	Dr.M.Vijay	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810421105071	Uma maheshwari s				
	810421105072	Vaishnavi p				
	810421105008	Bavishna .A	Smart IOT Monitoring of RF Energy Harvesting Techniques for wireless power transfer system	Mrs.T.Lavnnya	Industry based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
9	810421105016	Gayathri .A				
	810421105046	Pavithra. P				
10	81421105064	Siva S	Iot –Enabled Electric Vehicles Maintenance For Smart Charging Piles	Mr.K.Vijayakanth	Application based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	81421105065	Sivamanicam M				
	81421105067	Srikanth B				
	81421105080	Vishva J				

11	810421105082	Vishwanth M	Solar Based High Gain Dc-Dc Converter With Inverse Gain Characteristic	Mr.M.Asaithambi	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810421105304	Avinash S				
	810421105305	Barani Kumar M				
	810421105307	Dinesh Kumar S				
12	810421105007	Balaji S	Integrated Wireless Charging Receiver For Electric Vehicles Using Half Bridge Inverter	Mr.G.Chandrasekar	Product based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810421105024	Jayaprathap S				
	810421105039	Padmanaban K				
	810421105047	Raja V				
13	810421105002	Abishek.S	Deep Learning Based Object detection for street light control with Energy management & Fault using IOT	Mrs .T.Durga	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810421105010	Dhanasekar. B				
	810421105032	Loganathan .T				
	810421105038	MukeshKirshnan .R				
14	810421105311	Guruprasad S	Advanced Transformer Monitoring And Load Distribution With Iot Integration	D.Krishnamoorthy	Application based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810421105328	Rajavel V				
	810421105329	Rajesh S				
	810421105330	Rengasamy G				
15	810421105309	Gowtham J	IOT Based Accident Minimization In E-Vehicle Multiple Fault Detection Using Ai	Mr.M.Kathamuthu	Solution of industrial problems	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810421105310	Gowtham R				
	810421105317	Karthikeyan K				
	810421105336	Vinayagaragunathan S				

16	81421105313	Ilamparithi M	Advanced Electric Vehicle Wireless Charging With Mutually Spliced Double-D Coil	S. AmaliArputha Mary	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	81421105315	Jayaprakash M				
	81421105334	Vedhanayagam A				
	81421105335	Vetrivel R				

S.NO	Register No	Name	Project Title	Project Guide	Project Type	Mapping with PO,PSO
1	DSUG20105023	Naveen. A	Modelling of active- clamp flyback converter as auxiliary power -supply of an inductive-charging system for electric vehicles	Dr.K.Anbarasan	Industry-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105024	Naveen .A				
	DSUG20105031	Sakthivel. S				
	DSUG20105032	Samsalamon .P				
2	DSUG20105310	Elavarasan .E	Adaptive control technique for portable solar powered EV charging adapter to operate in remote location	Dr.M.Parameswari	Product-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1,PSO2,PSO3
	DSUG20105327	Mohamed Yasir .S				
	DSUG20105330	Mugesh. M				
	DSUG20105333	Prakash .R				

3	DSUG20105301	Abdul Rahuman. B	A comparative analysis of power electronics converter for ultrafast charging in EV application	Dr.D.Danalakshmi	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105317	Krishna .G				
	DSUG20105335	Rahul .S				
	DSUG20105344	Surendhar .S				
4	DSUG20105011	Divyalakshmi. G	Case study on static charge induced on human body in basketball court	Dr.K.Srinivasan	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105018	Keerthika. C				
	DSUG20105036	Sineka .D				
	DSUG20105314	Jeevithaa .R. T				
5	DSUG20105006	Arivazhagan .R	Modelling of three port soft switch dc-dc psfb converter with battery for spv appications	Dr.N.Arunkumar	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3, PSO1-PSO3
	DSUG20105003	AbubakkarSithik.R				
	DSUG20105009	Dinesh. D				
	DSUG20105010	Dinesh. M				
6	DSUG20105315	Jegadeesh S	Grid integrated pv based e-vehicle charge station with improved reactive power compensation	Dr.G.Muralikrishnan	Application-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1,PSO2,PSO3
	DSUG20105334	Prashanth S				
	DSUG20105340	ShameerAhamed A				
7	DSUG20105004	Ajithkumar. R	Microgrid battery charging management using fuzzy based dc-dc charge controller,	Mr.K.Vijayakanth	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	DSUG20105012	Elavarasan .E				
	DSUG20105019	Manikandan E				
	DSUG20105046	Visithran R				

8	DSUG20105035	Seenivasan S	Design and implementation monitoring of photovoltaic fed induction motor control using IOT	Mr.M.Asaithambi	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	DSUG20105039	Srikanth.P				
	DSUG20105041	Surya .A				
	DSUG20105044	Vishnu .B				

Sl. No	Reg. No	Name	Project Title	Project Guide	Project Type	Mapping with PO,PSO
1	810419105011	Hariharan M	Performance analysis of single phase multilevel cascaded converter based on particle swarm optimization technique	Dr,K.Anabarasan	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3PO12, PSO1-PSO3,,
	810419105045	Sabarinathan S				
	810419105302	Jaya Prasanth M				
	810419105314	Vigneshwaran S				
2	810419105001	Abinaya.P	A smart electric vehicles station assessment system using AI with block chain	Dr.M.Parameswari	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810419105309	Pavithra. M				
	810419105047	Sathyasri .S				
3	810419105013	Kalaiyarasan. K	Design and implementation of single input multi output DC-Dc converter using super lift LUO technology	Dr.N.Arrunkumar	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810419105027	Mohammed Ashik A				
	810419105304	Maharaja M				
	810419105311	Surendhar S				

4	810419105051	Sriram.K	Modelling and implementation of high frequency switched QRFC using snubber circuit	DrG.Muralikrishnana	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810419105060	Vignesh.K				
	810419105308	Prithiviraj.A				
	810419105310	Sanjay Kumar.V				
5	810419105008	Gopika. R	zero voltage derivative switching for resonant converters with reduction of ripple	Mrs.T.Lavanya	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3,
	810419105047	Sathya D				
	810419105309	Priyavathana R				
6	810419105021	Madhavan R	A goal towards electromobilituy within smart city solution (IOT) based air quality monitoring	Mr M.Asaithambhi	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810419105026	Mohamed Arafath I				
	810419105306	Mohammed Imthiyaz M				
	810419105312	Suresh V				
7	810419105014	Kannan.D	Implementation of High voltage gain interleaved boost converter for electric vehicles	Mr.C.P.Vignesh	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810419105031	Manoj.M				
	810419105040	RajeshKumar.A				
	810419105048	Sedhupathy.A				

8	810419105037	RagulRajan. S	Wireless Charging System for Electric Vehicles	Mrs.K.preetha	Product based	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810419105305	Minnal Raj M				
	810419105053	Thanigaivel. V				
	810419105016	Kaviyarasu G				

Academic year 2021-2022

PG Student Project:

S.No	Student Name	Register Number	Project Title	Supervisor	Year	Outcome / Abstract	PO,PSO
1	Thamijunisha A.	810419415002	A Novel Coordinated Control for Virtual Synchronous Generator Using Back-to-Back Motor Drive System	Dr. K. Anbarasan	2021	Proposed a VSG-based control with motor drive for grid frequency regulation using stored kinetic energy.	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3

Academic year 2022-2023

S.No	Student Name	Register Number	Project Title	Supervisor	Year	Outcome / Abstract	PO,PSO
1	Kaviyarasi.k	810421415001	Electric Vehicle Charging with dual fly back converter	Dr.N.Arun kumar	2022	A dual flyback converter-based EV charger offers an isolated, compact, and efficient solution for low to medium power applications.	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
2	Priyadharshini.S	810421415002	Modified Bridgeless Landsman converter fed EV battery charger with improved Power Factor	Dr.G.Muralikrishanan	2022	A Modified Bridgeless Landsman Converter enhances EV battery charging with improved power factor and reduced input current harmonics.	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3

Hands-on training and workshops on latest tools:

"Hands-on training sessions and workshops on the latest tools and technologies were conducted for EEE students in the **Project and Research Laboratory**. These sessions aimed to bridge the gap between theoretical knowledge and practical application by providing students with direct exposure to industry-relevant hardware and software platforms. The training covered areas such as embedded system design, power electronics, industrial automation, IoT integration, and renewable energy systems. Through expert guidance and interactive learning, students enhanced their technical competencies, problem-solving skills, and project development capabilities. These initiatives not only supported curriculum-based learning but also fostered innovation and preparedness for research, internships, and industry placements."

Academic year 2022-2023

S.No	Workshop Title	Tool/Software/Hardware Used	Learning Outcomes	Target Audience	Duration

1	Design and Development of Electric Vehicles	MATLAB/Simulink, BLDC motor kit, Battery pack, Controller (VFD),	Understand EV architecture, motor drive control, battery management systems (BMS), regenerative braking, and simulation of EV models	PG & UG Final Years	2 Days
2	Embedded System Design with Arduino & ESP32	Arduino IDE, ESP32, Sensors	Design IoT-based smart systems	UG (EEE)	2 Days
3	Circuit Simulation & PCB Design	Multisim, ORCAD	Simulate and design PCBs for electronic circuits	UG (EEE)	2 Days
4	Real-time Control using MATLAB/Simulink & DSP	MATLAB/Simulink, DSP Kit (TMS320)	Modeling and implementing control systems on DSP	PG & UG Final Years	2 Days
5	Solar PV System Design and Simulation	PV system, MATLAB Simulink, Hardware Kits	Design, simulate and analyze performance of PV systems	UG, PG & Research Scholars	2 Days

Academic year 2023-2024

S.No	Workshop Title	Tool/Software/Hardware Used	Learning Outcomes	Target Audience	Duration
1	Machine Learning Applications in EEE	Python	Apply ML for fault detection, energy forecasting, etc.	PG & Final Year UG	2 Days
2	IoT-based Smart Grid Prototyping	Node-RED, MQTT, ESP32, Blynk	Build a prototype smart energy monitoring system	UG & PG	2 Days
3	Power Electronics Converter Simulation	PSIM / MATLAB-Simulink	Simulate DC-DC, DC-AC converters, PWM techniques	UG (EEE)	2 Days

Academic year 2024-2025

S.No	Workshop Title	Tool/Software/Hardware Used	Learning Outcomes	Target Audience	Duration
1	Design and Development of Electric Vehicles	MATLAB/Simulink, BLDC motor kit, Battery pack, Controller (VFD),	Understand EV architecture, motor drive control, battery management systems (BMS), regenerative braking, and simulation of EV models	PG & UG Final Years	2 Days
2	Power Electronics Converter Simulation	MATLAB-Simulink	Simulate DC-DC, DC-AC converters, PWM techniques	UG (EEE)	2 Days
3	Circuit Simulation & PCB Design	Multisim, ORCAD	Simulate and design PCBs for electronic circuits	UG (EEE)	2 Days
4	Solar PV System Design and Simulation	PVsyst, MATLAB Simulink, Hardware Kits	Design, simulate and analyze performance of PV systems	UG, PG & Research Scholars	2 Days

The EEE Project/Research Laboratory in our college serves as a multidisciplinary innovation hub and is extensively utilized by final-year students of the Robotics Department for executing their projects. With advanced facilities such as Arduino and Raspberry Pi controllers, motor control trainers, power electronics kits, FPGA/DSP boards, MATLAB/Simulink, PSIM, and IoT-enabled hardware, the lab enables robotics students to design, simulate, and implement real-time applications. Using this facility, they have successfully developed innovative projects including PID optimization for aerial robots (quadcopters), autonomous path memorization robots, modular radio-controlled drones, spy robots for metal and gas detection, automatic lawn mowers and house-cleaning robots, AI-based fire-fighting robots with smoke extraction systems, marine-based autonomous human rescuing bots, environmental robots for industrial waste collection, and IoT-based baby monitoring systems. These projects provide students with practical exposure in sensor integration, embedded controllers, motor drive control, IoT, machine learning, and renewable energy integration, thereby enhancing their problem-solving skills, innovation capabilities, and teamwork while fulfilling Program Outcomes (POs) such as applying engineering knowledge, conducting experiments, and modern tool usage, along with Program Specific Outcomes (PSOs) related to robotics system design, control, and automation.

S.No	Register Number	Student Name	Project Title	PO & PSO

1	810421125015	Ganesh C	PID Optimization for Aerial Robot (Quadcopter)	PO1, PO2, PO3, PO4, PO5, PO6 PSO1, PSO2
	810421125024	Praveen raj V		
	810421125026	Rahul N		
	810421125030	Santhosh Kumar K		
2	810421125001	Abin C George	Autonomous Path Memorization Robot	PO1, PO2, PO3, PO4, PO5, PO6 PSO1, PSO2
	810421125010	Balakrishnan M		
	810421125025	Priyanka E		
	810421125032	Saravanan R		
3	810421125002	Abu Sufiyan B	Modular Radio Controlled Drone	PO1, PO2, PO3, PO5, PO6 PSO1, PSO2
	810421125014	Fayiz Muhammed		
	810421125016	Godwin Pious E J		
	810421125037	Thivakar M		
4	810421125004	Adithiya Lalappan	Spy Robot for Metal and Gas Detection	PO1, PO2, PO3, PO4, PO6 PSO1, PSO2
	810421125006	Akhil Aji		
	810421125007	Alen Anu		
	810421125008	Alwin T R		
5	810421125003	Adithya Prasd	Autoatic Lawn Mower and House Cleaning Robot	PO1, PO2, PO3, PO5, PO6 PSO1, PSO2
	810421125009	Anandhu T Thakappan		
	810421125011	Bijith S		
	810421125017	Jibin Sunu		

Students of **Dhanalakshmi Srinivasan Engineering College (Autonomous), Perambalur** actively participated in the **Maze Solving Robot Competition (TECHNEX'24)** organized by **Innovians Technologies** at **IIT (BHU), Varanasi**, on **17th March 2024**. The event was conducted at the **National Level**, attracting **12+ competitive teams** from premier institutions including **MIT Chennai, IIT Varanasi, and teams from Maharashtra, Andhra Pradesh, and other states**.

A team comprising **Adithyan Lalappan, Santhosh Kumar, Alen Anu, and Prisith Kumar** represented the college and secured the **2nd Place**, demonstrating their technical expertise, teamwork, and problem-solving skills. The innovative robot was **conceptualized, designed, and developed using the facilities available at the Project and Research Laboratory**, which provided access to modern controllers, embedded processors, simulation tools, and testing environments.

This achievement reflects the **practical application of classroom learning to real-world challenges** and showcases the effectiveness of the **Project and Research Laboratory** in nurturing innovation and preparing students for competitive platforms. Participation at such a prestigious level not only enhanced the students' technical competencies but also brought laurels to the institution by proving their ability to compete with teams from reputed national institutes.

S. No.	Event Name	Organizer	Venue	Date	Level	No. of Teams Participated	Position Secured	Participants	Represented Institution
1	Maze Solving Robot Competition (TECHNEX'24)	Innovians Technologies	IIT (BHU), Varanasi	17-03-2024	National Level	12+ Teams (MIT Chennai, IIT Varanasi, teams from Maharashtra, Andhra Pradesh, etc.)	2nd Place	Adithyan Lalappan, Santhosh Kumar, Alen Anu, Prisith Kumar	Dhanalakshmi Srinivasan Engineering College (Autonomous), Perambalur

Centre of excellence, innovation and startups:



The **Centre of Excellence (CoE) in the EEE Department** is actively utilized by students and faculty members for various academic and research-related activities. The CoE serves as a hub for **skill development, innovation, and interdisciplinary collaboration**. The key activities include:

- Conducting **hands-on training programs** on Arduino, microcontrollers, and embedded systems.
- Supporting **student projects** in areas such as Electric Vehicles, Drones, Renewable Energy, and Automation.
- Encouraging **interdepartmental collaboration**, where students from Mechanical, Civil, and CSE also participate and execute innovative projects.
- Organizing **workshops, seminars, and technical competitions** to enhance practical knowledge and industry exposure.
- Facilitating **research and prototype development** in emerging areas of technology.
- Promoting **entrepreneurial initiatives** by guiding students to convert their innovative ideas into viable solutions.

Centre of Excellence in Emerging Electrical Technologies – Laboratory Equipment Details:

S. No.	Description	Items / Components	Purpose

1	Flight Simulator Lab	Intel Core i5 12th Gen / 16GB / 500GB / 4GB GPU / Mouse & Keyboard – 5 Nos Flight Simulator Remote – 5 Nos Acer 43” TV – 3 Nos	For simulation of control systems, real-time electrical modeling, and power electronics visualization
2	Workstation Systems	Intel Core i5 12th Gen / 16GB / 500GB / 2GB GPU / Mouse & Keyboard – 8 Nos	For electrical CAD/CAE software, circuit design, and embedded system programming
3	3D Printing Lab	Bambu Lab 3D Printer – 1 No FUSION V 400 – 1 No 3D Printer Parts & Tools – 1 Set	For fabricating electrical enclosures, PCB holders, motor mounts, and custom lab hardware
4	Drone – RC Models & Spares	Quad: Frame (5), ESC (20), Motors (20), Prop (10 Pairs) Hexa: Frame (3), Controllers (5), Motors (30), ESC (30), Prop (30) Octa: Frame (1), DJI NAZA (1), PX (1), NX (1)	For practical study of electrical drives, BLDC motor control, and power converter circuits
5	Fixed Wing Models	F16 – 1 No F117 – 1 No RC Model (Blasa, 33PNP, RC Trainer) – 1 No	For aerodynamics-linked electrical system testing, motor efficiency studies, and battery load analysis
6	FS 16S	FS 16S TX & RX – 4 Nos	For wireless control experiments, signal transmission & electrical interface evaluation
7	RL AT9S Pro	RL AT9S Pro RX & TX – 1 No	For advanced wireless communication, control logic integration, and power system interfacing
8	Student Basic Workshop Kit	Frame (6), ESC (3), Motor (15), Prop (18 Pairs), KK2 Controller (4) (Consumable)	For hands-on learning in electrical wiring, controllers, motor interfacing, and power electronics

9	Batteries	1500 (2), 2200 (9), 3300 (2) → All 12V (Consumable)	For energy storage studies, battery management system testing, and DC supply experiments
10	Toolkit for UV	Consistency Tester (6), Tapparia Screwdriver Set (6), Multimeter (5), Tapparia Allenkey (3), Soldering Iron (6), Cellmeter (5), Battery Tester (5)	For electrical testing, soldering, circuit diagnostics, and measurement
11	Common Equipment	Liposafe Guard (2), Camera (6), Battery Holder (15), Battery Checker (1), Battery Connector (10), 3.7V Lipo (6), 8520M&P (12), ESP32 (9), Clamp meter (1), Axablade (6), Vernier (2), Precision Tool (1), Screwdriver Set (4), Wirestripper (14), Nose Plier (2), Screwdriver (9), Tester (1), Spanner Set (1), Tweezer (11), Landing Gear (5), Travel Pouch (5), Lipo Multi Charger (1)	For electrical prototyping, current/voltage measurement, microcontroller interfacing, and lab safety

EEE Smart Systems Innovation Hub:

e-Yantra kit Description:

S.no	Equipment	Comments
1	ATmega2560 Development Board	AVR based Development board useful for curriculum subjects
2	LPC2148 Development Board	ARM based Development board useful for curriculum subjects
3	P89V51RD2 Development Board	8051 based Development board useful for curriculum subjects
4	Raspberry-Pi3	Portable and affordable computing platform for programming and projects
5	Micro SD card (16 GB)	Essential accessory for Raspberry pi
6	USB adapter 2A	Essential accessory for Raspberry pi

7	NRF 24L01	Radio trans receiver for projects requiring wireless communication
8	Zigbee Modules 100M range	Long range radio trans receiver for projects requiring wireless communication
9	Zigbee Modules Adapter	Essential accessory for Zigbee configuration
10	TCS 3200 based Color sensor Module	color sensor Module
11	GY87	3-axis Gyro+3- axis acceleration +3-axis magnetic field +Air pressure module
12	Servomotor based Gripper Kit	Gripper kit for pick-place mechanism for robots
13	HD USB Webcam	Webcam for image processing projects
14	Metal-gear servomotors	Actuators for Robotic projects
15	ESP8266 Development board	Portable and affordable IoT platform for programming and projects
16	ESP32 Development board	Portable and affordable IoT platform for programming and projects
17	2-Channel relay Board(12Volt)	Relay interface board , controlled directly by a wide range of microcontrollers such as Arduino
18	2-Channel relay Board(5Volt)	Relay interface board , controlled directly by a wide range of microcontrollers such as Arduino
19	STM32 Nucleo Board	STM32 Nucleo development boards allow to try out new ideas and to Quickly create prototypes
20	Tiva Lanchpad	The Tiva ^{TM} C series TM4C123G Launchpad Evaluation board (EK-TM4C123GXL)is a Low-
21	Motor driver module (Rating:8amp and 6V-36V)	Rating: 8amp and 6V-36V
22	Quad Encoder Geared DC Motor 200RPM , 12 VDC	200 RPM, 12VDC, Torque :2.4Kg-cm

23	Micro servo motor	Stall Torque 1.5Kg-cm
24	Altera Cyclone IV FPGA, DEO-Nano	DEO-Nano development board is a Compact- sized FPGA development platform suited for

Software Tools Available:

S.No.	Software Tool	Purpose / Applications	Beneficiaries (UG/PG/Faculty/Research)
1	MATLAB / Simulink	Modeling, simulation, and analysis of electrical systems, power electronics, control systems, and renewable energy applications	UG, PG, Faculty, Research Scholars
2	Proteus	Circuit design, microcontroller programming, embedded system prototyping, and PCB design	UG, PG, Project Teams
3	PSpice / Multisim	Simulation of analog/digital circuits, power electronics, and verification of circuit behavior	UG, PG, Faculty, R&D Projects
4	AutoCAD Electrical	Electrical schematic design, panel layout, wiring diagram preparation, and documentation of electrical systems	UG, PG, Faculty, Industrial Projects

Final year research projects:

"The following advanced research projects were undertaken by EEE students using the facilities of the **Centre of Excellence in Emerging Electrical Technologies**. The laboratory provides a well-equipped and research-driven environment that encourages students to explore innovative ideas and develop technical solutions to real-world challenges. With access to advanced tools, instruments, and software platforms, students are empowered to conduct experimental investigations, prototype development, and system testing in key areas such as power electronics, automation, embedded systems, and smart energy technologies. This hands-on experience not only strengthens their practical skills but also nurtures a spirit of innovation, research aptitude, and readiness for higher studies or entrepreneurial ventures."

S.NO	Register No	Name	Project Title	Project Guide	Project Type	Mapping with PO,PSO

Academic year 2024-2025:

1	81421105060	Sathis Kumar K	Iot Enabled Water Monitoring In Smart Cities With Power Grid And Inverter Based Harvesting	Ms.A.Thamijunisha	Application based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1,PSO2, PSO3	**Academic Year 2023-24**
	81421105319	Kishanamoorthy S					
	81421105332	Sanjeev K					
	81421105333	Sridhar R					
2	81421105325	Praveen E	High Power Factor And High Step Down Brigeless Sepic Converter Based Ev Charging	Ms.S.Nalini	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2, PSO3	
	81421105059	Saravanan S					
	81421105069	Surya R					
	81421105081	Vishwa K					
3	81421105063	Silamabarasan S	Hybrid Renewable Pv-Fule Cell Ev Charging With Intelligent Rnn-Based State-Of-Charge Management	Mr.R.Sathish	Interdisciplinary projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3	
	81421105316	Jeeva V					
	81421105320	Lenin S					
	81421105312	Hari Haran T					
4	81421105321	Logeshwaran M	Design Of Harmonic Filters For Supra Harmonics Suppression In Power Electronics Dominated Power System	Devika K	Design and manufacturing	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3	
	81421105322	Mahesh U					
	81421105323	Mohamed Yasin A					
	81421105327	Raghu S					

	810421105023	Jayanathan .K	Controller Design for Autonomous direct current for Micro grid Operation	Mr .C. Kavikumar	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
5	810421105034	Mahesh .P				
	810421105037	Mohan Raj .B				
	810421105048	Rajarajan				
6	810421105005	Anbuselvan .J	Dual battery Management system with Real Time Monitoring , Thermal Regulations &Fire safety for Electric Vehicles	Mrs.T.Thenmozhi	Solution of industrial problems	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810421105011	Dhanushsanjai .V				
	810421105020	Gowtham .S				
	810421105049	Rajesh Kannan .D				
7	81421105066	Sobiya R	Enhanced Smart Safety Helmet For Industrial Workers	Mrs.S.Ayswarya	Product based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	81421105070	Susmitha R				
	81421105079	Vishpriya M				
8	81421105014	Dinesh M	Integrated Optimization Techniques For High Power Dept System In Electric Vechicles	Mrs.N.Saranya	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	81421105035	Mahendran K				
	81421105045	Ragul R				
	81421105046	Ragul S				
9	810421105075	Vengatesan R	Enhanced Solar Pv Performance With Dual Control Mppt In Dc-Dc Converter Application	Mr.P.Suriya		PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810421105077	Vijay S			Research based projects	
	810421105302	Asraf Deen M				
	810421105326	Pugalarasan S				

10	810421105019	Gokul Raj R	Optimized Energy Harvesting For Enhanced Smart Iot Performance	Mrs.M. Anusuya	Research based projects	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
	810421105027	Karthiravan K				
	810421105042	Prasath S				
	810421105043	Prithivi Raj S				

S.NO	Register No	Name	Project Title	Project Guide	Project Type	Mapping with PO,PSO
1	DSUG20105004	Ajithkumar. R	Microgrid battery charging management using fuzzy based dc-dc charge controller,	Mr.K.Vijayakanth	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105012	Elavarasan .E				
	DSUG20105019	Manikandan E				
	DSUG20105046	Visithran R				
2	DSUG20105035	Seenivasan S	Design and implementation monitoring of photovoltaic fed induction motor control using IOT	Mr.M.Asaithambi	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105039	Srikanth.P				
	DSUG20105041	Surya .A				
	DSUG20105044	Vishnu .B				
3	DSUG20105328	Mohammed Jilani. R	Implementation of dual coupled lcc-s for EV wireless charging system using ANN	Mr.M.Kathamuthu,	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3 ,
	DSUG20105332	Naveen .K				
	DSUG20105341	Silambarasan .S				
	DSUG20105343	Srinivasan .R				

4	DSUG20105304	Akash .R	Design and modeling of active quasi z-source multilevel inverter with high gain boost	Mrs.T.Durga	Industry-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105306	Ashik Ali S				
	DSUG20105312	Gowtham .D				
	DSUG20105336	Ramesh .V				
5	DSUG20105323	Mohamed Abuthair A J	Online adaptive gain for passivity based control for sensor less bldc motor coupled with dc motor for Application	Mr.V.Vinothkumar	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105325	Mohamed FaridAhamed .M				
	DSUG20105326	Mohamed Riyas .A				
	DSUG20105329	Mohanraj .R				
6	DSUG20105016	Jagadheesh. J	Mitigation of voltage sag and swell using dvr,	Mrs.M.Bhuvaneswari	Application-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105028	Rakesh .V				
	DSUG20105040	Sriram. S				
	DSUG20105043	Venkatesan .M				

7	DSUG20105308	Barath .R	Model predictive control based energy management system by using battery / super capacitor hybrid energy storage in electric vehicle	Mrs.P.Surya	Interdisciplinary Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	DSUG20105320	Logeshwaran .L				
	DSUG20105349	Vivek. V				
8	DSUG20105013	Ezhilarasan. E	Micro inverter for extracting power in the photovoltaic panel using coupled inductor	.Mr.C.Kavikumar	Product-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3 ,
	DSUG20105021	Mukesh Kumar .G				
	DSUG20105026	Pravin Kumar .C				
	DSUG20105038	Siva. R				

Academic Year 2022-23

S. No	Reg. No	Name	Project Title	Project Guide	Project Type	Mapping with PO,PSO
1	810419105037	RagulRajan. S	Wireless Charging System for Electric Vehicles	Mrs.K.preetha	Product based	PO1,PO2, PO3,PO4, PO5,PO6, PO7,PO8, PO9, PO10,PO11, PO12,PSO1, PSO2,PSO3
	810419105305	Minnal Raj M				
	810419105053	Thanigaivel. V				
	810419105016	Kaviyarasu G				

2	810419105063	Aravind. R	Hybrid solar wind inverter(ICIRSEM 2023	Mr.V.Vinotrhkumar	Research-Based Project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10, PO11, PO12,PSO1, PSO2,PSO3
	810419105063	Vinoth. M				
	810419105056	Uma Sudhan R				
	810419105017	Kaviyazhagan. E				
3	810419105020	Lavanya.A	A grid connected single phase transformer less inverter using H5 topology controlling two solar PV arrays	Mrs.M.Bhuvaneswari	industry based project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810419105033	Pavithra.k				
	810419105303	Johncy.A				
4	810419105012	Kalaimathi J	Detection of lightning damage on wind turbine blades using artificial neural network	Mrs.S,Nalini	Application based	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11, PO12,PSO1, PSO2,PSO3
	810419105022	Malathi M				
	810419105058	Varshini R				
	810419105064	Vishnupriya.M				
5	810419105004	Ariharan.S	Implementation of frontend buck converter for torque ripple reduction in BLDC motor	Mr.R.Pandiyan	industry based project	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10, PO11, PO12,PSO1, PSO2,PSO3
	810419105018	Krishnaraj. B				
	810419105024	Manokaran. V				

Students from different departments of our college also utilize the Centre of Excellence established in the EEE Department to carry out their project works. The centre provides a collaborative platform where students from Mechanical, Robotics, Food Technology, and other branches come together to make use of the advanced facilities. This interdisciplinary usage not only supports innovative work and project development but also enhances knowledge sharing, teamwork, and practical learning across various domains of engineering. Some of the sample projects carried out in the centre include Electric Vehicle prototypes, IoT-based Smart Energy Systems, Drone Applications, and Automation using Arduino and Controllers.

S. No.	Register Number	Name	Title of the Project	Relevant POs	Relevant PSOs
1	810422114011	Dhinesh. K	Design and Fabrication of a Compression Plate for Bone Fracture Treatment using SLA 3D Printing	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9, PO11	PSO1, PSO2, PSO3
2	810422114033	Neelakandan. K			
3	810422114051	Saranji. J			
4	810422114357	Udhayakumar. U			
5	810422114014	Hariharan. M	Design and Fabrication of Spur Gear using 3D Printing with PLA Filament	PO1, PO2, PO3, PO4, PO5, PO9, PO11	PSO1, PSO2
6	810422114021	Kasiraja. E			
7	810422114022	Kesavaraj. M			
8	810422114034	Nithis. S			

S. No	Register Number	Student Name	Project Title	PO & PSO
1	810421125023	Prashith Kumar G	AI – Fire Fighting Robot with Smoke Extraction and Filtration System	PO1, PO2, PO3, PO4, PO5, PO6 PSO1, PSO2
	810421125027	Sabiyo S		
	810421125036	Suresh S		
	810421125038	Udhaya Sankar T		

2	810421125005	Akash Krishnan	Environmental Robot for Waste Collection (Industrial Purpose)	PO1, PO2, PO3, PO5, PO6 PSO1, PSO2
	810421125028	Sanjai S		
	810421125029	Sanjay B		
	810421125039	Veerapandi D		
3	810421125018	Kishore Sabarinathan A	Marine Based Autonomous Human Rescuing Bot	PO1, PO2, PO3, PO4, PO5, PO6 PSO1, PSO2
	810421125020	Mohammed Rizvan H		
	810421125034	Sooraj S		
	810421125035	Sri Hariharan S		
4	810421125019	Krishnan Unni	IoT Based Baby Monitoring System	PO1, PO2, PO3, PO5, PO6 PSO1, PSO2
	810421125020	Mohammad Nayeem M F		
	810421125031	Sanumon Thomas		

Centre of Excellence – Utilization Beyond College Hours:

S. No	Academic Year	Department / Branch	No. of Students Utilized	Type of Activity	Time (Extra Hours)	Remarks
1	2022–2023	EEE	25	Arduino & Controller Training	5.00 pm – 7.00 pm	Completed successfully
2	2022–2023	Mechanical	20	EV Prototype Development	4.30 pm – 7.30 pm	Ongoing project
3	2023–2024	CSE	25	IoT-based Smart Energy System	5.00 pm – 7.00 pm	Prototype developed

4	2023–2024	Civil	18	Drone Applications in Surveying	4.00 pm – 6.30 pm	Field tested
5	2024–2025	ECE,Robotics	22	Embedded Systems Workshop	5.00 pm – 7.00 pm	Well received
6	2024–2025	EEE + Mechanical (Joint)	28	EV with IoT Monitoring System	5.00 pm – 7.00 pm	Interdisciplinary project

The final year students of the **Electrical and Electronics Engineering (EEE) Department** have successfully utilized the **Centre of Excellence in Emerging Electrical Technologies** facilities to enhance their technical and professional skills. With the continuous support of industry-focused training, hands-on exposure, and career development activities offered through the Centre, the students secured placement offers in various reputed companies across different domains. Many students were placed in core industries, manufacturing sectors, and IT-enabled services, with attractive salary packages. The consistent placement record highlights the effective role of the Centre of Excellence in bridging the gap between industry requirements and academic learning, thereby enabling students to achieve rewarding career opportunities.

Three Years of Drone Magic in Electrical Engineering:

S.No	Academic Year	Type	Topic	Speaker Name & Designation	Organization/Institution	Date	Target Audience	Key Outcomes / Takeaways
1	2022–2023	Innovation Talk	UAV & Drone Fundamentals in Electrical Systems	Dr.G.Saravanallango, Professor	NIT,Trichy	12-09-2022	3rd Year EEE Students	Introduced UAV design, flight control, sensors, and applications in power line inspection.
2	2022–2023	Workshop	Drone Assembly & Flight Control	Ms. P. Anitha, Robotics Engineer	DroneTech Labs	20-10-2022	UG & PG EEE Students	Hands-on experience in assembling drones, basic programming, and sensor interfacing.

3	2023–2024	Innovation Talk	Drones in Renewable Energy & Power Systems	Mr. V. Natarajan, Drone R&D Lead	Skynetics Technologies	18-08-2023	Final Year EEE Students	Insights on industrial drone applications, energy system monitoring, and automation.
4	2023–2024	Lab Experiment	Power Line & Solar Panel Monitoring Using Drones	Lab Faculty	Centre of Excellence, EEE	05-09-2023	UG Students	Conducted drone flights for visual/thermal inspection; condition monitoring & fault detection experience.
5	2023–2024	Project Work	Autonomous Energy Audit Drones	Project Mentors	Centre of Excellence, EEE	28-11-2023	Final Year EEE Students	Designed drones for autonomous energy audits; collected data for energy efficiency analysis.
6	2024–2025	Innovation Talk	Drone Technology & IoT Integration	Dr. M. Parameswari, Professor	DSEC	10-08-2024	UG & PG Students	Learned IoT sensor integration, AI analytics, and predictive maintenance for smart grids.

7	2024–2025	Workshop	Drone Programming & Automation	Mr.A.R.Noor Mohamed	Prag Robotics Pvt Ltd,chennai	22-08-2024	UG & PG Students	Practical experience in automated flight paths, sensor integration, and drone-based monitoring systems.
8	2024–2025	Innovation Talk	AI-Based Drone Applications in Electrical Engineering	Dr. S. Senthil Kumar, Professor	NIT,Trichy	15-07-2024	Final Year EEE Students	Understanding AI analytics for energy systems, real-time data acquisition, and drone-assisted inspection.

Faculty Support in Student Innovative Projects:

S.No	Faculty Name	Role(s)	No. of Events Involved	Academic Years Involved
1	Dr. K. Anbarasan	Mentor	3	2022–2023, 2023–2024, 2024–2025

2	Mr. M. Asaithambi	Facilitator/Mentor	3	2022–2023, 2023–2024, 2024–2025
3	Mr. K. Vijayakanth	Mentor	2	2022–2023, 2024–2025
4	Dr. M. Parameswari	Mentor	2	2023–2024, 2024–2025
5	Dr. K. Srinivasan	Facilitator	3	2022–2023, 2023–2024, 2024–2025
6	Dr. M. Vijay	Mentor	2	2023–2024, 2024–2025
7	Mr. R. Kannan	Mentor	2	2022–2023, 2023–2024
8	Mr. V. Vinothkumar	Mentor/Facilitator	2	2022–2023, 2023–2024
9	Dr. D. Danalakshmi	Mentor	1	2024–2025
10	Dr. A. Rajkumar	Mentor	1	2024–2025
11	Mrs. T. Lavanya	Mentor	1	2024–2025
12	Mrs. M. Bhuvaneswari	Mentor	1	2024–2025
13	Mr. C. Kavikumar	Facilitator	1	2024–2025
14	Mr. D. Krishnamoorthy	Facilitator	1	2024–2025
15	Mrs. S. Amali Arputha Mary	Mentor	1	2024–2025
16	Ms. S. Nalini	Mentor	1	2024–2025
17	Mrs. K. Devika	Mentor	1	2024–2025
18	Mr. M. Kathamuthu	Facilitator	1	2023–2024

19	Ms. A. Thamijunisha	Facilitator	1	2023–2024
20	Dr. G. Muralikrishnan	Mentor	1	2023–2024
21	Mrs. S. Anandhi	Mentor	1	2023–2024
22	Dr. V. Subaseethslakshmi	Mentor	1	2022–2023
23	Mr. D. Kumaravel	Mentor	1	2022–2023
24	Mr. M. Bharath	Mentor	1	2022–2023
25	Mr. S. Selvakumaran	Mentor	2	2022–2023, 2023–2024
26	Dr. R. Latha	Mentor	1	2022–2023
27	Mrs. T. Durga	Facilitator	1	2022–2023
Total event supported by Faculty			**41**	

Proposal submitted to the Department of Science and Technology (DST):

The Artificial Intelligence Based Solid Waste Management System using Smart Biogas Plant is a research project undertaken by the Department of Electrical and Electronics Engineering at the Centre of Excellence in Emerging Electrical Technologies, Dhanalakshmi Srinivasan Engineering College (Autonomous), Perambalur – 621 212. The project is led by Dr. M. Parameswari, Professor and Head of EEE, as the Principal Investigator, with Dr. D. Shanmugasundaram (Principal, Mechanical Engineering), Dr. K. Anbarasan (Dean Academics, EEE), and Dr. Chellappan (Professor, Mechanical Engineering) serving as Co-Investigators. The research is planned for a duration of three years and is funded by the Department of Science and Technology (DST). This project focuses on integrating artificial intelligence with solid waste management processes to optimize biogas production, enhance sustainability, and promote smart energy solutions within the campus and surrounding communities.

Item	Details
Title of the Project	Artificial Intelligence Based Solid Waste Management System using Smart Biogas Plant
Department / Lab	Department of Electrical and Electronics Engineering – **Centre of Excellence in Emerging Electrical Technologies**
Institute	Dhanalakshmi Srinivasan Engineering College (Autonomous), Perambalur – 621 212
Principal Investigator	Dr. D. Shanmugasundaram (Principal, Mechanical Engg.),

Co-Investigators	Dr. M. Parameswari, Professor & Head, EEE, Dr. K. Anbarasan (Dean Academics, EEE), Dr. Chellappan (Professor, Mechanical Engg.)
Duration	3 Years
Funding Agency	Department of Science and Technology (DST)

Technical Specifications:

S. No	Particulars	Details
1	Plant Capacity	8 cubic metre/day (biogas)
2	Feedstock Capacity	250 kg/day
3	Feedstock Type	Cow dung & household organic waste
4	Estimated Plant Cost	₹ 5 Lakhs (approx.)
5	Biogas Utilization	Electricity generation & cooking
6	Slurry Production	500 Litres/day
7	Slurry Utilization	Sold to farmers at ₹ 10/kg
8	Waste Collection	From 254 households in 12 villages

Work Plan / Milestones:

Phase	Key Activities	Timeline
Inception Phase	Site selection, community survey, resolution for plant construction	0 – 6 months
Planning Phase	Beneficiary identification, project plan, technical approvals	6 – 12 months
Hardware Phase	Modeling, design & hardware assembling	12 – 18 months
Testing Phase	Analysis, monitoring & optimization	18 – 24 months
Implementation Phase	Installation, operation & maintenance	24 – 36 months

Estimated Budget – Equipment & Components:

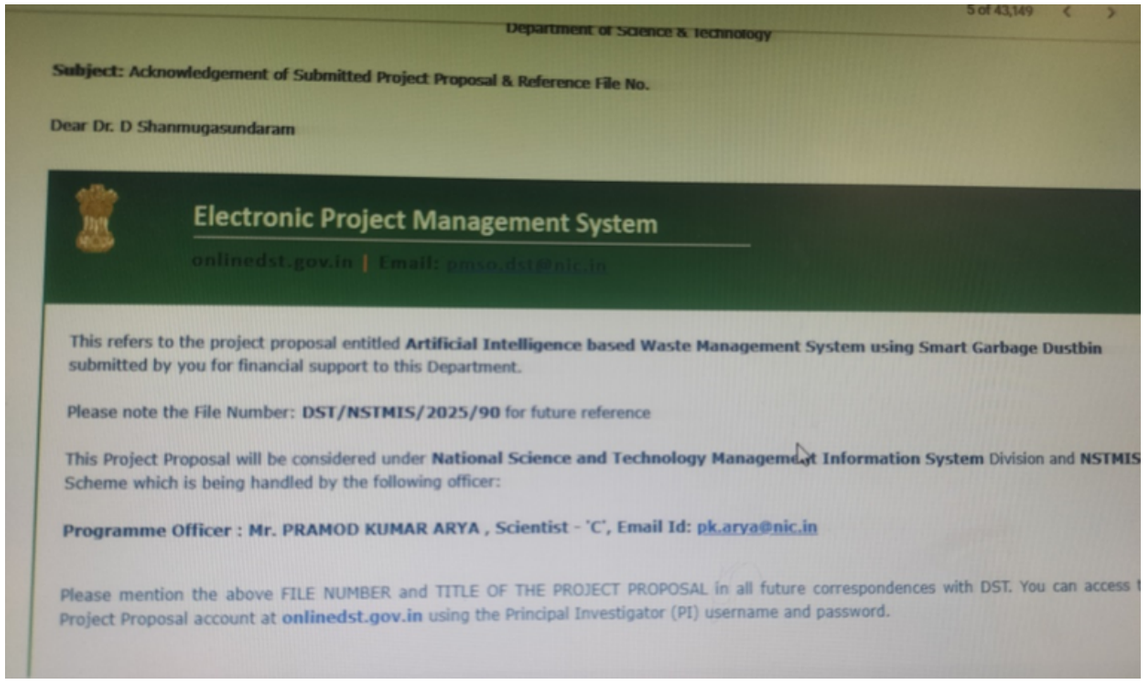
S. No	Equipment / Component	Qty	Unit Price (₹)	Total (₹)
1	Biowaste Grinding Machine	2	5,95,000	11,90,000
2	Cylinders	100	15,000	15,00,000
3	Solar Panel (1 MW)	1	1,00,00,000	1,00,00,000
4	Lithium Iron Phosphate Battery (200W)	25	60,000	15,00,000
5	Sensors & Controllers (AI, IoT modules)	–	–	1,00,000
6	Others (Valves, Pipes, UPS, Motor, Safety Devices, Shed, Fencing)	–	–	31,01,657
Total				**1,73,91,657**

Estimated Budget – Installation & HR:

Item	Amount (₹)
Bio-pond construction with pipes & valves	1,50,00,000
Salary – Principal Investigator (36 Months)	3,60,000
Salary – Co-PIs (3 Members, 36 Months)	8,64,000
Salary – Technicians (5 Members)	9,00,000
Travel & Documentation	5,50,000
Total	**1,76,74,000**

Consolidated Budget:

Category	Amount (₹)
Equipment & Components	1,73,91,657
Installation & HR	1,76,74,000
Grand Total	**3,50,65,657**



Year-wise Publication / Conference / Book Chapter Count:

From the academic year **2021–2022**, our department students initiated their research publication journey through the project laboratory, contributing **2 journal papers** in reputed international journals. In the following year, **2022–2023**, their research output expanded significantly with **2 journal publications** and **12 conference papers**, making a total of **14 publications** presented in national and international platforms. The academic year **2023–2024** showed a strong focus on **conference contributions**, where students actively participated and published **18 papers** in well-recognized international conferences such as ICMPET-2023 and NEC-ICPSPE-2K23. The momentum further strengthened in **2024–2025**, with a remarkable achievement of **47 conference papers** presented and published in the *International Conference on Power Systems & Communication Engineering* (April 2025).

Overall, the year-wise record highlights a steady growth in student research culture within the department's project laboratory, progressing from **2 publications in 2021–22 to 47 in 2024–25**, demonstrating continuous improvement, enhanced student engagement, and increasing visibility in the research community.

S.No	Item	2024-25	2023-24	2022-23	2021-22
1	No. of peer-reviewed journal papers published	33	32	27	36
2	No. of peer-reviewed conference papers published	35	36	31	34
3	No. of books/book chapters published	25	27	24	20
	Total	**93**	**95**	**82**	**90**

Legends of Placement

The Centre of Excellence in Emerging Electrical Technologies (CoE-EEE) at Dhanalakshmi Srinivasan Engineering College has demonstrated an impressive placement track record over the last four academic years (2021–2025), with more than 150 students successfully placed in reputed core and allied industries. Renowned recruiters such as Ashok Leyland, TAFE, Sakthi Auto Components, Sundaram Fasteners, Pegatron, Faurecia, GK Power Expertise, IM Gears, and Sutherland Global Services have consistently offered opportunities to students. The highest package recorded was ₹5.0 LPA (Sakthi Auto Components, 2023–24), while the median salary range stood between ₹2.4 LPA and ₹4.5 LPA. On average, 65% of placements were in core Electrical, Electronics, and Manufacturing sectors, while around 35% were in IT and allied domains. This strong placement performance is a direct outcome of the department's focus on industry-oriented training, internships, hands-on exposure, and skill development programs, which have equipped students with the competencies required to meet industrial demands and secure competitive career opportunities, thereby strengthening the industry-academia linkage of CoE-EEE.

Placement Records (2024–2025):

S. No.	Company Name	Company Location	Designation(s) Offered	No. of Students Placed	Median Salary (LPA)
1	Worksbot Applications Pvt Ltd	Chennai, Tamil Nadu	Trainee Engineer	2	3.6
2	Unitech Plasto Components Pvt Ltd	Tamil Nadu	Graduate Engineer Trainee	1	2.4
3	Sri Sai Power & Equipments Pvt Ltd	Trichy, Tamil Nadu	Engineer Trainee	11	3.6
4	Faurecia India Pvt Ltd	Chennai, Tamil Nadu	Graduate Engineer Trainee	5	2.6
5	Sundaram Fasteners Ltd (Autolec Division)	Chennai, Tamil Nadu	Manufacturing / Training	25	2.88

6	Pegatron	Chengalpattu, Tamil Nadu	Apprenticeship Training	13	1.5
7	Ashok Leyland Ltd	Chennai, Tamil Nadu	Graduate Apprentice Trainee (GAT)	2	4.0
8	Sakthi Auto Component Ltd	Coimbatore, Tamil Nadu	Graduate Engineer Trainee (GET)	1	5.0
9	Sutherland Global Services	Chennai, Tamil Nadu	Consultant	3	4.0
10	Tractors And Farm Equipment (TAFE)	Chennai, Tamil Nadu	Trainee	3	4.0
11	Gk Power Expertise Pvt Ltd (Arraa Energy)	Chennai, Tamil Nadu	Embedded Hardware / Software Engineer	9	4.0
12	Im Gears Pvt Ltd	Chennai, Tamil Nadu	Engineer Trainee	2	4.5

Placement Records (2023–2024):

S. No.	Company Name	Company Location	Designation(s) Offered	No. of Students Placed	Salary Range (LPA)	Median Salary (LPA)
1	Ashok Leyland Ltd	Chennai, Tamil Nadu	Graduate Apprentice Trainee (GAT)	2	4.0 – 4.0	4.0
2	Sakthi Auto Component Ltd	Coimbatore, Tamil Nadu	Graduate Engineer Trainee (GET)	1	5.0 – 5.0	5.0
3	Sutherland Global Services	Chennai, Tamil Nadu	Consultant	3	4.0 – 4.0	4.0
4	Tractors and Farm Equipment (TAFE)	Chennai, Tamil Nadu	Trainee	3	4.0 – 4.0	4.0
5	GK Power Expertise Pvt Ltd (ARRAA Energy)	Chennai, Tamil Nadu	Embedded Hardware / Software Engineer	9	4.0 – 4.0	4.0
6	IM Gears Pvt Ltd	Chennai, Tamil Nadu	Engineer Trainee	2	4.5 – 4.5	4.5

Placement Records (2022–2023):

S. No.	Company Name	Company Location (District & State)	Designation(s) Offered	No. of Students Placed	Median Salary (LPA)
1	Bitlabs / Tekworks	Hyderabad, Telangana	Trainee Test Engineer	5	3.0
2	Pinnacle Infotech Solutions	Madurai, Tamil Nadu	BIM Engineer Lead / Modeler	1	2.5
3	Faurecia India Pvt Ltd	Chennai, Tamil Nadu	Trainee Engineer	1	2.2
4	Ravi Graphics	Bangalore, Karnataka	Machine Operator	4	2.4
5	Tap Engineering	Chennai, Tamil Nadu	Engineer	4	2.0
6	Pegatron	Chengalpattu, Tamil Nadu	Apprenticeship Training	23	2.0
7	Sundaram Fasteners Ltd	Chennai, Tamil Nadu	Manufacturing Training	12	2.88
8	Jbm Auto Ltd	Kanchipuram, Tamil Nadu	Graduate Apprenticeship Trainee	7	2.16
9	Ashok Leyland	Krishnagiri, Tamil Nadu	Graduate Apprentice	1	2.5
10	Super Auto Forges	Tamil Nadu	Quality Controller – Assembly	1	2.0

Placement Records (2021–2022):

S. No.	Company Name	Company Location	Designation(s) Offered	No. of Students Placed	Median Salary (LPA)
1	Worksbot Applications Pvt Ltd	Chennai, Tamil Nadu	Trainee Engineer	2	3.6
2	Unitech Plasto Components Pvt Ltd	Tamil Nadu	Graduate Engineer Trainee	1	2.4
3	Sri Sai Power & Equipments Pvt Ltd	Trichy, Tamil Nadu	Engineer Trainee	11	3.6
4	Faurecia India Pvt Ltd	Chennai, Tamil Nadu	Graduate Engineer Trainee	5	2.6
5	Sundaram Fasteners Ltd (Autolec Division)	Chennai, Tamil Nadu	Manufacturing / Training	25	2.88
6	Pegatron	Chengalpattu, Tamil Nadu	Apprenticeship Training	13	1.5

Smart India Hackathon 2024 – Student Participation Record:

S. No.	Student Name	Depart	Year	College Name	Event Name	Event Level	Event Dates	Venue / Host Institute	Achievement / Participation
1	Sudhan. S	Biotechnology	III	Kumaraguru College of Technology, Coimbatore, Tamil Nadu	Smart India Hackathon 2024	National	11th – 15th Dec 2024	Grand Finale	Participated
2	Arunkumar. K								
3	Jayaprakash. S								
4	Jayasri. V								
5	Parasakthi. R								
6	Shinkka. J								

Start-up / Innovation / Entrepreneurship Related Work:

The Department of Electrical and Electronics Engineering (EEE) actively promotes **innovation, research, and entrepreneurship** through the **Next Gen Incubation Unit (NGIU)**. The NGIU provides a structured platform for **student and faculty innovations** to evolve into **start-ups, patents, and technology-driven solutions**. The initiative focuses on key areas of electrical engineering such as:

- Renewable Energy Systems
- Power Electronics & Drives
- Electric Vehicles & Battery Management Systems
- IoT for Smart Grids & Energy Management
- Automation, Robotics, and Embedded Systems

This ecosystem is further **strengthened and supported by the Centre of Excellence in Emerging Electrical Technologies (CoEEET)**, which provides the **hardware, software, tools, and prototyping facilities** required for start-up development.

“Strengthening Innovation & Entrepreneurship: AIC RAISE partners with DSEC, Perambalur”:

Dhanalakshmi Srinivasan Engineering College, Perambalur, has signed a **Memorandum of Understanding (MoU) with AIC RAISE (Atal Incubation Centre – Research and Innovation in Social Entrepreneurship)** to foster innovation, entrepreneurship, and startup culture among students and faculty. This collaboration provides a strong platform for nurturing entrepreneurial ideas through mentorship, incubation support, skill development programs, and industry connect initiatives. Under this MoU, students will gain access to **training workshops, startup bootcamps, innovation challenges, and funding opportunities**, enabling them to transform their ideas into viable products and business models. The partnership also emphasizes **research collaboration, multidisciplinary projects, and exposure to emerging technologies**, ensuring that learners are better prepared to address real-world challenges and contribute to societal and industrial development.

Role of CoEEET in Supporting Start-ups & Innovation:

The **Centre of Excellence in Emerging Electrical Technologies (CoEEET)** acts as the **technical backbone** of NGIU by providing:

1. **High-end Computing & Simulation Tools**
   - *MATLAB/Simulink, PSpice, Multisim, Proteus, AutoCAD Electrical*
   - Used for **system design, modeling, and virtual prototyping** of renewable energy systems, power converters, and control algorithms.
2. **Embedded & IoT Platforms**
   - *ARM, AVR, 8051, STM32 Nucleo, Raspberry Pi, ESP32/ESP8266, FPGA boards*
   - Enables students to develop **IoT-based smart grid monitoring systems, wireless power management, and EV controllers**.
3. **Prototyping & Fabrication Facilities**
   - *3D Printing Lab, Drone and RC models, Servo/BLDC motors, Motor drivers*
   - Supports **product prototyping**, such as enclosures, PCB holders, EV motor controllers, and renewable energy hardware.
4. **Testing & Measurement Facilities**
   - *Power analyzers, multimeters, oscilloscopes, clamp meters, battery testers, LiPo chargers*
   - Used for **battery performance analysis, BMS testing, electrical drive diagnostics, and energy efficiency studies**.
5. **Specialized Labs**
   - *Flight Simulator Lab & Drone Lab* → For **real-time modeling of control systems, motor efficiency testing, and wireless control projects**.
   - *Renewable Energy & EV Kits* → For **hands-on experiments in solar, wind, and EV charging applications**.

Activities Conducted:

S. No.	Date of the Event	Event Name	Description

1	05/02/2024	Inauguration of NEX GEN	Grand launch of NEX GEN, opening avenues for incubation, mentorship, and start up acceleration.
2	23/02/2024	Startup Awareness Event – 1st	Introduced first-year students to innovation, incubation, and startup opportunities, sparking entrepreneurial curiosity.
3	26/02/2024	Pre-incubation Selection Event	A competitive platform where students pitched ideas, with selected teams advancing to pre-incubation under expert guidance.
4	28/02/2024	Women's Hackathon	A women-only coding hackathon that encouraged innovation, problem-solving, and leadership, empowering women technologists.
5	04/03/2024	Startup Awareness Event – 2nd	Empowered students with insights into start-ups, business plans, and entrepreneurial opportunities through collaboration with IEDC.
6	20/03/2024	1st Patent Filing	An insightful session that introduced students to the fundamentals of patent filing, enabling them to protect innovations and understand the importance of intellectual property in entrepreneurship.
7	21/05/2024 – 23/05/2024	Mock Interview at Coimbatore	Career-focused mock interviews providing real-time feedback, industry exposure, and direct internship opportunities.
8	16/07/2024	Faculty Development Program	Advanced training program for educators focusing on pedagogy, research insights, and innovation-driven teaching practices.
9	26/08/2024	Pitch Perfect at Coimbatore	Dynamic pitching event where groundbreaking startup ideas were presented, showcasing creativity and entrepreneurial drive.
10	21/10/2024	Pitch Perfect at DSU	Platform for young innovators to present startup ideas, where students secured top positions, proving excellence.
11	28/10/2024	October – Boss Table	Focused interaction session strengthening leadership, teamwork, and academic excellence initiatives.
12	24/11/2024	SOFT Toycathon	A sustainability-driven challenge where students designed eco-friendly toys from reused materials, fostering creativity and impact.
13	27/11/2024	November – Boss Table	A brainstorming meet fostering collaboration, leadership, and innovative decision-making among student leaders.

14	16/12/2024	2nd Patent Filing	A practical workshop where students gained hands-on exposure to drafting and filing patents, fostering innovation protection and strengthening their entrepreneurial journey.
15	29/01/2025	January – Boss Table	Kick-start of the year with strategic discussions, encouraging innovation and planning student-led initiatives.
16	25/02/2025	February – Boss Table	Collaborative forum to track progress, share insights, and push entrepreneurial ideas forward.

Best Practices in Start-up Promotion:

Pre-incubation training for final year projects

S. No.	Event Name & Collaboration	Date(s)	Student Participants	Dept.	Count	Mode
1	AIC RAISE Incubation Collaboration – Startup Weekend	27–29 Dec 2022	Tharakkeswar, Vignesh	CSE	2	Offline
2	Startup Pitch Deck	26/08/2024	Hareesh A, Kalai Selvan B, Farhan Umar A	EEE	3	Offline
3	Mock Interview (Collab with AIC RAISE)	06/02/2024	Tharakkeshwar, Mohammad Muzhamil, Dinesh Kumar S, Elan Cheran E, Aravinth N	CSE & EEE	5	Offline
4	Pre-Incubation Program	04/11/2024	Ram Kumar, Rishikesh, Tamilarasan G, Vishal K, Sandhuru P	EEE	5	Online

“Udyam Registration Details of Student Startups with CoEEE & NexGen Innovation Support”:

S.No	Name of the Student	Department	UDYAM Registration Number	Name of Enterprise	Type of Enterprise	Major Activity	Social Category	Unit Name	Activity
1	Mr..Kalaiselvan.B	EEE	UDYAM-TN-04-0106480	CAREER CRAFT	Micro (2025-26)	Services	General	Career Craft	Other business support service activities n.e.c.
2	Mr.Farhan Umar.A	EEE	UDYAM-TN-16-0019485	VOLTIFY	Micro (2025-26)	Services	General	Voltify	Architectural and engineering activities and related technical consultancy
3	Mr.Hareesh.A	EEE	UDYAM-TN-16-0019484	SUNVOLT	Micro (2025-26)	Services	General	Sunvolt	Architectural and engineering activities and related technical consultancy

MSME IDEA HACKATHON 4.0 – Proposed Ideas:

The **Centre of Excellence in Emerging Electrical Technologies** at Dhanalakshmi Srinivasan Engineering College serves as a hub for innovation, research, and skill development by leveraging the advanced facilities available in the Project and Research Laboratories. Through this centre, students and faculty actively engage in developing novel solutions addressing real-world challenges in **electrical machines, power electronics, control systems, renewable energy, IoT, and AI-driven applications**. The laboratories are utilized to design and prototype impactful ideas such as **AI-driven energy audits for optimizing energy efficiency, compact agricultural drones for precision farming, IoT-based smart monitoring systems, and renewable energy integration with intelligent controllers**.

The Centre also promotes **multidisciplinary collaboration** by encouraging students from other departments like Mechanical, Civil, Aeronautical, Biomedical, Chemical, and Food Technology to work alongside EEE students, resulting in innovative prototypes such as **eco-friendly sanitary products, edible food packaging, energy-efficient desalination systems, and sustainable agricultural solutions**. With strong mentoring support from faculty and industry experts, these initiatives not only foster **entrepreneurship and startup culture** but also prepare students for **research publications, funding opportunities, and participation in national-level hackathons and innovation challenges**.

Thus, the Centre of Excellence acts as a catalyst for **bridging theoretical knowledge with practical applications**, enabling students to become future-ready engineers contributing to sustainability, cost reduction, and industrial growth.

Incubatee Name	Title of Proposed Idea / Innovation	Name and Details of Mentor(s)
Bhuvanesh Ganapathi S	Harnessing AI-Driven Energy Audits Optimizing Energy Efficiency with IoT Integration for Sustainability, Cost Reduction, and Future Expansion	Dr. K. Anbarasan, Professor, EEE, DSEC, Perambalur
K. Suresh	Drone Delivery for Health Care Products	Dr. K. Velmurugan, Professor, Mechanical Engineering, DSEC, Perambalur
Kumaraguru R	Identifying the Animal Entering the Field and Making it Avoid the Field	Dr. R. Gopinathan, Professor, Civil Engineering, DSEC, Perambalur
Tharun	Development of a Compact AI-Driven 5-Liter Agricultural Spray Drone for Onion, Paddy, Maize, Other Crop Fields, and Indoor Farming	Dr. Katheeresan, Professor, Aeronautical Engineering, DSEC, Perambalur
Sanjai S	Aquatic Feed Production Using By-Products of Sericulture and Rice Milling	Dr. D. Karthikeyan, Professor, Biomedical Engineering, DSEC, Perambalur
Rahul R	Development of Edible Sachet for Soup Pre-Mix Using Lotus Stem Starch	Dr. Chandran Masi, Professor, Food Technology, DSEC, Perambalur
Sudeeshna S Kumar	Development of Food Expiry Label Using Natural Indicators	Dr. Chandran Masi, Professor, Food Technology, DSEC, Perambalur
Surya V	Leveraging Restorative Technology: Crafting Beverage Straws from Unused Coconut Leaves with Novel Midrib Incorporation for Sustainability, Piercing Ease, and Boosting Agricultural Economies	Dr. Chandran Masi, Professor, Food Technology, DSEC, Perambalur
Akshaya P	Utilizing Cable Bacteria in Microbial Desalination Cells for Sustainable Water Desalination and Energy Generation	Dr. Chandran Masi, Professor, Food Technology, DSEC, Perambalur
Karthi N	Preparation of Malt Using Eggshell and Vitamin D Source (Mushroom)	Dr. M. D. Duriamurugan, Professor, Chemical Engineering, DSEC, Perambalur

Students Participation in Hackathons / Ideathons (2023–2024):

S.No.	Name of the Students	Name of the Event	Date of Event	Place of Event	Website Link if any
1	Akshay R, Dinesh D	Ideathon – Project Title: Automated Agricultural Monitoring System	13.09.2023	Sri Ramakrishna Engineering College	-
2	Sineka D, Keerthika C	Internal Hackathon 2023 – Project Title: Health Monitoring Wearable	13.09.2023	Jayaram College of Engineering and Technology	-

3	Samsalamon P, Barath R	Internal Hackathon 2023 – Project Title: Sustainable Energy Monitoring System	13.09.2023	Roever Engineering College	-
4	Mohamed Riyas A	Internal Hackathon 2023 – Project Title: Smart Drainage Monitoring System using IoT and AI	18.11.2023	JCT College of Engineering and Technology	-
5	Srinivasan R, Logeshwaran L	Dhanalakshmi Srinivasan University Ideathon – Project Title: IoT-Based Smart Energy Management System for Buildings	06.11.2023	Dhanalakshmi Srinivasan University, Trichy	-
6	Vigneshwar M, Naveen A	Ideathon 2023 – Project Title: IoT-Based Predictive Maintenance System for Industrial Motors	31.05.2023	Francis Xavier Engineering College, Tirunelveli	-
7	Vivek V, Shameer Ahamed A	Ideathon 2023 – Project Title: Smart Street Lighting System Using IoT And Motion Detection	26.07.2023	Dhanalakshmi Srinivasan University, Trichy	-
8	Prashanth S, Dhanaselvan S	Ideathon – Project Title: Speed Control of DC Motor Using PWM Technique	30.05.2024	St. Peter’s College of Engineering and Technology, Chennai	-
9	Krishna G, Meghanadhan	National Level Ideathon-2024 – Project Title: Automatic Street Light Control Using LDR and Timer	24.02.2024	Narasaraopeta Engineering College, Andhra Pradesh	-
10	Dinesh Ram, Gowtham D	Smart India Hackathon 2023 – Project Title: Energy Efficient BLDC Motor Drive System	20.09.2023	Saveetha Engineering College, Chennai	-
11	Harikrishnan S, Jegadeesh S	Innovatex-23 Ideathon – Project Title: Automatic Power Factor Correction System	15.02.2023	SJB Institute of Technology, Bangalore	-
12	Akash R, Visithran R	Ideathon – Project Title: Battery Management System for Electric Vehicles	10.09.2024	PPG Institute of Technology, Coimbatore	-

Students Participation in Hackathons / Ideathons (2022–2023):

S.No.	Name of the Students	Name of the Event	Date of Event	Place of Event	Website Link if any
1	Ajith S, Aravind R	Ideathon 2022 – Project Title: Intelligent Waste Management System	17.03.2022	Dhanalakshmi Srinivasan University, Trichy	-
2	Dinesh K, Hariharan A	Ideathon 2022 – Project Title: Wearable Devices for Chronic Pain Management and Relief	17.03.2022	Dhanalakshmi Srinivasan University, Trichy	-
3	Hariharan M, Kalaiyarasan K	Ideathon 2022 – Project Title: AI-Based Autonomous Delivery Robot with Dynamic Obstacle Avoidance	17.03.2022	Dhanalakshmi Srinivasan University, Trichy	-
4	Mugesh Kumar T, Prakash K	Startup Ideathon – Project Title: AI & IoT-Based Vehicle Safety and Accident Prevention System	19.11.2022	Jaya Engineering College	-

5	Ragupathi P, Thanigaivel V	Arunai Ideathon – Project Title: Smart Solar Energy Management System for Rural Homes	18.03.2021	Arunai Engineering College, Thiruvannamalai	-
6	Uma Sudhan R, Vignesh K	Codeathon – Project Title: IoT-Based Power Line Monitoring System	25.04.2022	Trichy Engineering College, Trichy	-
7	Vishnupriya M, Vanmathi R	Ideathon 2022 – Project Title: Voice-Controlled Surveillance Robot with Drone Deployment Capability	28.02.2022	M.A.M College of Engineering, Trichy	-
8	Ragul Rajan S, Raja V	Ideathon 2022 – Project Title: Solar-Powered Smart Irrigation System	23.04.2022	Sri Ramakrishna Engineering College	-
9	Rasheedul Irfan M, Sriram K	Silicon Fusions Ideathon – Project Title: Empowering Intelligence through Innovation	30.09.2021	AISSM College of Engineering, Pune	-
10	Thanigaivel V, Vinoth M	Ideathon – Project Title: Solar Charging Station for E-Bikes	28.04.2022	Sri Eswari College of Engineering, Coimbatore	-
11	Purushothaman S, Prakash K	Ideathon – Project Title: IoT-Based Street Light Monitoring and Control	20.11.2022	Kakatiya Institute of Technology and Science	-
12	Sathya D, Suriya S	HackFest 2K22 – Project Title: Hybrid Solar-Wind Power Generation with Battery Backup	15.07.2022	Erode Sengunthar Engineering College	-

PART E: First Year faculty and financial Resources

(Data to be filled in for the first year course faculty and budget allocation and utilization)

E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

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)	1440	72	63	21	76
2023-24(CAYm1)	1440	72	66	18	78
2024-25(CAY)	1440	72	57	18	68

E2. Budget Allocation, Utilization, and Public Accounting at Institute Level

Table No. E2.1: Budget and actual expenditure incurred at Institute level.

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	23884000	23793748	22747500	21610134	28679600	28549884	25694800	23125320
Library	3396000	3395568	3234900	3073183	2940800	1746760	1572000	1414800
Laboratory equipment	5688000	5663757	5417200	5146312	4924700	4432230	3989000	3869330
Teaching and non-teaching staff salary	168000000	161061955	160332700	152316055	145756900	145656988	131091200	130954261
Outreach Programs	1200000	1176252	1141900	1084898	1038200	934362	840900	815673
R&D	1850000	1830566	1764300	1676028	1603900	1443470	1299100	1260127
Training, Placement and Industry linkage	37200000	36267980	36376800	34557934	24887900	24599178	22139200	21475024
SDGs	6540000	6445678	6223200	5911999	5657500	5091674	4582500	4445025
Entrepreneurship	2300000	1978923	1231100	1169524	1300900	1270882	1143800	1109486
Others, specify	9400000	9392892	8987000	8537650	8170000	8053000	7247800	7030366
Total	**259458000**	**251007319**	**247456600**	**235083717**	**224960400**	**221778428**	**199600300**	**195499412**

E3. Budget Allocation, Utilization, and Public Accounting at Program Specific Level

Table No. E3.1: Budget and actual expenditure incurred at program level.

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	379200	360248	362400	344280	344500	323781	310000	294500
Software	37900	36403	36200	34752	34500	32722	31000	29450
SDGs	436000	409840	415100	390194	387600	368254	348900	338433
Support for faculty development	168000	161280	161000	154560	160600	155785	144600	140262
R & D	123300	117135	117000	112320	108300	105073	97500	94575
Industrial Training, Industry expert, Internship	235900	226464	229800	220608	206200	197913	185600	180032
Printing, Stationery and Laboratory Maintenance	626600	589004	604900	574655	567000	544399	510400	495088
Total	**2006900**	**1900374**	**1926400**	**1831369**	**1808700**	**1727927**	**1628000**	**1572340**