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: 11540	**Date of Submission**: 20-02-2026

PART A- Profile of the Institute

A1.Name of the Institute: R.M.K.ENGINEERING COLLEGE	
Year of Establishment : 1995	Location of the Institute: Kavaraipettai
A2. Institute Address:R.S.M.NAGAR,KAVARAIPETTAI,GUMMIDIPOONDI TALUK,TIRUVALLUR DIST-601206.	
City:Tiruvallur	State:Tamil Nadu
Pin Code:601206	Website:WWW.RMKEC.AC.IN
Email:PRINCIPAL@RMKEC.AC.IN	Phone No(with STD Code):044-67906790
A3. Name and Address of the Affiliating University (if any):	
Name of the University : ANNA UNIVERSITY, CHENNAI	City: Chennai
State : Tamil Nadu	Pin Code: 600025
A4. Type of the Institution: Autonomous CAY(2020-21)	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **11**
- No. of PG programs: **3**

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	Engineering & Technology	UG	Artificial Intelligence and Data Science	2020	--	Artificial Intelligence and Data Science
2	Engineering & Technology	UG	Civil Engineering	2006	--	Civil Engineering
3	Engineering & Technology	UG	Computer Science and Business System	2020	--	Computer Science and Business System
4	Engineering & Technology	UG	Computer Science and Design	2021	--	Computer Science and Design
5	Engineering & Technology	UG	Computer Science and Engineering	1997	--	Computer Science and Engineering
6	Engineering & Technology	PG	Computer Science and Engineering	2004	--	Computer Science and Engineering
7	Engineering & Technology	UG	Electrical and Electronics Engineering	1995	--	Electrical and Electronics Engineering
8	Engineering & Technology	UG	Electronics & Communication Engineering	1995	--	Electronics and Communication Engineering

9	Engineering & Technology	UG	Electronics and Communication (Advanced Communication Technology)	2023	--	Electronics and Communication (Advanced Communication Technology)
10	Engineering & Technology	UG	Electronics Engineering (VLSI Design and Technology)	2023	--	Electronics Engineering (VLSI Design and Technology)
11	Engineering & Technology	UG	Information Technology	1999	--	Information Technology
12	Engineering & Technology	UG	Mechanical Engineering	1995	--	Mechanical Engineering
13	Engineering & Technology	PG	Power Electronics and Drives	2005	--	Electrical and Electronics Engineering
14	Management	PG	Master of Business Administration	2025	--	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
Computer Science and Business System	Yes	Computer Science and Business System	UG
Artificial Intelligence and Data Science	Yes	Artificial Intelligence and Data Science	UG
Civil Engineering	No	Civil Engineering	UG
Electrical and Electronics Engineering	No	Electrical and Electronics Engineering	UG
Mechanical Engineering	No	Mechanical 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 and Electronics Engineering	UG	1995 / --	60	No	NA	60	1995	F.No.Southern / 1-44639887343/2025/EOA Date:30.04.25	Granted accreditation for 3 years for the period (specify period)	2023	2026	5	4

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. Sukhi Y
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)	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)	2021-22 (CAYm4)	2020-21 (CAYm5)	2019-20 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	60	60	60	60	60	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	60	52	60	60	55	42	90
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	4	5	6	11	20	28
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	3	0	0	1	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	63	56	65	67	66	62	118

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]
2025-26 (CAY)	60	60	3	105.00
2024-25 (CAYm1)	60	52	0	86.67
2023-24 (CAYm2)	60	60	0	100.00

Average [(ER1 + ER2 + ER3) / 3] = 97.22≡ 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	(2021-22) LYG	(2020-21) LYGm1	(2019-20) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	71.00	80.00	148.00
B=No. of students who graduated from the program in the stipulated course duration	61.00	56.00	117.00
Success Rate (SR)= (B/A) * 100	85.92	70.00	79.05

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 78.32

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(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
X=(Mean of 1st year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 1st year/10)	7.75	7.62	7.76
Y=Total no. of successful students	52.00	60.00	61.00
Z=Total no. of students appeared in the examination	52.00	60.00	61.00
API [X*(Y/Z)]	7.75	7.62	7.76

Average API[(AP1+AP2+AP3)/3] : 7.71

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 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.58	7.69	7.91
Y=Total no. of successful students	64.00	66.00	66.00
Z=Total no. of students appeared in the examination	65.00	67.00	66.00
API [X * (Y/Z)]	7.46	7.57	7.91

Average API [(AP1 + AP2 + AP3)/3] : 7.65

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 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.71	7.42	8.02
Y=Total no. of successful students	66.00	66.00	61.00
Z=Total no. of students appeared in the examination	66.00	66.00	61.00
API [X*(Y/Z)]:	7.70	7.42	8.02

Average API [(AP1 + AP2 + AP3)/3] : 7.71

B9. Placement, Higher Studies, and Entrepreneurship

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

Item	LYG (2021-22)	LYGm1(2020-21)	LYGm2(2019-20)
FS*=Total no. of final year students	71.00	80.00	148.00
X=No. of students placed	49.00	41.00	93.00
Y=No. of students admitted to higher studies	5.00	6.00	8.00
Z= No. of students taking up entrepreneurship	0.00	2.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	76.06	61.25	68.24

Average Placement Index = (P_1 + P_2 + P_3)/3: 68.52 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. Sukhi Y	XXXXXXX37R	M.E. and Ph.D.	Sathyabama University	Mechatronics	19/05/1997	28.8	Lecturer	Professor	01/02/2011	Regular	Yes		Yes
2	Dr. Jothi Swaroopan N M	XXXXXXX14G	M.E. and Ph.D.	Anna University	Power System	03/01/2013	13.1	Professor	Professor	03/01/2013	Regular	Yes		No
3	Dr. Magesh T	XXXXXXX32G	M.E. and Ph.D.	Anna University	Power System	19/01/2006	20	Lecturer	Professor	01/08/2016	Regular	Yes		No
4	Dr.Kavitha P	XXXXXXX32K	M.E. and Ph.D.	Anna University	Control & Instrumentation	15/12/2006	19.1	Assistant Professor	Associate Professor	01/07/2010	Regular	Yes		No
5	Dr.Alexander Jeevanantham	XXXXXXX87D	M.E. and Ph.D.	Anna University	Power Electronics & Drives	21/06/2018	7.7	Assistant Professor	Associate Professor	01/11/2023	Regular	Yes		No
6	Dr Chairma Lakshmi K R	XXXXXXX87J	M.E. and Ph.D.	Anna University	Control & Instrumentation	22/05/2013	12.8	Assistant Professor	Associate Professor	01/03/2024	Regular	Yes		No
7	Dr. A Fayaz Ahamed	XXXXXXX02F	M.E. and Ph.D.	Anna University	Power Electronics & Drives	13/06/2013	12.7	Assistant Professor	Associate Professor	02/12/2024	Regular	Yes		No
8	Dr. Vimala M	XXXXXXX72G	M.E. and Ph.D.	Anna University	Power Electronics & Drives	01/06/2015	10.8	Assistant Professor	Associate Professor	01/12/2025	Regular	Yes		No
9	Dr.K.Naresh kumar	XXXXXXX09A	M.E. and Ph.D.	Anna University	Power System	21/06/2018	7.7	Assistant Professor	Associate Professor	01/12/2025	Regular	Yes		No
10	Mr. Thiyagesan M	XXXXXXX77E	M.E.	Anna University	Power Electronics & Drive	13/05/2014	11.8	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Ms. Sabari L Umamaheswari	XXXXXXX20G	M.E.	Anna University	Power System	13/05/2014	11.8	Assistant Professor	Assistant Professor		Regular	Yes		No

12	Dr. Jenifer A	XXXXXXX14M	M.E. and Ph.D.	Anna University	Power Electronics & Drives	14/05/2014	11.9	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Ms. Karukuzhali S	XXXXXXX48B	M.E.	Anna University	Power Electronics & Drives	11/07/2024	1.6	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Dr.Geetha Ramadas	XXXXXXX75K	M.E. and Ph.D.	Anna University	High voltage Engineering	05/10/1998	26.10	Lecturer	Professor	02/06/2008	Regular	No	12/08/2025	No
15	Dr. Meenakumari R	XXXXXXX13N	M.E. and Ph.D.	Anna University	Power System	03/07/2024	0.10	Professor	Professor	03/07/2024	Regular	No	29/05/2025	No
16	Dr. Anita S	XXXXXXX65N	M.E. and Ph.D.	Anna University	Power Electronics & Drives	09/12/2000	24.6	Lecturer	Associate Professor	12/12/2012	Regular	No	01/07/2025	No
17	Ms. Annie Isabella L	XXXXXXX57C	M.E.	Anna University	Power Electronics & Drives	18/01/2007	17.5	Lecturer	Assistant Professor		Regular	No	03/07/2024	No
18	Mr. Balamurugan S	XXXXXXX06E	M.E.	Anna University	Power System	01/06/2011	13.1	Assistant Professor	Assistant Professor		Regular	No	03/07/2024	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(2025-26)**	**CAYm1 (2024-25)**	**CAYm2 (2023-24)**
UG1.B	64	65	66
UG1.C	65	66	66
UG1.D	66	66	66

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1: Electrical and Electronics Engineering	**195**	**197**	**198**
PG1.A	9	9	9
PG1.B	9	9	9
PG1: Power Electronics and Drives	**18**	**18**	**18**
DS=Total no. of students in all UG and PG programs in the Department	213	215	216
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=** 213	**S2=** 215	**S3=** 216
DF=Total no. of faculty members in the Department	13	16	16
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=** 13	**F2=** 16	**F3=** 16
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= 16.38**	**SFR2= 13.44**	**SFR3= 13.50**
Average SFR for 3 years	**SFR= 14.44**		

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)]
2025-26(CAY)	10	3	10.00	28.00
2024-25(CAYm1)	12	4	10.00	34.00
2023-24(CAYm2)	7	9	10.00	26.50

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
2025-26	1.00	3.00	2.00	4.00	7.00	6.00

2024-25	1.00	5.00	2.00	4.00	7.00	7.00
2023-24	1.00	4.00	2.00	2.00	7.00	10.00
Average	RF1=1.00	AF1=4.00	RF2=2.00	AF2=3.33	RF2=7.00	AF2=7.67

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	Rajesh Pasuplaty	Vice president & Practice Head	Mphasis	Project Work	50.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mohan Shanmugam Kanagasabapathy	Director (Business Development)	Citadel Controls Private Limited, Chennai	Project Work	50.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. Chellamuthu	Emeritus faculty	R.M.K. ENGINEERING COLLEGE	Project Work	50.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of peer reviewed journal papers published	12	14	40
2	No. of peer reviewed conference papers published	19	18	17
3	No. of books/book chapters published	4	2	1

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. Y. ALEXANDER JEEVANANTHAM	Vignesh Kumar	Naan Mudhalvan - Niral Thiruvizha, Tamil Nadu State Government	Aquaponics System	Tamil Nadu State Government	6 MONTHS	0.10
Dr. M. Vimala	Praveen Kumar	Naan Mudhalvan - Niral Thiruvizha, Tamil Nadu State Government	Sewage Cleaning Robot	Tamil Nadu State Government	6 MONTHS	0.10
Dr. K. NARESHKUMAR	Ms. ANNIE ISABELLA L	Tamil Nadu State Council for Science and Technology.	Bidirectional ZETA Converter for Vehicle to Grid Operation	Tamil Nadu State Council for Science and Technology.	1 YEAR	0.04
Dr. SUKHI Y		Elango Traders	Analysis, Design and Implementation of Multiport Power Converter for Electric Vehicle Application	Elango Traders	9 MONTHS	5.00
						Amount received (Rs.):5.24

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Naresh Kumar K		SEG Sustainable Agriculture System, Unnat Bharat Abhiyan	Easy Agri	National Coordinating Institute, IIT Delhi	1 YEAR	1.00
						Amount received (Rs.):1.00

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
-	-	-	-	-	-	0.00
						Amount received (Rs.):0.00

Total Amount (Lacs) Received for the Past 3 Years: 6.24

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. SUKHI Y		MSYS Connect India Pvt Ltd	Integration of Hybrid Renewable Energy Systems Using Multiport Bidirectional DC-DC Converter for Regulated Power Supply	MSYS Connect India Pvt Ltd	5 MONTHS	0.60
Dr. MAGESH T		GEM Chemicals	Design and Implementation of Dual Active Bridge with Single Phase Shifting Techniques for EV Charging	GEM Chemicals	6 MONTHS	0.51
Dr. P. KAVITHA		Archmed Healthcare India Pvt Ltd	Development of an AI-Based COPD Prediction System Using Breath Analysis	Archmed Healthcare India Pvt Ltd	3 MONTHS	0.60
Dr. Y. ALEXANDER JEEVANANTHAM	Dr. K. NARESHKUMAR	V. Bharathi Traders	Streamlined CRM through Automation	V. Bharathi Traders	6 MONTHS	1.00
Dr. FAYAZ AHAMED A		GEM Chemicals	Design of Electric Vehicle Battery Thermal Management System	GEM Chemicals	3 MONTHS	0.51
Mr. THIYAGESAN M		KRK Traders	Automated Load Management and Safety Enhancement System using IoT & RFID	KRK Traders	7 MONTHS	1.10
Ms. SABARI L. UMAMAHESWARI		Chandra Electrical	Temperature Monitoring and Control in EV	Chandra Electrical	6 MONTHS	0.50
Dr. Y. ALEXANDER JEEVANANTHAM	Dr. MAGESH T, Mr. THIYAGESAN M, Dr. K. NARESHKUMAR	Hari Homes	EV Charge Supported Smart Street Light with Low Power Consumption and SOS	Hari Homes	7 MONTHS	10.00
						Amount received (Rs.):14.82

(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. SUKHI Y		Kirubai Foundation	Multiport Power Converter for Electric Vehicle	Kirubai Foundation	6 MONTHS	0.50
Dr. SUKHI Y		PM Agro Biotech Pvt. Ltd	BLDC Motor Speed Controller for Electric Vehicles	PM Agro Biotech Pvt. Ltd	6 MONTHS	1.60
Dr. MAGESH T		Chandra Electrical	Hybrid Charging of E-Vehicle	Chandra Electrical	7 MONTHS	0.50
Dr. P. KAVITHA		Archmed Healthcare India Pvt Ltd	Automatic Pill Box with Timely Alert System for Alzheimer Patients	Archmed Healthcare India Pvt Ltd	5 MONTHS	0.50
Dr. FAYAZ AHAMED A		GEM Chemicals	Eco-Friendly Automated EV Garbage Vehicle	GEM Chemicals	2 MONTHS	0.51
Dr. VIMALA M		Saint Homeo Medicals	Photovoltaic System for Homeopathic Facilities	Saint Homeo Medicals	3 MONTHS	0.50
Ms. SABARI L. UMAMAHESWARI		Greencity Aircon	Data Analysis using Solar Self Powering System	Greencity Aircon	6 MONTHS	0.50
Mr. THIYAGESAN M		KRK Traders, Chennai	DC-DC Converter for Continuous Input for Renewable Energy	KRK Traders, Chennai	7 MONTHS	0.50
Dr.GEETHA RAMADAS		EDS Instruments & Systems Pvt. Ltd.	IoT-based Metal Detector for Detecting Foreign Material	EDS Instruments & Systems Pvt. Ltd.	5 MONTHS	0.50
						Amount received (Rs.):5.61

(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. SUKHI Y		PM Agro Biotech Pvt Ltd	Home Automation using Augmented Reality	PM Agro Biotech Pvt Ltd	5 MONTHS	0.30
Dr. MAGESH T		Green City Aircon	IOT based solar panel dust cleaning system	Green City Aircon	5 MONTHS	0.30
Dr. MAGESH T		Melkote Techsol Private limited	Hybrid charging of E vehicle	Melkote Techsol Private limited	3 MONTHS	0.30
Dr. P. KAVITHA		PM Agro Biotech Pvt Ltd	Agrimaster -A Smart Controller For Agriculture	PM Agro Biotech Pvt Ltd	5 MONTHS	0.30
Dr. P. KAVITHA		Sri Selva Ganapathy Engineering	Security Monitoring systems using IoT	Sri Selva Ganapathy Engineering	9 MONTHS	0.30
Dr. Y. ALEXANDER JEEVANANTHAM		Web Moksha	Energy Audit	Web Moksha	2 MONTHS	0.30
Dr. FAYAZ AHAMED A		PM Agro Biotech Pvt Ltd	Smart Street Light System with Auto Fault Detection	PM Agro Biotech Pvt Ltd	5 MONTHS	0.30
Mr. THIYAGESAN M		KRK Traders	Design of Smart Room Monitoring System based on IoT and AWS	KRK Traders	3 MONTHS	0.30
Dr. VIMALA M		Muthu Stores	PV powered billing system	Muthu Stores	3 MONTHS	0.30
Dr. JENIFER A		Green City Aircon	Non Isolated DC converter	Green City Aircon	5 MONTHS	0.30
Dr. JENIFER A		Kirubai Foundation	Improving Education for Autism Spectrum Disorder Children	Kirubai Foundation	6 MONTHS	0.30
S.Anita		PM Agro Biotech Pvt Ltd	IoT & RFID based Wireless Vehicle Charging using ARDUINO	PM Agro Biotech Pvt Ltd	5 MONTHS	0.30
S.Anita		Kirubai Foundation	PV Based BLDC Drive for Light Electric Vehicle with Energy Regeneration	Kirubai Foundation	6 MONTHS	0.30
						Amount received (Rs.):3.90

Total amount (Lacs) received for the past 3 years: 24.33

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. SUKHI Y	SYNCHRONOUS BUCK CONVERTER FOR AUXILIARY LOADS IN ELECTRIC VEHICLES	12	0.36	0.36	Developed a high-efficiency synchronous buck converter for EV auxiliary loads with improved regulation and reduced switching losses
Dr. MAGESH T	MULTIPORT BIDIRECTIONAL CONVERTER FOR ELECTRIC VEHICLE APPLICATION	10	0.31	0.31	PAPER PUBLICATION
Dr. P. KAVITHA	AUTONOMOUS WIND ENERGY RECHARGAEBE VEHICLE WITH V2G AND G2V CAPABILITIES ENABLED BY IIOT	12	0.36	0.36	Patent and hardware
Ms. SABARI L. UMAMAHESWARI	DESIGN AND IMPLEMENTATION OF A SMART FACTORY ENERGY MONITORING SYSTEM	10	0.30	0.30	Developed an intelligent system for real-time monitoring and optimization of energy usage in manufacturing
Dr. Y. ALEXANDER JEEVANANTHAM, Dr. MAGESH T, Mr. THIYAGESAN M, Dr. K. NARESHKUMAR	Smart Street Light with Low Power Consumption	10	1.00	1.00	Hardware developed
			Amount received (Rs.): 2.33		

(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. SUKHI Y	UV STERILIZER LAMP	12	0.30	0.30	Developed UV Sterilizer lamp for applications in healthcare, water purification, and surface sterilization
Dr. SUKHI Y	PV BASED CENTRALIZED MONITORING SYSTEM FOR STREET LIGHT FAULT DETECTION AND LOCATION TRACKING	12	0.96	0.96	Developed a PV based centralized street lighting system with real time fault detection and location tracking, improving efficiency and reliability
Dr. MAGESH T	DESIGN AND IMPLEMENTATION OF DUAL ACTIVE BRIDGE WITH SINGLE PHASE SHIFTING TECHNIQUE FOR EV CHARGER	12	0.30	0.30	PAPER PUBLICATION
Dr. P. KAVITHA	AUTONOMOUS WIND ENERGY RECHARGAEBE VEHICLE WITH V2G AND G2V CAPABILITIES ENABLED BY IIOT	12	0.30	0.30	Developed a hardware-based wind–EV system enabling V2G/G2V with IIoT-based real-time energy management
Dr. VIMALA M	DESIGN AND IMPLEMENTATION OF DATA ACQUISITION SYSTEM FOR 100W PANEL	12	0.30	0.30	PATENT GRANT
Ms. SABARI L. UMAMAHESWARI	INTELLIGENT VIBRATION MONITORING FOR ROTATING MACHINES	10	0.30	0.30	Developed a vibration-based system for early fault detection and health monitoring of rotating machinery
Mr. THIYAGESAN M	Certificate Program on eMobility and Electric Vehicle Engineering – Cohort 3	6	1.77	1.77	Designed Honour degree syllabus
			Amount received (Rs.): 4.23		

(CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr. MAGESHT	ESTIMATION OF SOC AND STATE OF HEALTH IN BMS USING MACHINE LEARNING	8	0.18	0.18	Machine learning enhances SoC and SoH estimation with better accuracy, speed, and reliability
			Amount received (Rs.): 0.18		

Total amount (Lacs) received for the past 3 years : 6.74

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-I	33	DC Series Motor, DC Shunt Motor, DC Compound Motor, DC Shunt Motor Coupled with DC Compound	18 hours/week	Ms.K.R.Sumathi	Lab Technician	D.E.E.E
2	Electrical Machines Laboratory-II	33	Synchronous Induction motor 3HP, DC Shunt Motor Coupled with Three phase Alternator, DC Shunt	18 hours/week	Ms.K.R.Sumathi	Lab Technician	D.E.E.E
3	Control and Instrumentation laboratory	33	LVDT Calibrating kit & jig, Bourdon tube Trainer, ADC, Digital to Analog converter, Instrumentation Amplifier,	18 hours/week	Ms. A. S. Vijayalakshmi	Lab Technician	D.E.E.E
4	Power Electronics and Electronics Laboratory	33	Three phase SCR Half and Fully controlled bridge converter with Induction Motor, IGBT Chopper - 4	18 hours/week	Mr. M Subranmanya chett	Lab Technician	D.E.E.E
5	Renewable Energy Systems Laboratory	33	PV EMULATOR, Micro Wind Energy Generator Module, Fuel Cell, Battery Storage System with	12 hours/week	Ms.K.R.Sumathi	Lab Technician	D.E.E.E
6	Embedded Systems and IoT Laboratory	33	USB to Micro USB charger, Sensor Modules - 37 in 1 kit, Temperature and Humidity sensor module - I2C	21 hours/week	Ms. A. S. Vijayalakshmi	Lab Technician	D.E.E.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	• Rubber safety mats provided near rotating electrical machines. • Proper earthing connections ensured for all motors and starters • Miniature Circuit Breakers (MCB) installed for protection against overload and short circuits • Students are instructed to: o Avoid touching rotating parts o Switch OFF supply before altering connections • Maintenance-linked safety practices: o Weekly greasing and cleaning prevent overheating and mechanical failure o Semester-wise temperature rise tests ensure safe operation o Earth continuity is checked every semester
2	Power Electronics and Electronics Laboratory	• Isolated power supplies for sensitive instrumentation • Proper grounding of CROs and training kits • Students trained to handle precision instruments carefully • Maintenance-supported safety practices: • CRO operation checks and calibration of meters every semester • Periodic servicing of training kits to avoid unsafe readings or failures
3	Control and Instrumentation Systems Laboratory	• Isolated power supplies for sensitive instrumentation • Proper grounding of CROs and training kits • Students trained to handle precision instruments carefully • Maintenance-supported safety practices: • CRO operation checks and calibration of meters every semester • Periodic servicing of training kits to avoid unsafe readings or failures
4	Embedded Systems and IoT Laboratory	• Anti-static precautions followed while handling embedded boards • Proper cable management to avoid short circuits • Lab-specific safety measures linked to maintenance: • Monthly antivirus updates to prevent system vulnerabilities • Regular software updates to ensure stable and safe operation of systems
5	Renewable Energy Systems Laboratory	• Proper insulation and protection for renewable energy training kits • Safety gloves used during handling of power modules and connections • MCBs used to protect solar and inverter-based systems • Maintenance-linked safety measures: • Semester-wise servicing of training kits • Regular verification of components • CROs and measurement devices serviced periodically • Software and antivirus updates ensure safe system operation
6	R&D Laboratory	Considering the advanced, experimental, and research-oriented nature of the R&D Laboratory, the following lab-specific safety measures are implemented: • Isolated power supplies for experimental setups • Miniature Circuit Breakers (MCB) and fuses provided for every test bench • Proper earthing and grounding of all experimental equipment • Insulated tools and test probes used during live experiments • Rubber safety mats provided in high-voltage test areas • Controlled access to the laboratory; experiments are conducted only under faculty supervision • Personal protective equipment (PPE) such as: o Safety gloves o Insulating mats (as required by the experiment)

D3. Project Laboratory/Research Laboratory

7.5. Project Laboratory / Research Laboratory / Centre of Excellence

The Department is privileged with faculty members holding Ph.D degrees and expertise in various fields. With the supervision of well trained and technically strong faculty members, the students are made to carry out their project works. The objective of the project work is to help the students to develop the ability to apply the engineering and technological concepts, tools and techniques to study and attempt to solve any engineering or system problem.

7.5.1. Availability of project laboratories/research laboratories

The Department has strong Industry interaction and has been involved constantly in handling various consultancy projects for various Industries. The students are trained to build various products as prototypes after proving the concept in simulation software and they also develop application software if it forms part of the Product. The facilities available are Soldering guns, Assorted electronic components for making circuits, Small PCBs, Multi Meters, Digital Storage Oscilloscope (20MHz), Decade Resistance Box, Decade Inductance Box, Decade Capacitance Box, Semiconductor devices, Regulated Power Supply ±15V, Bread boards, IC Tester (Analog), Step-down transformer, Potentiometer, Interface boards, Matlab, Pspice, E-TAP, PSIM softwares installed PCs, UPS (5 KVA), DIgSILENT -PF4R.

- In order to carry out research and development, consultancy activities, the department is provided with 32 Personal computers, with various technical software's such as MATLAB, PSIM, Lab view, P-spice.
- DIgSILENT educational version, PF4R (Power Factory 4 Research) package allows full access to those functions which are required to model and analyze most complex power systems such as power electronic devices, unbalanced operation or AC/DC systems. All functions are included which are required to simulate steady state operation including harmonic load flow, protection, reliability and time domain simulations ranging from microseconds to hours (from EMT to long term stability). Type of license for this package is for research purposes only.
- The lab is provided with modern power electronic converters to acquire practical understanding of modern power electronic converters used in Electric Vehicles. It also allows them to explore the intersection of power electronics, renewable energy integration, and control strategies, contributing to their overall knowledge and skills in this field.
- The lab is provided with a variety of sensors (e.g., temperature, humidity, motion, light) and actuators (e.g., motors, servos) which allows students to work on broad range of applications.
- Apart from working hours, research works and Projects are done in the R&D lab from 3.00 to 5.30 pm.

S.No.	Name of the Laboratory	No. of students per batch (Batch size)	Name of the major equipment	Weekly utilization status (all the courses for which the lab is utilized)	Relevance to POs/PSOs

1.	R&D laboratory	3 or 4	Software C, C++ and many prototyping platforms. Speakers, Head set Printer ADC and DAC card 8254 timer counter, Interface boards, Soldering machine MCS Family Microcontroller Trainer (micro 51 EB LCD) Stepper Motor Controller with Motor (VBMB 13A) TMS 320 LF2407A based DSP trainer kit DS PIC30F4011 based controller card (micro 4011) 1HP 3 phase AC Induction Motor with generator (PEC HV ACC3 S) Single phase SCR Power Circuit (PEC 14 HV4D) SRM Power Module (PEC 16DSM015) PMDC Motor – 180V 1 HP with spring balance set up SRM with spring balance loading arrangement VPE Spartan 3A/3A DSP FPGA controller Three phase IGBT based Power Module (VPET 106A) Isolation Transformer, Auto Transformer PIC 16F877 Project card (VPTB-03#1) 1.1 HP BLDC& PMSM motor with load setup DC-DC Buck-Boost Converter Trainer (VSMPS-07A) Linear Power supply+/-5V DSPIC 4011 Based chopper fed DC driver DSPIC 4011 Based BDLC motor driver Voltage regulation of three phase Synchronous generator (PEC14HV4H) DSPIC 30F4011 Based PWM Controller MATLAB, ETAB-installed personal computers	35 hours/week	PO1, PO2, PO 3, PO 4, PO 5, PO 6, PO 9, PO 11, PSO 2

7.5.1.1 Utilization of project lab

Weekly 21 hours have been allotted for the final year students to carry out their projects in the labs. The students are expected to contact the project guide daily to discuss the progress of their project work. Weekly review of their projects by the faculty member is brought to the notice of their project coordinator. The project review is conducted once in a month by the coordinator. The interested students to do project can utilize the lab during the working hours with permission from the mentor.

7.5.2 Availability of centre of excellence

The Department of Electrical and Electronics Engineering has established a Centre of Excellence (CoE) in Embedded Systems in collaboration with HCL Tech, serving as the Knowledge Partner, to strengthen industry-oriented education, research, and skill development.

With rapid advancements in Embedded Systems, Electronics, Wireless Communication, Networking, Robotics, and Intelligent Computing, the Centre of Excellence addresses the growing industry demand for engineers with specialized expertise in embedded technologies.

The CoE is established under a formal Memorandum of Understanding (MoU) with HCL Tech and functions under their academic and technical supervision.

Infrastructure and Facilities

- Dedicated Embedded Systems Centre of Excellence Laboratory
- 32 high-end computers exclusively allocated for CoE activities
- Advanced embedded system development and testing tools
- Industry-aligned software and hardware platforms
- Supervised laboratory setup aligned with HCL Tech standards

Curriculum Integration

- 40% of the EEE curriculum credits are dedicated to Embedded Systems–related subjects
- Syllabi designed and reviewed by Embedded Systems experts from HCL Tech
- Early exposure through training starting from 4th semester.
- Strong integration of theory, lab practice, and industry applications

Activities Conducted (Academic Year 2022–2023)

The Centre of Excellence actively conducts industry-focused academic and training activities, including:

- Guest lectures by HCL Tech senior professionals
- Industry interaction sessions and mentoring
- Hands-on training programs in operating systems and embedded domains
- Industry training and evaluation
- Project allocation and execution under industry supervision
- Faculty Development Programs (FDPs)

A total of 10 major CoE activities were conducted during the academic year 2022–2023, directly benefiting EEE students across multiple batches.

Role and Significance of the Centre of Excellence

The Embedded Systems CoE:

- Acts as a hub for industry–academia collaboration
- Provides exposure to current industry trends and evolving technologies
- Enhances hands-on skills, problem-solving ability, and innovation
- Supports product development, research, and project execution
- Bridges the gap between academic learning and industrial expectations

7.5.3. Utilization of project laboratories/research laboratory /Centre of excellence

The Project Laboratory, Research Laboratory, and Embedded Systems Centre of Excellence (CoE) of the EEE Department are effectively and optimally utilized to support academic learning, industry-oriented training, project execution, research activities, and employability enhancement.

Utilization of Embedded Systems Centre of Excellence (CoE)

The Embedded Systems CoE, established in collaboration with HCL Tech (Knowledge Partner), is extensively utilized for the following purposes:

- Industry-oriented training programs starting from the 4th semester, enabling early exposure to embedded systems concepts

- Guest lectures and expert talks delivered by senior professionals from HCL Tech and other industries on emerging embedded technologies
- Hands-on training sessions in operating systems, embedded software development, and system design
- Industry interaction sessions providing mentoring, career guidance, and technical insights
- Industry training and evaluation, including testing in embedded domains and final selection processes
- Project allocation and execution, where students undertake embedded system projects under the supervision of industry experts from HCL Tech
- Faculty Development Programs (FDPs) to enhance faculty expertise and align teaching with current industry practices

Utilization of Project and Research Laboratories

- **Final-year UG students** utilize the Project Laboratory for:
  - Mini-projects and major projects in embedded systems, power electronics, control systems, and renewable energy
- **Faculty and students** use the Research Laboratory for:
  - Prototype development
  - Experimental validation
  - Research publications and innovation activities
- Facilities are made available beyond regular class hours under faculty supervision.

Impact of Utilization

- Enhanced technical competency and hands-on skills in embedded system

  Increased student participation in industry-driven projects and training programs
- Improved industry readiness and employability, evidenced by:
  - 20 students placed (2025 batch)
  - 23 students placed (2026 batch) in embedded systems–related roles

The paper publications and consultancy work carried out using the facilities in the project laboratory. The list is given in Table 7.5.3.1 and Table 7.5.3.2 respectively.

Table No.7.5.3.1: List of paper publications

S.No.	Name of the Faculty	Title of the Paper	Name of Journal	Month / Year	Indexing
1	K. A. Mohamed Junaid, Y Sukhi, S Anita	Low-Cost Smart Irrigation for Agricultural Land Using IoT	IETE Journal of Research	February 2023	SCI
2	Y.Alexander Jeevanantham ; Saravanan A ; Vanitha V ; Samson Isaac. J ; S. Boopathi ; D. Pavan Kumar	Implementation of Internet-of Things (IoT) in Soil Irrigation System	IEEE Xplore	February 2023	SCOPUS
3	Vimala Muthu, Geetha Ramadas	Performance studies of Bifacial solar photovoltaic module installed at different orientations: Energy, Exergy, Enviroeconomic, and Exergo-Enviroeconomic analysis	Environmental Science and Pollution Research	March 2023	SCOPUS
4	Sabari L Uma Maheshwari, R. Mohamed Atheeq, U. Nikhil Surendar, S. Navin Vaishnav	IoT based Fire Fighting Robot	IEEE Xplore	March 2023	SCOPUS
5	Kavitha P, Gokul R, Naveenkumar V, Yukesh M, Ganeshmoorthy G	Sizing and Research of Battery System and Renewable Energy in Residential Microgrids	IEEE Xplore	March 2023	SCOPUS
6	S Balamurugan; K.J. Ganesh; M. Rohith Reddy; S. Aadarsh Teja; M J Suganya	Development of Augmented Reality Application for Online Trial shopping	IEEE Xplore	March 2023	SCOPUS
7	Naresh Kumar K, P. Badrinath, S. Vickraman, G. Satheesan	Charging Station for E-Vehicle using Solar with IoT	IEEE Xplore	March 2023	SCOPUS

8	M. Thiyagesan, S. Shreepad, L. Raja, , Khallikkunaisa	A Vulture Model Flapping - Wing with UAV Technology Based - A Novel Drone for Emergency and Safety Purpose Applications	IEEE Xplore	March 2023	SCOPUS
9	Muthu Vimala , Geetha Ramadas , Muthaiya Perarasi , Athikesavan Muthu Manokar and Ravishankar Sathyamurthy	A Review of Different Types of Solar Cell Materials Employed in Bifacial Solar Photovoltaic Panel	Energies	April 2023	SCI
10	M. Perarasi , Geetha Ramadas	Detection of Cracks in Solar Panel Images Using Improved AlexNet Classification Method	Russian Journal of Non Destructive Testing	May 2023	SCI
11	Sabari L Uma Maheshwari, Shasiraj Teotia,R Kumaravel,Himaney Pandey, K Dhinakaran	Automation in Monitoring Temperature, Vibration of Industry and Preventing Accident Using IoT	IEEE Xplore	May 2023	SCOPUS
12	Umamaheswari B; Jayanthi G; Kavitha P; Sivakumar R; Ekambareshwaran S; Umeshnandhan S	GSM-Based Gas Efflux Monitoring using MQ-2 Sensors	IEEE Xplore	February 2023	SCOPUS
13	Jenifer A , Alexander Jeevanantham Y , Thiyagesan M , Narmatha S U , Sudhakar K	Energy Management of Solar Power Generation Using IOT	European Chemical Bulletin	May 2023	SCOPUS
14	Jenifer Arockia Raj & Sukhi Yesuraj	Design and Development of SECU Converter Cascaded Control for EV Applications	Electric Power Components and Systems	May 2023	SCI
15	A. Fayaz Ahamed and Y. Sukhi	Modeling of Hybrid Henry Gas Solubility Optimization Algorithm with Deep Learning-Based LED Driver System	Journal of Circuits, Systems and Computers	June 2023	SCI
16	N. Anil Kumar, Y. Sukhi, M. Preetha, and K. Sivakumar	Ant Colony Optimization with Levy-Based Unequal Clustering and Routing (ACO-UCR) Technique for Wireless Sensor Networks	Journal of Circuits, Systems and Computers	July 2023	SCI
17	Deepak Raj G; Ananda Raja T; Sowndhar R; Annie Isabella L	Design and Implementation of Multi Domain Monitoring Device to Improve Soil Health	IEEE Xplore	September 2023	Scopus
18	Joseph Sathiadhas Esra, Y. Sukhi	Optimized Binaural Enhancement via attention masking network-based speech separation framework in digital hearing aids	Computer Speech & Language	August 2023	SCI
19	K. A. Mohamed Junaid; Y. Sukhi; Y. Jeyashree; S. Sivakumar	IoT based life saving helmet for two-wheeler	AIP Conf. Proceeding	November 2023	Scopus
20	A Jaya Mabel Rani; M.Nivetha S; N M Jothi Swaroopan; K Hari Kumar	Face Emotion Based Music Recommendation System Using Modified Convolution Neural Network	IEEE Xplore	January 2024	SCOPUS
21	A Jaya Mabel Rani; Bharathwaj K S; N M Jothi Swaroopan; K Hari Kumar; Geetha R	A Legal Prediction Model Using Support Vector Machine and K-Means Clustering Algorithm for Predicting Judgements and Making Decisions	IEEE Xplore	January , 2024	SCOPUS
22	A. Jaya Mabel Rani; B. Yasotha; Sevanthi P; K. Karthika; Y.Alexander Jeevanantham; V.Samuthira Pandi	Predictive Analytics for Proactive Maintenance in Industrial IoT Applications	IEEE Xplore	January 2024	SCOPUS
23	Dr Magesh T,Mr Thiyagesan M,Harini U,Dharshini B,	Analysis of Crop Disease Using Deep Learning based Convolutional Neural Network	IEEE Xplore	March 2024	SCOPUS
24	Magesh T,Thiyagesan M,Gokul T,Darshan C.R.A	Fault Detection Using IoT in Essential Power Transmission Lines	IEEE Xplore	March 2024	SCOPUS
25	Magesh T1*, Samuel Franklin F1, Santhi P S2 and Thiyagesan M1	Machine Learning-Driven Wind Energy Forecasting for Sustainable Development	MATEC Web of Conferences	March 2024	WOS
26	Anshul Srivastava; Mounika Nalluri; Tarun Lata; Geetha Ramadas; N Sreekanth; Hrishikesh Bhanudas Vanjari	Scaling AI-Driven Solutions for Semantic Search	IEEE Xplore	March 2024	SCOPUS

27	Chintala Venkatesh, Y Sukhi	Efficient and Reliable Fast Charging Station for Electric Vehicles: Integrating PV System and Optimized Control	Electric Power Components and Systems	March 2024	SCI
28	B. Umamaheswari; Jayanthi G; Kavitha P; Balaji N; Philip Thom George; Suwaatha S	Control and Monitoring of pH Process	IEEE Xplore	March 2024	SCOPUS
29	J. Praveenchandar, Saju Raj T, Geetha Ponnaian, T. Magesh, S. Vinoth Kumar	Autonomous Vehicle Traffic Accident Prevention using Mobile-Integrated Deep Reinforcement Learning Technique	Journal of Electrical Systems	April 2024	SCOPUS
30	S.Hemalatha, Rabinarayan Sethi, M.Rajasekaran, Ravula Arunkumar, M. Vimala, Velmurugan V, Shaik Razia, J.Deepa	Novel Routing Protocol to Overcome Packet Delay in Mobile Adhoc Network	Journal of Theoretical and Applied Information Technology	May 2024	SCOPUS
31	Anand P.;Raghunandan J.;Magesh T.;Devi G.;Ramapriya R.;Oviya B.	Design and Performance of Battery Temperature Management System with Machine Learning	IEEE Xplore	June 2024	SCOPUS
32	Vimala M	An examination of the grid-tied solar photovoltaic energy system installed at the B. S. Abdur Rahman Crescent Institute of Science and Technology in India	Environmental Progress & Sustainable Energy	January 2025	SCI/WoS
33	Thiyagesan M; Magesh T; Annie Isabella L; Vanitha R; Hemalatha S; Geethaavarshni S	Wireless Electric Vehicle Charging Station using Solar Energy	2025 International Conference on Emerging Technologies in Engineering Applications (ICETEA)	August 2025	Scopus
34	Y. Sukhi, P. Kavitha, C. R. A. Darshan, M. C. Brijesh Immanuel, E. Disam, Sai Prasad & Y. Jeyashree	Alcohol Detection and Engine Locking Using Arduino	Third International Conference on Intelligent System	July 2025	Scopus
35	P. Kavitha, Y. Sukhi, Anand G. Mehul, Arigonda Roshan Kiruthik, R. R. Amith, Ahamed A. Fayaz, M. Perarasi, B. Sarala, Y. Jeyashree	Smart Home Security and Monitoring System	Power Energy and Secure Smart Technologies	September 2025	WoS
36	Y. Sukhi, P. Kavitha, Sharo E. J. Adlin, Bavithra Jayamohan, M. N. Kanimozhi, Ahamed A. Fayaz, B. Sarala, M. Perarasi, Y. Jeyashree	Design and Implementation of an IoT-Enabled Smart Energy Meter Using Arduino	Power Energy and Secure Smart Technologies	September 2025	WoS

Table No.7.5.3.2: List of Consultancy work

S.No.	Name of faculty (Chief Consultant)	Client Organization	Title of Consultancy of project	Amount received (in Rupees)
ACADEMIC YEAR 2023 - 2024				
1	Dr.Y Sukhi	Kirubai Foundation	Multiport Power Converter for Electric Vehicle	50000
2	Ms. M.Vimala	Saint homeo Medicals	Photovoltaic system for Homeopathic facilities	50000
3	Ms.Sabari L Umamaheswari	Greencity Aircon	Data Analysis using solar self powering system	50000

4	Mr.M. Thiyagesan	KRK traders , chennai	DC-DC Converter for continuous input for Renewable Energy System	50000
5	Dr.T Magesh	Chandra Electrical	Hybrid charging of E vehicle	50000
6	Dr.P Kavitha	Archmed Healthcare India Pvt Ltd	Automatic pill box with timely alert system for Alzheimer patients	50000
7	Dr.Geetha Ramadas	EDS Instruments & Systems Pvt. Ltd.,	Development and testing of an IoT based metal detector for detecting any foreign material	50000
8	Dr.Y Sukhi	PM Agro Biotech Pvt. Ltd	Analysis, Design, and Development of BLDC Motor Speed Controller for Electric Vehicles	1,60,000
10	Mr.Fayaz Ahamed A	GEM CHEMICALS	Design and Development of Eco friendly automated EV Garbage Vehicle	51000
ACADEMIC YEAR 2024 - 2025				
S.No.	**Name of faculty (Chief Consultant)**	**Client Organization**	**Title of Consultancy of project**	**Amount received (in Rupees)**
1	Dr.P Kavitha	Archmed Healthcare India Pvt Ltd	Development of an AI-Based COPD Prediction System Using Breath analysis	60000
2	Dr.Y.Sukhi	MSYS Connect India Pvt Ltd	Integration of Hybrid Renewable Energy Systems Using Multiport Bidirectional DC-DC Converter for Regulated Power Supply	60000
3	Ms.Sabari L Umamaheswari	Chandra Electrical	Temperature Monitoring and control in EV	50000

4	Dr.T Magesh	Gem Chemicals	Design and Implementation of Dual active Bridge with Single Phase shifting Techniques for EV Charge	51000
5	Dr.Y.Alexander Jeevanantham and Dr.K. Naresh Kumar	V.Bharathi Traders	Streamlined CRM through Automation	100000
6	Mr.M. Thiyagesan	KRK Traders	Automated Laod Management and safety Enhancement system using IOT & RFID	110000
7	Dr. Y. Alexander Jeevanantham, M. Thiyagesan, Dr. K. Naresh Kumar, Dr. T. Magesh	Hari Homes	EV Charge Supported Smart Street Light With Low Power Consumption and SOS	1,000,000
8	Dr.Y.Sukhi	Elango Traders	Analysis, Design and Implementation of Multiport Power Converter for Electric Vehicle Application	500000
9	Mr.Fayaz Ahamed A	Gem Chemicals	Design of Electric Vehicle battery Thermal Management System	51000
ACADEMIC YEAR 2025 - 2026				
S.No.	**Name of faculty (Chief Consultant)**	**Client Organization**	**Title of Consultancy of project**	**Amount received (in Rupees)**
1	Naresh Kumar K & M Thiyagesan	Barathi Traders	ECO Friendly Automated EV Garbage Vehicle	1,10,000
2	Y Alexander Jeevanantham	Jayam Properties and Developers	Cost Estimation of Solar street light system	1,10,000

7.5.4. Relevance to Program Outcomes (POs) / Program Specific Outcomes (PSOs)

The Project Laboratory, Research Laboratory, and Centre of Excellence significantly contribute to the attainment of **Program Outcomes (POs) and Program Specific Outcomes (PSOs)**.

Table No.7.5.4: Relevance to Pos and PSOs

Facility	Contribution to POs/PSOs

Project Laboratory	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO11, PSO1, PSO2
Research /R&D Laboratory	PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PSO2
Centre of Excellence	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO11, PSO1, PSO2

Through project-based learning, research exposure, teamwork, ethical practices, and modern tool usage, these facilities ensure holistic development of students and align strongly with outcome-based education requirements.

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
2023-24(CAYm2)	1020	51	39	6	64
2024-25(CAYm1)	1020	51	39	5	63
2025-26(CAY)	1140	57	38	8	56

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 2025-26	Actual Expenses in 2025-26 till	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
Infrastructure Built-Up	65000000	54045722	59500000	59451081	61500000	61283825	73000000	72902520
Library	3000000	2244355	3500000	3404893	2300000	2290285	1300000	1199576
Laboratory equipment	30000000	24666740	38700000	38565392	15000000	14904667	27000000	26828660
Teaching and non-teaching staff salary	428000000	351645708	367100000	367100116	328000000	327692007	292000000	290769073
Outreach Programs	17500000	6727550	17000000	16720150	16500000	16366610	12000000	11649340
R&D	14656000	12429171	13655000	13511910	17295000	16762155	14360000	14233864
Training, Placement and Industry linkage	38000000	32892631	37500000	37316188	42500000	42464285	28000000	28062278

SDGs	22000000	5765374	21100000	21021148	13000000	12950757	6300000	6477225
Entrepreneurship	344000	344000	325000	325000	285000	285000	250000	250000
Others, specify	498570000	334687524	622180000	620831870	666670000	664231197	598040000	596706036
Total	**1117070000**	**825448775**	**1180560000**	**1178247748**	**1163050000**	**1159230788**	**1052250000**	**1049078572**

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 2025-26**	**Actual Expenses in 2025-26 till**	**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**
Laboratory equipment	100000	99900	150000	125074	200000	176463	66155	65004
Software	0	0	0	0	0	0	0	0
SDGs	20000	20000	105000	105000	5000	5000	5000	5000
Support for faculty development	227500	210852	439500	289523	182500	142523	0	0
R & D	120000	98432	220000	210689	110000	98432	120000	98432
Industrial Training, Industry expert, Internship	85000	85000	30000	30000	187000	187000	80200	80190
Miscellaneous Expenses*	1387345	1385637	1257019	1209228	1219166	1190063	1171880	11096988
Total	**1939845**	**1899821**	**2201519**	**1969514**	**1903666**	**1799481**	**1443235**	**11345614**