NATIONAL BOARD OF ACCREDITATION

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

Program Name : Electrical & Electronics Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10052	**Date of Submission**: 25-02-2025

PART A- Profile of the Institute

A1.Name of the Institute: VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY	
Year of Establishment : 2007	Location of the Institute: Madurai
A2. Institute Address:Velammal College of Engineering and Technology,Madurai Rameswaram High Road,Velammal Nagar, ViraganoorMadurai 625 009.	
City:Madurai	State:Tamil Nadu
Pin Code:625009	Website:www.vcet.ac.in
Email:principal@vcet.ac.in	Phone No(with STD Code):0452-2465289
A3. Name and Address of the Affiliating University (if any):	
Name of the University : ANNA UNIVERSITY CHENNAI	City: Madurai
State : Tamil Nadu	Pin Code: 625009
A4. Type of the Institution: Autonomous CAY(2021-22)	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **9**
- No. of PG programs: **5**

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	2023	--	Artificial Intelligence and Data Science
2	Engineering & Technology	UG	Civil Engineering	2011	--	Civil Engineering
3	Engineering & Technology	PG	Communication Systems	2011	--	Electronics and Communication Engineering
4	Engineering & Technology	UG	Computer Science and Engineering	2007	--	Computer Science and Engineering
5	Engineering & Technology	PG	Computer Science and Engineering	2011	--	Computer Science and Engineering
6	Engineering & Technology	UG	Computer Science and Engineering (Cyber Security)	2024	--	Computer Science and Engineering (Cyber Security)

7	Engineering & Technology	UG	Electrical and Electronics Engineering	2007	--	Electrical and Electronics Engineering
8	Engineering & Technology	UG	Electronics & Communication Engineering	2007	--	Electronics and Communication Engineering
9	Engineering & Technology	UG	Electronics Engineering (VLSI Design and Technology)	2024	--	Electronics Engineering (VLSI Design and Technology)
10	Engineering & Technology	UG	Information Technology	2007	--	Information Technology
11	Engineering & Technology	PG	Manufacturing Engineering	2011	--	Mechanical Engineering
12	Engineering & Technology	UG	Mechanical Engineering	2008	--	Mechanical Engineering
13	Engineering & Technology	PG	Network Engineering	2012	--	Information Technology
14	Engineering & Technology	PG	Power Systems Engineering	2013	--	Electrical and Electronics Engineering

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
Mechanical Engineering	No	Mechanical Engineering	UG
Electronics and Communication Engineering	Yes	Electronics & Communication Engineering	UG
Computer Science and Engineering	Yes	Computer Science and Engineering	UG
Information Technology	Yes	Information Technology	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:
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.A.Shunmugalatha
B. Nature of appointment:	Regular
C. Qualification:	ME/M. Tech and PhD

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	60	60	60	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	53	55	61	57	46	58	76
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	2	3	5	4	4	5
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	0	0	0	0	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	53	57	64	62	50	62	81

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	0	0	88.33
2023-24 (CAYm1)	60	0	0	91.67
2022-23 (CAYm2)	60	0	0	101.67

Average [(ER1 + ER2 + ER3) / 3] = 93.89≡ 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).	50.00	62.00	81.00
B=No. of students who graduated from the program in the stipulated course duration	46.00	58.00	76.00
Success Rate (SR)= (B/A) * 100	92.00	93.55	93.83

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 93.13

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)	7.99	8.23	8.12
Y=Total no. of successful students	48.00	48.00	51.00
Z=Total no. of students appeared in the examination	55.00	61.00	57.00
API [X*(Y/Z)]	6.97	6.48	7.27

Average API[(AP1+AP2+AP3)/3] : 6.91

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)	8.11	8.26	8.46
Y=Total no. of successful students	48.00	51.00	46.00
Z=Total no. of students appeared in the examination	51.00	56.00	50.00
API [X * (Y/Z)]	7.63	7.52	7.78

Average API [(AP1 + AP2 + AP3)/3] : 7.64

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)	8.13	8.11	8.58
Y=Total no. of successful students	51.00	46.00	58.00
Z=Total no. of students appeared in the examination	51.00	46.00	58.00
API [X*(Y/Z)]:	8.13	8.11	8.58

Average API [(AP1 + AP2 + AP3)/3] : 8.27

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	64.00	124.00	125.00
X=No. of students placed	31.00	49.00	61.00
Y=No. of students admitted to higher studies	5.00	5.00	11.00
Z=Total no. of students appeared in the examination	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	56.25	43.55	57.60

Average Placement Index = (P_1 + P_2 + P_3)/3: 52.47 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.A.Shunmugalatha	XXXXXXX38C	ME/M. Tech and PhD	Anna University	Power Systems Engineering	07/06/2010	14.7	Professor	Professor	07/06/2010	Regular	Yes		Yes
2	Dr.R.Narmatha Banu	XXXXXXX65E	ME/M. Tech and PhD	Anna University	Power Systems Engineering	02/01/2013	12	Professor	Professor	02/01/2013	Regular	Yes		No
3	Dr.N.Karpagam	XXXXXXX21Q	ME/M. Tech and PhD	Anna University	Power Systems Engineering	04/06/2012	12.7	Professor	Professor	04/06/2012	Regular	Yes		No
4	Dr.S.Dhanalakshmi	XXXXXXX93J	ME/M. Tech and PhD	Kalasalingam Academy of Research and Education	Power Systems Engineering	06/06/2012	12.7	Associate Professor	Professor	01/09/2016	Regular	Yes		No
5	Dr.A.Radhika	XXXXXXX80P	ME/M. Tech and PhD	Anna University	Power Electronics and Drives	03/01/2011	14	Assistant Professor	Associate Professor	01/04/2021	Regular	Yes		No
6	Dr.T.Chandrasekar	XXXXXXX32G	ME/M. Tech and PhD	Anna University	Power Systems Engineering	07/06/2010	14.7	Assistant Professor	Associate Professor	01/04/2021	Regular	Yes		No
7	Dr.B.Kiruthiga	XXXXXXX22P	ME/M. Tech and PhD	Anna University	Power Electronics and Drives	02/01/2014	11	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
8	Mrs.V.Umayal Muthu	XXXXXXX01P	M.E/M.Tech	Anna University	Embedded systems	17/12/2018	6.1	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Dr.S.Chellam	XXXXXXX87J	ME/M. Tech and PhD	Anna University	Power Systems Engineering	26/06/2018	6.6	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Dr.S.Muthulakshmi	XXXXXXX53L	ME/M. Tech and PhD	Anna University	Applied Electronics	19/01/2024	1	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Dr.T.Deepika Vinothini	XXXXXXX60N	ME/M. Tech and PhD	Anna University	Power Electronics and Drives	03/06/2024	0.7	Assistant Professor	Assistant Professor		Regular	Yes		No

12	Mr.M.Jeyamurugan	XXXXXXX17B	M.E/M.Tech	Anna University	Power Electronics and Drives	02/09/2024	0.4	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Mrs.M.Devaki	XXXXXXX67D	M.E/M.Tech	Anna University	Power Systems Engineering	04/07/2011	13.6	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Mrs.R.Saranya	XXXXXXX31N	M.E/M.Tech	Anna University	Control & Instrumentation	01/07/2016	8.6	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Dr.A.Madhan	XXXXXXX32E	ME/M. Tech and PhD	Anna University	Power Systems Engineering	25/06/2018	6.6	Assistant Professor	Assistant Professor		Regular	Yes		No
16	Dr.S.Senthilrani	XXXXXXX83D	ME/M. Tech and PhD	Anna University	VLSI Design	29/04/2008	16.2	Assistant Professor	Associate Professor	01/04/2021	Regular	No	28/06/2024	No
17	Mrs.J.Rajeswari	XXXXXXX59E	M.E/M.Tech	Anna University	Communication Systems	06/02/2012	11.11	Assistant Professor	Assistant Professor		Regular	No	23/01/2024	No
18	Mrs.K.Sneha	XXXXXXX44M	M.E/M.Tech	Anna University	Power Systems Engineering	15/06/2015	7.8	Assistant Professor	Assistant Professor		Regular	No	15/02/2023	No
19	Ms.M.Jajini	XXXXXXX43Q	M.E/M.Tech	Anna University	Control & Instrumentation	19/06/2017	5.2	Assistant Professor	Assistant Professor		Regular	No	30/08/2022	No
20	Dr.R.J.Venkatesh	XXXXXXX46J	ME/M. Tech and PhD	Anna University	Applied Electronics	01/07/2010	12.2	Assistant Professor	Associate Professor	01/04/2020	Regular	No	03/09/2022	No
21	Mr.A.Omprakash	XXXXXXX13C	M.E/M.Tech	Anna University	Power Systems Engineering	02/06/2014	8.3	Assistant Professor	Assistant Professor		Regular	No	29/09/2022	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	63	64	65
UG1.C	63	65	64
UG1.D	65	64	124
UG1: Electrical and Electronics Engineering	**191**	**193**	**253**
PG1.A	9	9	9
PG1.B	9	9	9
PG1: Power Systems Engineering	**18**	**18**	**18**
DS=Total no. of students in all UG and PG programs in the Department	209	211	271
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=** 209	**S2=** 211	**S3=** 271
DF=Total no. of faculty members in the Department	14	13	14
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=** 14	**F2=** 13	**F3=** 14
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= 14.93**	**SFR2= 16.23**	**SFR3= 19.36**
Average SFR for 3 years	**SFR= 16.84**		

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)	10	4	10.00	29.00
2023-24(CAYm1)	9	4	10.00	26.50
2022-23(CAYm2)	9	5	13.00	21.15

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	4.00	2.00	3.00	6.00	7.00
2023-24	1.00	4.00	2.00	3.00	7.00	6.00
2022-23	1.00	4.00	3.00	3.00	9.00	7.00
Average	RF1=1.00	AF1=4.00	RF2=2.33	AF2=3.00	RF2=7.33	AF2=6.67

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	Er.A.Siva	Project manager	SSS Automation	Automation and Robotics	30.00
2	Er.Alageswari Pandi,	Director	CADD Engineer & Tech ,Madurai	Innovation Into Start-Up: Workshop on Electrical CADD	14.00

(CAYm2)

(CAYm3)

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	24	10	26
2	No. of peer reviewed conference papers published	24	6	14
3	No. of books/book chapters published	4	2	13

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.A.Radhika	Dr.A.Shunmugalatha, Dr.R.Narmathabanu	EEE	Fish Food Plastics	MSME	1 year	7.50
Dr.B.Kiruthiga		EEE	AI sensor driven irrigation system for waste water minimization	EDII-TN	1 year	0.10
Dr. S. Senthilrani		EEE	Deep Learning Strategies for Fault Diagnosis in PV Systems	Council For Innovation and Excellence	1 year	0.25
Dr.A.Radhika		EEE	Energy conservation using IoT based	TNSCST	1 year	0.08
						Amount received (Rs.):7.93

(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.R.Narmatha Banu	Dr.B.Kiruthiga	EEE	Entrepreneurship cum Skill Development Programme Title on “Repair and Maintenance of Power supply, UPS and Inverter	MSME	1Year	1.25
Dr.R.Narmatha Banu	Dr.B.Kiruthiga	EEE	Promotion of Energy Audit and Conservation of Energy	Department Of Industries and Commerce (DIC)	1Year	0.35
Dr.R.Narmatha Banu	Dr.B.Kiruthiga Dr.S.Chellam	EEE	International Conference ICPES’23	Penguin Apparels	1Year	0.25
Dr.R.Narmatha Banu	Dr.B.Kiruthiga	EEE	Scheme -Entrepreneurship cum Skill Development Programme- on Repair and Maintenance of Power Supply, Inverter and UPS	MSME	1Year	1.25
Dr.R.Narmatha Banu	Dr.B.Kiruthiga	EEE	Scheme - Training and Awareness Programme - Promotion of Energy Audit and Conservation of Energy	Department Of Industries and Commerce (DIC)	1Year	0.35
						Amount received (Rs.):3.45

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.A.Shunmugalatha	Dr.R.Narmatha Banu Dr.B.Kiruthiga	EEE	Entrepreneurship Development Programme	EDII-TN	1Year	0.10
Dr. A. Shunmugalatha	Dr.S.Dhanalakshmi Dr.A.Radhika	EEE	Modernization and Removal of Obsolescence MODROB: Power Electronics Lab	AICTE	2 Years	6.75
						Amount received (Rs.):6.85

Total Amount (Lacs) Received for the Past 3 Years: 18.23

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.A.Shunmugalatha	Dr.R.Narmatha Banu Dr.T.Chandrasekar Mr.M.Madhan	Velammal Medical College Hospital and Research Institute (VMCHRI)	Energy Audit	Velammal Trust	3 days	2.25
Dr.A.Radhika		MSME	Fish Food Plastic	MSME	8 months	1.13
						Amount received (Rs.):3.38

(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.A.Shunmugalatha	Dr.R.Narmatha Banu Dr.T.Chandrasekar Mr.M.Madhan	Velammal Medical College Hospital and Research Institute (VMCHRI)	Energy Audit	Velammal Trust	2 days	1.25
						Amount received (Rs.):1.25

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.A.Shunmugalatha	Dr.R.Narmatha Banu Dr.T.Chandrasekar Mr.M.Madhan	Velammal Medical College Hospital and Research Institute (VMCHRI)	Energy Audit	Velammal Trust	17 days	2.25
						Amount received (Rs.):2.25

Total amount (Lacs) received for the past 3 years: 6.88

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.A.Radhika	Fish Food Plastic	8 months	1.13	1.13	The core idea of the is to save aquatic lives from non-decomposable plastics.
Dr.A.Shunmugalatha	Journal Publication	1 Year	0.01	0.01	To encourage the faculty to publish more journals.
Dr.R.Narmatha Banu	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Dr.N.Karpagam	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Dr.S.Dhanalakshmi	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Dr.A.Radhika	Journal Publication	1 Year	0.01	0.01	To encourage the faculty to publish more journals.
Dr.T.Chandrasekar	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Dr.B.Kiruthiga	Journal Publication	1 Year	0.01	0.01	To encourage the faculty to publish more journals.
Mrs.V.Umayal Muthu	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Dr.S.Chellam	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Mrs.M.Devaki	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Mrs.R.Saranya	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Mr.A.Madhan	Journal Publication	1 Year	0.00	0.00	To encourage the faculty to publish more journals.
Dr.A.Shunmugalatha Dr.R.Narmatha Banu Dr.S.Dhanalakshmi Dr.S.Chellam	Visit to Esteemed Institution	1 day	0.01	0.01	Placement Opportunities and GATE Exposure to students.
			Amount received (Rs.): 1.17		

(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.A.Shunmugalatha	Visit to Esteemed Institution--Bannari Amman Institute of Technology	1 day	0.02	0.02	Curriculum Updation and gained exposure to Student R & D projects
Dr.A.Shunmugalatha	Visit to Esteemed Institution-Kumaraguru College of Technology	1 day	0.02	0.02	Curriculum Updation and gained exposure to Student R & D projects
Dr.N.Karpagam	Visit to ATAL - IDEA Lab	5 days	0.02	0.02	Gained knowledge on Electronics System for health care and explored to PCB design and Biochip
			Amount received (Rs.): 0.06		

(CAYm3)

Total amount (Lacs) received for the past 3 years : 1.23

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	Engineering Practices Laboratory	3	Megger, Range Finder, Digital Live-wire detector, Multimeters, DC Regulated Power Supply I/P 230V single phase O/P 30V DC	Twelve sessior	Mr.P. Mathan Rajan	Lab Instructor	B.E.,
2	Electric Circuits Laboratory	3	AFO, CRO, RPS and AC & DC Meters	Two sessions p	Mr.P. Mathan Rajan	Lab Instructor	B.E.,
3	Electrical Machines Laboratory	3	All types of DC and AC Motor with Loading Arrangement, DC Shunt Motor Coupled with Three phase Alternator, Single phase and	Two sessions p	Mr.M. Logesh Raja	Lab Instructor	B.Sc.,
4	Control Systems Laboratory	3	Dual Trace CRO, Function Generator, AC & DC Servo motor with kit, Analog Simulation of Type – 0 & Type 1 system kit	Two sessions p	Mrs.K. Naga Rani	Lab Instructor	B.E.,
5	Measurement & Instrumentation Laboratory	3	AC and DC Bridges,Pressure transducer,LVDT,Analog to digital converter,Flow measurement kit	Two sessions p	Mrs.K. Naga Rani	Lab Instructor	B.E.,

6	Linear Integrated Circuits Laboratory	3	ADC & DAC Kits, CRO,AFO and Meters, DSO	Two sessions p	Mr.P. Siva Kumar	Lab Instructor	B.E.,
7	Power Electronic & Drives Laboratory	3	Dual Trace CRO, Function Generator, AC to DC fully controlled converter (single phase &	Two sessions p	Mr.P. Siva Kumar	Lab Instructor	B.E.,
8	Renewable Energy Systems Laboratory	3	Solar PV training system 1 Kw ,Wind-Solar Hybrid Power system with micro wind Energy	Two sessions p	Mr.P. Siva Kumar	Lab Instructor	B.E.,
9	Power System Simulation Laboratory	1	Personal computers (Pentium-IV, 80GB, 512 MBRAM), Laser Printer, Server (Pentium IV,	Two sessions p	Mr.S. Kali Dasan	Lab Instructor	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	Engineering Practices Laboratory & Electric circuits Laboratory	Do's 1. Follow the Proper dress code. 2. Observation notes and records should be completed. before coming to the next Laboratory. 3. Be aware of operating equipment. 4. Follow the correct procedure to receive the components. 5. Verify the connections with the lab instructor before the commencement of the experiment. 6. Ensure that all switches are in the OFF position and all the connections are removed after the completion of laboratory. 7. Place all patch cords and stools at original positions after completion of laboratory. Don'ts 1. Don't come late to the Laboratory. 2. Don't enter into the Laboratory with Gold ornaments. 3. Don't make or remove the connections with power ON. 4. Don't switch ON the supply without getting verification from the concerned Laboratory Incharge. 5. Don't enter and leave the laboratory without the permission of concerned Laboratory Incharge.
2	Electrical Machines Laboratory	Do's 1. Come to the laboratory with proper uniform and good quality leather shoes. 2. Be punctual and disciplined inside the laboratory. 3. Study and prepare well before entering into the laboratory. 4. Complete the observation after completion of the experiment in the laboratory itself. 5. Use proper rating of equipment. 6. Be alert till the experiment is completed. 7. Handle the meters carefully, for which you are duly responsible. 8. Make connections with the approval of staff members. 9. Make sure that supply is OFF before touching any terminals. 10. Switch OFF the supply, after the completion of the experiment. 11. Return all the apparatus and make sure that nothing is left on the Worktable. Don'ts 1. Don't work with electricity if your hands, feet, or other body parts are wet or when standing on a wet floor. 2. Avoid wearing golden rings, bracelets and bangles. 3. Don't touch any equipment set up in the laboratory until the instruction is given. 4. Don't touch any substance unless the teacher permits. 5. Don't chew gum or bring food or drinks into the laboratory. 6. Never operate the main circuit breakers which are on the main panels. 7. Don't put your feet on chairs or tables. 8. Do not sit on the laboratory tables. 9. Never overload a circuit by plugging in too many appliances. 10. Never tamper with the third prong. 11. Never install cords under rugs. 12. Don't play inside the laboratory.
3	Control & Instrumentation Laboratory	Do's 1. Follow the Proper dress code. 2. Observation notes and records should be completed before coming to the next laboratory. 3. Be aware of operating equipment. 4. Follow the correct Precaution and procedure to receive the components. 5. Verify the connections with the lab instructor before the commencement of the experiment 6. Ensure that all switches are in the OFF position and all the connections are removed after the completion of laboratory. 7. Place all patch cords and stools at original positions after completion of laboratory. Don'ts 1. Don't come late to the Laboratory 2. Don't enter into the Laboratory with Gold ornaments. 3. Don't make or remove the connections with power ON. 4. Don't switch ON the supply without getting verification from the concerned Laboratory Incharge. 5, Don't enter and leave the laboratory without the permission of concerned Laboratory Incharge

4	Power Electronics & Drives / Linear Integrated Circuits Laboratory	Do’s 1. Follow the Proper dress code. 2. Observation notes and records should be completed before coming to the next laboratory. 3. Be aware of operating equipment. 4. Follow the correct procedure to receive the components. 5. Verify the connections with the lab instructor before the commencement of the experiment 6. Ensure that all switches are in the OFF position and all the connections are removed after the completion of lab. 7. Place all patch chords and stools at original positions after completion of laboratory. Don'ts 1. Don’t come late to the Laboratory. 2. Don’t enter into the Laboratory with Gold ornaments. 3. Don’t make or remove the connections with power ON. 4. Don’t switch ON the supply without getting verification from the concerned Laboratory Incharge. 5. Don’t enter and leave the laboratory without the permission of concerned Laboratory Incharge.
5	Renewable Energy Systems Laboratory	Do’s 1. Follow the Proper dress code. 2. Observation notes and records should be completed before coming to the next laboratory. 3. Be aware of operating equipment. 4. Follow the correct procedure to receive the components. 5. Verify the connections with the laboratory instructor before the commencement of the experiment. 6. Ensure that all switches are in the OFF position and all the connections are removed after the completion of laboratory. 7. Place all patch chords and stools at original positions after completion of laboratory. Don'ts 1. Don’t come late to the Laboratory. 2. Don’t enter into the Laboratory with Gold ornaments. 3. Don’t make or remove the connections with power ON. 4. Don’t switch ON the supply without getting verification from the concerned Laboratory Incharge. 5. Don’t enter and leave the laboratory without the permission of concerned Laboratory Incharge.
6	Power System Simulation Laboratory	Instructions to Students 1. Students are instructed to come prepared for the laboratory. 2. Remove the foot wears and keep it outside only at shoe-rack. 3. Register the usage timing along with signature in the Login Register. 4. Keep your belongings safely. 5. Wearing ID card is compulsory. 6. Maintain discipline inside the lab, by not roaming and making unwanted noises. 7. In case of any difficulty in using the systems, contact only the Laboratory Instructor. 8. On any account usage of a single PC by two or more students is prohibited. 9. Co-operate with the lab instructor to maintain the rules and regulations and pave the way for constructive utilization of laboratory.

D3. Project Laboratory/Research Laboratory

1. Research & Development/ TI Innovation Laboratory:

- Research & Development/ TI Innovation Laboratory worth Rs.22.58 Lakhs is established in the year 2014 to enrich the research activities in electrical and electronics field.
- Texas Instruments freely contributed components worth Rs.3.00 Lakhs related to automatic control of drives used in Power electronic devices
- UG/ PG/Ph.D., scholars are regularly doing their project work in this lab to analyze the harmonics and other electrical parameters in power electronic based drives and other related projects using power quality analyzer and power measurement devices.

Name list of Projects carried out in Research & Development/ TI Innovation Laboratory

S. No.	2019-23 Batch	2020-24 Batch	2021-25 Batch
1	Project Title: SELF MONITORING AND CLEANING SYSTEM FOR SOLAR PANEL Name of Students: SRIDHAR.M.S , SANTHOSH.S , BOOBAESH S , KALEESWARAN.S.R	Project Title: INTENSIVE PATIENT MONITORING SYSTEM BASED ON IOT Name of Students: KARTHICK MURUGAN ANANTHA LAKSHMI LANISHA VIRGIN A RAJESWARI P	Project Title: FAULT DETECTION IN MICROGRID USING ML Name of Students: DHINESH G T AKASH S ARUN PRASATH N K HARIKRISHNAN J M
2	Project Title: FINGERPRINT AND PASSCODE BASED EXAM HALL AUTHENTICATION Name of Students: KALEESWARAN.S.R SANTHOSH.S OOBAESH S SRIDHAR.M.S	Project Title: IOT BASED WIRELESS COMMUNICATION OF TRANSMISSION LINE PARAMETERS Name of Students: SWETHA K SWETHA.K SHANMATHI T G INFENCIA D	Project Title: LIDAR BASED MINIDRONE WITH PROXIMITY SENSOR IN SURVEILLANCE OF FOREST AREA Name of Students: LOKESWARAN S MOHANRAM P THILAKRAJS VETRIVEL G
3	Project Title: AN EFFICIENT PERCEPTIVE FAULT DETECTION SYSTEM USING IoT Name of Students: DIVYA S M.NIHITHA SIVA SANKARI I	Project Title: VISUAL LOCALIZATION OF AN INTERNAL INSPECTION ROBOT FOR THE OIL-IMMERSED TRANSFORMER Name of Students: SHARMINI SAKTHI C SOFI D	Project Title: PLANT DISEASE RECOGNITION: A LARGE-SCALE BENCHMARK DATASET AND A VISUAL REGION AND LOSS REWEIGHTING APPROACH Name of Students: PRITHYINGARADEVI B RAJADHARSHINI K YOGALAKSHMI A S

- **2. Centre of Excellence - Electrical Drives System in Electric Vehicle Laboratory:**

- Centre of Excellence - Electrical Drives System in Electric Vehicle Laboratory worth Rs.72.09 Lakhs has been established.
- An electric vehicle (EV) electrical drive system converts energy from the vehicles battery into mechanical power to drive the wheels.
- The critical components of an EV drive system include the electric motor, power electronics, the battery pack, and a controller.
- The development of Electric drive system in electric vehicles technologies and faster adaptation has generated a great deal in improving the sustainability of the transportation model.
- Electric mobility has experienced a significant advance in the last decades due to technological advancements, bringing a dramatic change to our societies and transforming our lives.
- This is particularly true in the current times where mankind faces serious risks due to the well-known pandemic and global warming.
- This Centre of Excellence - Electrical Drives System in Electric Vehicle Laboratory is a premier interdisciplinary platform for students, researchers, practitioners and educators and discuss the most recent innovations, trends, and concerns, as well as practical challenges in the fields of Electric Vehicle Technologies.
- The scope of the topics covered by Centre of Excellence includes major aspects of electrical parts, mechanical design and communication technologies required for Electric drive system in electric vehicle system

Impact:

- Improves technical proficiency and practical skills of students in core subjects.
- Supports research and project work in emerging electrical and electronics technologies.
- Strengthens the institutes capacity to offer industry-relevant training

The facilities in the Centre of Excellence are

1. Tricycle EV Development Systems (Viev – 3 W)
2. BLDC Hub Motor test Bed set Up
3. 5 KW LLC Based Electrical Vehicle Quick Charger With Front End PFC Correction
4. Battery Management Systems
5. NX (CAD/CAM/CAE/MCD)Software For Electrical Vehicle
6. Siemens Simcenter Amesim Software For Electric vehicle
7. 3 ϕ Inverter With MPPT DC-DC boost Converter and Bi Directional Battery Charger For 48 V BLDC motor
8. 3 Phase Thyristorized Drive for DC Motor
9. Closed Loop Control of Chopper Fed DC Motor Drive
10. Embedded Control of Slip Ring Induction Motor Using Static Krammer Drive
11. Speed Control of Single Phase Induction Motor Drive Using 3 Phase to Single Phase Matrix Converter
12. Speed Control Of Brushless Dc Drive
13. Embedded Control Of Switched Reluctance Motor Drive
14. PLC Based Four Quadrant Operation Of 3 Phase Squirrel Cage Induction Motor Drive
15. Speed Control Of 3 Phase Multilevel Inverter Fed Squirrel Cage Induction Motor Drive
16. Two Wheeler Electric Vehicle Training Systems

Table No. 7.5.1: List of Project Laboratory/Research Laboratory /Centre of Excellence

S.No.	Name of the Laboratory
1.	Research & Development/ TI Innovation Laboratory
2.	Centre of Excellence –Electrical Drives System in Electric Vehicle Laboratory

Research & Development/ TI Innovation Laboratory equipment manufacturer details

Sl.No.	Name of the Laboratory	Name of the major equipment	Name of the manufacturer

1	Research & Development/ TI Innovation Laboratory	HIOKI 3197 Power Quality analyzer & HIOKI Current Transformer	HIOKI, Bangalore

DSP 2812 Controller with In-circuit emulator 3 Phase Intelligent Power Module – 3 HP BLDC Motor with spring balance load, 24V, 5500RPM, 180W DC – DC Buck Boost Converter Spartan 6 – FPGA development Kit	VI Microsystems , Chennai
Desktop Computer I3 Proessor with Samsung 18.5 inch monitor – 10 Nos	HP, Chennai
Semikon- 3 Phase IGBT based inverter, PWM card and power supply	SEMIKRON, Mumbai

Power Management Laboratory Kit, MSP 430 EXP G2 Launch Pad (44 Nos) Wi-Fi Booster Pack CC110L (12 Nos) C2000 Piccolo LAUNCHXL-F28027 (30 Nos) BOOSTERPACK, DRV8301 (5 Nos) C2000 LED Booster Pack (5 Nos) TIVA Launch pad EK-TM4C123GXL (3o Nos) Sensor Hub Booster Pack for Tiva™ C (5 Nos) CC3200 Simple Link Wi-Fi Launch Pad (30 Nos) ASLK PRO Kit (12 Nos) STEPS Experimenter pack for MSP 430 STEPS Experimenter pack for C 2000 STEPS Experimenter pack for TIVA ASLK PRO Kit (4Nos) MSP 430 eZ430 – RF 256X (2 Nos) TIVA-DK-TM4c129X(1 No) MSP –EXP 430F5529 Explorer Kit (2 Nos) TMDSDCDC2kit-Digital Power Kit (2 Nos) DRV8312-69m-Kit- BLDC Motor Control Kit(1 No) TMDS1MTRPFCKit – Motor Control Kit (1 No) DK-TM4C1234 CAN Development Kit(1 No)	STEPS KNOWLEDGE SERVICES PVT LTD, COIMBATORE

		FLUKE 1732- Power Quality logger along with standard accessories	FLUKE, Chennai
		Solar Water Pump-1HP, Solar PV Modules Poly 72 cell- 4 Nos, Mounting structure – 1 Set, Solar vfd mobile – 1 Set, Single phase output UPS – 1 Set	OSCAR ELECTRICALS, Erode
		Establishment of Texas Instruments Robotics advanced Embedded system Kit	TEXAS INSTRUMENTS,COIMBATORE
		Hikvision IRF Bullet, DS-7804 DVR, WD Hard disc 1TB,DC Pin and gold jelly fulled cable	HIK Vision, Madurai
		Design and fabrication of Solar Powered irrigation system with PEST Control and forecasting using IoT	OSCAR ELECTRICALS, Erode

2	Centre of Excellence - Electrical Drives System in Electric Vehicle Laboratory	Tricycle EV Development Systems (Viev – 3 W), BLDC Hub Motor test Bed set Up, 5 KW LLC Based Electrical Vehicle Quick Charger With Front End PFC Correction, Battery Management Systems, NX (CAD/CAM/CAE/MCD)Software For Electrical Vehicle, Siemens Simcenter Amesim Software For Electric vehicle, 3 ϕ Inverter With MPPT DC-DC boost Converter and Bi Directional Battery Charger For 48 V BLDC motor, 3 Phase Thyristorized Drive for DC Motor, Closed Loop Control of Chopper Fed DC Motor, Drive Embedded Control of Slip Ring Induction Motor Using Static Krammer Drive, Speed Control of Single Phase Induction Motor Drive Using 3 Phase to Single Phase Matrix Converter, Speed Control of Brushless Dc Drive, Embedded Control Of Switched Reluctance Motor Drive, PLC Based Four Quadrant Operation of 3 Phase Squirrel Cage Induction Motor Drive, Speed Control of 3 Phase Multilevel Inverter Fed Squirrel Cage Induction	VI Microsystems , Chennai

		Motor Drive	

Electrical Drives System in Electric Vehicle Laboratory Equipment details

Sl.No.	Name of the Laboratory	Name of the major equipment	Name of the manufacturer
1.	Centre of Excellence - Electrical Drives System in Electric Vehicle Laboratory	Tricycle EV Development Systems (Viev – 3 W), BLDC Hub Motor test Bed set Up, 5 KW LLC Based Electrical Vehicle Quick Charger With Front End PFC Correction, Battery Management Systems, NX (CAD/CAM/CAE/MCD)Software For Electrical Vehicle, Siemens Simcenter Amesim Software For Electric vehicle, 3 ϕ Inverter With MPPT DC-DC boost Converter and Bi Directional Battery Charger For 48 V BLDC motor, 3 Phase Thyristorized Drive for DC Motor, Closed Loop Control of Chopper Fed DC Motor, Drive Embedded Control of Slip Ring Induction Motor Using Static Krammer Drive, Speed Control of Single Phase Induction Motor Drive Using 3 Phase to Single Phase Matrix Converter, Speed Control of Brushless Dc Drive, Embedded Control Of Switched Reluctance Motor Drive, PLC Based Four Quadrant Operation of 3 Phase Squirrel Cage Induction Motor Drive, Speed Control of 3 Phase Multilevel Inverter Fed Squirrel Cage Induction Motor Drive	VI Microsystems , Chennai

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)	600	30	18	7	53
2023-24(CAYm1)	660	33	21	7	55
2024-25(CAY)	840	42	27	11	57

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 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Infrastructure Built-Up	30000000	7500000	20000000	13567087	20000000	16276200	2000000	1033633
Library	2155000	1800000	2230000	1786589	1448000	974449	1833000	1344752
Laboratory equipment	60987795	10000000	5788461	5215310	22335412	10582939	9437318	443708
Teaching and non-teaching staff salary	130000000	122950689	122653013	111502739	98308624	89371477	91107566	82825060
Outreach Programs	70000	60350	80000	71500	100000	93000	62000	56650
R&D	5255000	0	2337560	2129609	296500	1422335	585500	1901137
Training, Placement and Industry linkage	0	0	0	0	0	0	0	0
SDGs	60000	50085	0	0	0	0	0	0

Entrepreneurship	0	0	0	0	0	0	0	0
Others, specify	0	0	0	0	0	0	0	0
Total	**228527795**	**142361124**	**153089034**	**134272834**	**142488536**	**118720400**	**105025384**	**87604940**

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 2024-2025**	**Actual Expenses in 2024-2025 till**	**Budgeted in 2023-2024**	**Actual Expenses in 2023-2024 till**	**Budgeted in 2022-2023**	**Actual Expenses in 2022-2023 till**	**Budgeted in 2021-2022**	**Actual Expenses in 2021-2022 till**
Laboratory equipment	7815350	6617074	284247	234019	2500795	85616	23298811	0
Software	0	0	0	0	0	0	0	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty development	10000	0	0	0	0	0	0	0
R & D	40000	0	36060	0	116500	15000	118000	118000
Industrial Training, Industry expert,	10000	74880	10000	0	36000	10000	30000	0
Miscellaneous Expenses*	10000	0	20000	12425	126000	247955	1015560	6000
Total	**7885350**	**6691954**	**350307**	**246444**	**2779295**	**358571**	**24462371**	**124000**