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: 10459	**Date of Submission**: 27-03-2025

PART A- Profile of the Institute

A1.Name of the Institute: K RAMAKRISHNAN COLLEGE OF ENGINEERING	
Year of Establishment : 2008	Location of the Institute: NH45, SAMAYAPURAM, TIRUCHIRAPPALLI
A2. Institute Address:K.Ramakrishnan College of Engineering, Kariyamanikam Road, Samayapuram, Trichy – 621112, Tamilnadu, India.	
City:Tiruchirappalli	State:Tamil Nadu
Pin Code:621112	Website:www.krce.ac.in
Email:principal@krce.ac.in	Phone No(with STD Code):0431-2670699
A3. Name and Address of the Affiliating University (if any):	
Name of the University : ANNA UNIVERSITY	City: Chennai
State : Tamil Nadu	Pin Code: 600025
A4. Type of the Institution: Self-Supported Institute	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **8**
- 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	2020	--	Computer Science and Engineering
2	Engineering & Technology	PG	Communication Systems	2011	--	Electronics and Communication Engineering
3	Engineering & Technology	UG	Computer Science and Business System	2020	--	Computer Science and Engineering
4	Engineering & Technology	PG	Computer Science and Engineering	2013	--	Computer Science and Engineering
5	Engineering & Technology	UG	Computer Science and Engineering	2008	--	Computer Science and Engineering
6	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2021	--	Computer Science and Engineering
7	Engineering & Technology	UG	Electrical & Electronics Engineering	2008	--	Electrical and Electronics Engineering
8	Engineering & Technology	UG	Electronics & Communication Engineering	2008	--	Electronics and Communication Engineering
9	Engineering & Technology	PG	Engineering Design	2012	--	Mechanical Engineering
10	Engineering & Technology	UG	Information Technology	2020	--	Computer Science and Engineering
11	Engineering & Technology	UG	Mechanical Engineering	2008	--	Mechanical Engineering
12	Engineering & Technology	PG	Power Systems Engineering	2013	--	Electrical and Electronics Engineering
13	Management	PG	Masters of Business Administration	2009	--	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
Electronics and Communication Engineering	No	Electronics & Communication Engineering	UG
Electrical and Electronics Engineering	No	Electrical & 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 ARRO DETAILS
1	Electrical & Electronics Engineering	UG	2008 / --	60	No	NA	60	2008	AICTE- File No.06/05/TN/E&T/20 dated 20/06/2008

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. S. TITUS
B. Nature of appointment:	Regular
C. Qualification:	Ph.D

B3. Program Details

Table No.B3.1: Admission details for the program excluding those admitted through multiple entry and exit points.

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	60	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	63	63	61	56	48	59	72
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	5	7	8	19	9	4
N3=Separate division if any	0	0	0	0	0	1	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.	63	68	68	64	67	69	76

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	100.00
2023-24 (CAYm1)	60	0	0	100.00
2022-23 (CAYm2)	60	0	0	100.00

Average [(ER1 + ER2 + ER3) / 3] = 100.00≡ 20.00

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

Table No.B5.1: The success rate in the stipulated period of a program.

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	79.00	69.00	124.00
B=No. of students who graduated from the program in the stipulated course duration	53.00	66.00	73.00
Success Rate (SR)= (B/A) * 100	67.09	95.65	58.87

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 73.87

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)
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)	7.46	7.56	7.65
Y=Total no. of successful students	63.00	61.00	56.00
Z=Total no. of students appeared in the examination	63.00	61.00	56.00
API [X*(Y/Z)]	7.46	7.56	7.64

Average API[(AP1+AP2+AP3)/3] : 7.55

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)	7.59	7.76	8.08
Y=Total no. of successful students	66.00	63.00	65.00
Z=Total no. of students appeared in the examination	68.00	64.00	67.00
API [X * (Y/Z)]	7.37	7.64	7.84

Average API [(AP1 + AP2 + AP3)/3] : 7.62

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

Table No.B8.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.81	8.01	8.30
Y=Total no. of successful students	60.00	63.00	67.00
Z=Total no. of students appeared in the examination	63.00	65.00	67.00
API [X*(Y/Z)]:	7.44	7.76	8.30

Average API [(AP1 + AP2 + AP3)/3] : 7.83

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	79.00	69.00	124.00
X=No. of students placed	55.00	62.00	63.00
Y=No. of students admitted to higher studies	7.00	4.00	8.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	78.48	95.65	57.26

Average Placement Index = (P_1 + P_2 + P_3)/3: 77.13 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	Na As (Re Co Ad
1	Dr. S. TITUS	XXXXXXX69Q	Ph.D	ANNA UNIVERSITY, CHENNAI	POWER SYSTEM ENGINEERING	16/07/2018	6.8	Professor	Professor	16/07/2018	Re
2	Dr. K. DHAYALINI	XXXXXXX32M	Ph.D	ANNA UNIVERSITY, CHENNAI	POWER SYSTEMS	03/08/2015	9.7	Professor	Professor	03/08/2015	Re
3	Dr. R. ILANGO	XXXXXXX04R	Ph.D	ANNA UNIVERSITY, CHENNAI	HIGH VOLTAGE ENGINEERING	01/06/2018	6.9	Professor	Professor	01/06/2018	Re
4	Dr. R. MANIVASAGAM	XXXXXXX90A	Ph.D	ANNA UNIVERSITY, CHENNAI	POWER ELECTRONICS AND DRIVES	29/05/2010	14.9	Assistant Professor	Professor	01/07/2023	Re
5	Dr. R. ARULRAJ	XXXXXXX52C	Ph.D	ANNAMALAI UNIVERSITY, CHIDAMBARAM	POWER SYSTEM ENGINEERING	02/03/2023	2	Assistant Professor	Assistant Professor		Re
6	Dr. V. ASHOK KUMAR	XXXXXXX97H	Ph.D	ANNA UNIVERSITY, CHENNAI	POWER ELECTRONICS AND DRIVES	01/06/2018	6.9	Assistant Professor	Assistant Professor		Re
7	Mr. G. GABRIEL SANTHOSH KUMAR	XXXXXXX56K	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER ELECTRONICS AND DRIVES	11/06/2012	12.9	Assistant Professor	Assistant Professor		Re
8	Mr. A. SUBRAMANIYA SIVA	XXXXXXX44P	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER MANAGEMENT	01/08/2013	11.7	Assistant Professor	Assistant Professor		Re
9	Mrs. A. DURGADEVI	XXXXXXX77C	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	CONTROL AND INSTRUMENTATION	20/06/2016	8.9	Assistant Professor	Assistant Professor		Re
10	Mr. S.P. RICHARD	XXXXXXX16J	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER ELECTRONICS AND DRIVES	12/06/2017	7.9	Assistant Professor	Assistant Professor		Re
11	Mr. P. VIGNESH WARAN	XXXXXXX14M	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER ELECTRONICS AND DRIVES	14/06/2017	7.9	Assistant Professor	Assistant Professor		Re
12	Mr. A. PRABHU	XXXXXXX13H	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER SYSTEMS ENGINEERING	11/06/2018	6.9	Assistant Professor	Assistant Professor		Re

13	Mr. U. RAMANI	XXXXXXX28C	M.E/M.Tech	KALASALINGAM UNIVERSITY KRISHNANKOIL	CONTROL AND INSTRUMENTATION	14/12/2018	6.3	Assistant Professor	Assistant Professor		Re
14	Mr. P. PARTHASARATHY	XXXXXXX49F	M.E/M.Tech	PERIYAR MANIYAMMAI UNIVERSITY	POWER ELECTRONICS AND DRIVES	20/12/2021	3.3	Assistant Professor	Assistant Professor		Re
15	Mr. M. SENTHILKUMAR	XXXXXXX66R	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER SYSTEMS ENGINEERING	20/12/2021	3.3	Assistant Professor	Assistant Professor		Re
16	Mr. T. VADIVELAN	XXXXXXX22J	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER SYSTEMS ENGINEERING	23/01/2023	2.1	Assistant Professor	Assistant Professor		Re
17	Mr. A. JAINULAFDEEN.	XXXXXXX60H	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER ELECTRONICS AND DRIVES	15/09/2023	1.6	Assistant Professor	Assistant Professor		Re
18	Mrs. N. VINOTHINI	XXXXXXX18Q	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	EMBEDDED SYSTEMS	23/06/2014	10.9	Assistant Professor	Assistant Professor		Re
19	Mrs. R.ANU	XXXXXXX70D	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER ELECTRONICS AND DRIVES	09/01/2019	5.4	Assistant Professor	Assistant Professor		Re
20	Ms. R. SUSHMITHA	XXXXXXX51D	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER SYSTEMS ENGINEERING	21/06/2019	5.1	Assistant Professor	Assistant Professor		Re
21	Mrs. V. SIVASHANKARI	XXXXXXX96J	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER SYSTEMS ENGINEERING	12/06/2017	6.7	Assistant Professor	Assistant Professor		Re
22	Mrs. R. NITHYA	XXXXXXX45E	M.E/M.Tech	ANNA UNIVERSITY, CHENNAI	POWER SYSTEMS ENGINEERING	05/09/2018	5.7	Assistant Professor	Assistant Professor		Re

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	65	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Electrical & Electronics Engineering	**197**	**198**	**198**
PG1.A	12	12	12
PG1.B	12	12	18
PG1: Power Systems Engineering	**24**	**24**	**30**

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
DS=Total no. of students in all UG and PG programs in the Department	221	222	228
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=** 221	**S2=** 222	**S3=** 228
DF=Total no. of faculty members in the Department	18	20	19
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 18	**F2=** 20	**F3=** 19
FF=The faculty members in F who have a 100% teaching load in the first-year courses	3	3	3
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 14.73**	**SFR2= 13.06**	**SFR3= 14.25**
Average SFR for 3 years	**SFR= 14.01**		

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)	5	13	11.00	23.18
2023-24(CAYm1)	5	15	11.00	25.00
2022-23(CAYm2)	4	15	11.00	22.73

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	0.00	7.00	14.00
2023-24	1.00	4.00	2.00	0.00	7.00	16.00
2022-23	1.00	3.00	2.00	1.00	7.00	15.00
Average	RF1=1.00	AF1=3.67	RF2=2.00	AF2=0.33	RF2=7.00	AF2=15.00

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	Mr.Sriraman Balaji	CoE and Founder	Rajan Robotics	Sensors and Transducer	50.00
2	Dr.S.Dharmalingam(Rtd)	General Manager	BHEL,Trichy	Electrical Machines-I	55.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. K.A Viswanathan	Sr.Engineer	Veoneer India Pvt.Ltd	Electrical Machines-II	58.00
2	Mr. M. Milton	Sr. Trainer	Innate Talent	Professional Skills-III	55.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. J. Yuva Priyan	Sr. Engineer Technical sales	Axon interconnect (Defense and Aerospace)	Power Plant engineering	60.00
2	Mrs. S. Vinothini	Sr. Trainer	Innate Talent	Professional Skills-IV	50.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	16	6	14
2	No. of peer reviewed conference papers published	8	22	8
3	No. of books/book chapters published	3	4	4

C7. Sponsored Research Project

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

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. K. Dhayalini	NA	EEE	Student Branch Operating Fund	IEEE Madras Section	6 Months	0.30
Dr. K. Dhayalini	NA	EEE	PES High Performing Student Branch Chapter Program Award	IEEE Madras Section	6 Months	0.17
Dr.S.Titus	NA	EEE	All India Workshop on “Role of AI in Hybrid Electric Vehicle and Battery Management system” -9 - 10 August 2024	IEI Trichy Local Centre	6 Months	0.40
Dr.S.Titus	NA	EEE	INTERNATIONAL CONFERENCE on “EMERGING TRENDS IN ENGINEERING SCIENCE AND TECHNOLOGY” (ICETEST - 2024)	IEI Trichy Local Centre	6 Months	0.11
Dr. K. Dhayalini	NA	EEE	Student Branch Operating Fund	IEEE Madras Section	6 Months	0.28
Dr.S.Titus	Mr. G. Gabriel Santhosh Kumar	EEE	Design of EV For domestic load Transport	VI Microsystem	1 Year	7.96
						Amount received (Rs.):9.22

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. K. Dhayalini	NA	EEE	Student Branch Operating Fund	IEEE Madras Section	6 Months	0.11
Dr. K. Dhayalini	NA	EEE	Student Branch Activity award	IEEE Madras Section	6 Months	0.05
Dr. K. Dhayalini	NA	EEE	PES High Performing Student Branch Chapter Program Award	IEEE Madras Section	6 Months	0.15
Dr.R.Ilango	NA	EEE	Development of reaction wheel controlled self balancing bicycle for improving vehicle stability control	TNSCST	6 Months	0.08
Mr.S.P.Richard	NA	EEE	An efficient agricultural irrigation system for small scale farmers without free agricultural electric service	TNSCST	6 Months	0.08
Dr.S.Titus	Dr.R.Manivasagam	EEE	Rope Conveyor for CNC Machine	Sri Kalathar Industries	6 Months	3.00
						Amount received (Rs.):3.47

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. K. Dhayalini	NA	EEE	Student Branch Operating Fund	IEEE Madras Section	6 Months	0.32
Dr. K. Dhayalini	NA	EEE	Student branch fund	IEEE Madras Section	6 Months	0.23
Mr. A. Prabhu	NA	EEE	Energy management system using full stack web application	TNSCST	6 Months	0.08
						Amount received (Rs.):0.63

Total Amount (Lacs) Received for the Past 3 Years: 13.32

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. R. Ilango	Mr. M. Senthilkumar	EEE	Electrical Safety Audit	Govt. Primary Health Centres, Sirugambur Block	1 Month	0.70
Dr. R. Ilango	Dr. R. Arulraj	EEE	Electrical energy audit Motor analyzing	ROOTT ZONE &SKA COIRS-Pollachi	1 Month	0.30
Dr. R. Ilango	Mr. M. Senthilkumar	EEE	Harmonics Analysis in Variable Frequency Drives	Thirumal Milks Chilling Centre – Perambalur.	3 Months	0.21
Dr. R. Ilango	Dr. R. Arulraj	EEE	MD Controller Performance Checking	Trichy Public School, Thuvakudi, Trichy.	1 Month	0.35
Dr. R. Ilango	Mr. M. Senthilkumar	EEE	Electrical Energy Audit using Power Quality Analyzer	Kalai B.M.H. Systems (P) Ltd, Thirubuvanam, Kumbakonam. Tamil Nadu.	1 Month	0.20
Dr. S. Titus	Mr. G. Gabriel Santhosh Kumar	EEE	Weather Monitoring System	KR Green Energy	1 Year	1.76
						Amount received (Rs.):3.52

(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. Ilango	Mr. M. Senthilkumar	EEE	Electrical Motor Performance Audit	Lakshmi Villas Rice Mill Rajampalayam Mannachanallur, Trichy.	2 Months	0.25
Dr. S. Titus	Dr. R. Manivasagam	EEE	Welding Electrode Wastage Reduction	Thirumala Electrodes Co., Thuvakudi, Trichy.	6 Months	0.70
Dr. S. Titus	Mr. G. Gabriel Santhosh Kumar	EEE	Weather Monitoring System	RAMC Solar Powerplant	1 Year	1.32
Dr. R. Ilango	Dr. R. Manivasagam	EEE	Impact of Grid Power Quality Issues	RAMC Solar Powerplant	6 Months	0.98
						Amount received (Rs.):3.25

(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. R. Ilango	Mr. M. Senthilkumar	EEE	Electrical Audit (Power Factor issue)	Sangam Silks, Poovalur Road, Lalgudi, Trichy.	1 Month	0.10
Dr. R. Ilango	Mr. M. Senthilkumar	EEE	Energy Audit	Thirumala Electrodes Co., Thuvakudi, Trichy.	1 Month	0.10
Dr. S. Titus	Mr. G. Gabriel Santhosh Kumar	EEE	Weather monitoring System	RAMC solar powerplant	1 Year	1.57
						Amount received (Rs.):1.77

Total amount (Lacs) received for the past 3 years: 8.54

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.. V. Ashok kumar	PSO-ANFIS-Based Energy Management in Hybrid AC/DC Microgrid along with Plugin Electric Vehicle	6 Months	0.08	0.08	Journal paper published
Mr. A.Subramaniya siva	Comparative harmonic elimination techniques for supraharmonic reduction in microgrid	6 Months	0.15	0.15	Paper Published in Q3 journal
Dr. K. Dhayalini	Hybrid Optimized Control of Bidirectional Off-Board EV Charger	6 Months	0.28	0.28	Journal Paper published
Dr.S.Titus	Compact Novel Circular Shaped Fractal Quad-Port Mimo Antenna Loaded	6 Months	0.10	0.10	Journal paper published
Dr.S.Titus	IoT Based Fault Detection System of Battery for Electric Vehicle	6 Months	0.15	0.15	Project Paper Published
			Amount received (Rs.): 0.76		

(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. R. ILANGO	Design of 15 level multilevel inverter for grid connected PV systems using Hybrid ZOA -SNN technique	12 Months	0.08	0.08	Published a paper in IETE Journal
Dr. S. TITUS	Design of Multiband Diamond Fern Fractal Microstrip Patch Antenna for Vehicular Application Systems	6 Months	0.10	0.10	Journal paper published
Dr.. V. ASHOK KUMAR	PSO-ANFIS-Based Energy Management in Hybrid AC/DC Microgrid	6 Months	0.10	0.10	Research Paper Published
Mr. G. GABRIEL SANTHOSH KUMAR	Hybrid Artificial Rabbit Optimization and Perturb & Observe MPPT	6 Months	0.19	0.19	Research Paper Published
Dr. K. DHAYALINI	Design and Development of La_2O_3/Nd_2O_3-Doped SnO_2 Nanomaterials	6 Months	0.22	0.22	Research Paper Published
Dr. R. MANIVASAGAM	Hybrid wind-PV farm with STATCOM for damping & control of overall chaotic oscillations in two-area	6 Months	0.31	0.31	Research Paper Published
Dr. K. DHAYALINI	Performance Development of Electric Bike	6 Months	0.15	0.15	Research Paper Published
			Amount received (Rs.): 1.15		

(CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr. K. DHAYALINI	Development of SnO_2-Noble Metal Composites for Enhanced Energy Generation and Storage Applications	12 Months	0.81	0.81	Journal paper published
Mr. A. PRABHU	Eye Movement Signal Classification for Developing Human Computer Interface using Electrooculogram	6 Months	0.11	0.11	Published the project into journals
Dr. S. TITUS	IoT-based monitoring of smart grid using high-gain converter	6 Months	0.18	0.18	Research Paper Published
Dr.. V. ASHOK KUMAR	Optimal confidential mechanisms in smart city healthcare	6 Months	0.12	0.12	Research Paper Published
Mrs. A. DURGADEVI	Classification of electroencephalogram signal for developing brain-co,puter interfac	6 Months	0.14	0.14	Research Paper Published
Mr. G. GABRIEL SANTHOSH KUMAR	Aquatic Emission and Properties Analysis for Wind Turbine Blades	6 Months	0.14	0.14	Research Paper Published
Dr. R. ILANGO	Charging demand based on the interaction among electric vehicles and renewable energy sources	12 Months	0.58	0.58	Research Paper Published
Dr. S. TITUS	Developed H Bridge Cascaded Multi level Inverter	6 Months	0.15	0.15	Research Paper Published
			Amount received (Rs.): 2.23		

Total amount (Lacs) received for the past 3 years : 4.14

PART D: Laboratory Infrastructure in the Department

(Data to be filled in for the Department)

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

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

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Electrical Machines Laboratory	30	Laboratory Rectifier (100A), AC Distribution Panel, DC Distribution Panel, Auto synchronous motor	22 Hours	Mr.P.Vigneshw	Laboratory Tec	D.E.E.E
2	Control & Instrumentation Laboratory	30	DC Servo Motor Trainer Kit, DC & AC Position Control System, AC Synchro Transmitter & Receiver, 60	14 hours	Mr.R.Venkates	Laboratory Tec	D.E.E.E
3	Power Electronics & Drives Laboratory	30	Characteristics of GTO,IGCT, Characteristics of PMBLDC Motor, Illumination control of lamp, Speed	14 hours	Ms.D.Vaishnav	Laboratory Tec	M.E
4	Electronics Laboratory	30	Digital Storage Oscilloscope (100MHZ), Regulated 3 phase Output Power Supply (0-15V),	08 hours	Ms.D.Vaishnav	Laboratory Tec	M.E
5	Engineering Practices Laboratory	30	Single Phase Autotransformer, Single phase Loading Capacitor (10A), Single phase Loading	10 hours	Ms.D.Vaishnav	Laboratory Tec	M.E
6	Linear & Digital Integrated Circuits Laboratory	30	IC Tester (Digital), Digital Trainer Kit, Digital Storage Oscilloscope(50Hz), Function	10 hours	Mrs.T.Antoban	Laboratory Tec	D.E.E.E
7	Electric Circuits Laboratory	30	Function generator (ST-4060-1MHZ), Function Generator SFG 1013, Digital Storage Oscilloscope	08 hours	Mrs.T.Antoban	Laboratory Tec	D.E.E.E
8	Power System Simulation Laboratory	30	ETAP 7.5.2, Matlab R2015a, Desktop Dell Vostro 3669, Intel Core I5, 7th Gen Processor 4 GB RAM	30 hours	Mrs.T.Antoban	Laboratory Tec	D.E.E.E
9	Renewable Energy Systems Laboratory	30	Solar PV Module Training Kit, Fuel Cell Module Trainer Kit, Hybrid Wind Solar Study Module, 24W Wind	8 Hours	Mr.R.Venkates	Laboratory Tec	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	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. Students are asked to remove ID cards and place it in separate place while conducting experiments 3.Students are advised to wear high insulating leather shoes in order to protect them from experiencing heavy electrical shocks. Earthlings are checked annually for proper electrical conductivity. 4.Separate storage spaces are provided for consumables placing Extension cords shall not be used as a substitute for permanent wiring. 5.Girl Students are supposed to wear Lab Apron. Boys students are asked to tuck-in their shirts while entering the laboratory. 6.Students are advised to remove any conducting materials like Gold rings, bracelets etc., to prevent experiencing electrical shock. 7.Separate MCB's based on ratings are placed in the work tables to prevent students from electrocution. 8.Students are instructed not to turn on MCB's without getting permission from lab-in charge/Lab technician.
2	Control & Instrumentation Laboratory	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. Students are asked to remove ID cards and place it in separate place while conducting experiments 3.Students are advised to wear high insulating leather shoes in order to protect them from experiencing heavy electrical shocks. 4.Earthlings are checked annually for proper electrical conductivity. 5.Separate storage spaces are provided for consumables placing Extension cords shall not be used as a substitute for permanent wiring. 6.Girl Students are supposed to wear Lab Apron. 7.Boys students are asked to tuck-in their shirts while entering the laboratory. 8.Students are advised to remove any conducting materials like Gold rings, bracelets etc., to prevent experiencing electrical shock. 9.Separate MCB's based on ratings are placed in the work tables to prevent students from electrocution. 10.Students are instructed not to turn on MCB's without getting permission from lab-in charge/Lab technician.
3	Power Electronics & Drives/ Electronics Laboratory	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. Students are asked to remove ID cards and place it in separate place while conducting experiments 3.Students are advised to wear high insulating leather shoes in order to protect them from experiencing heavy electrical shocks. 4.Earthlings are checked annually for proper electrical conductivity. 5.Separate storage spaces are provided for consumables placing Extension cords shall not be used as a substitute for permanent wiring. 6.Girl Students are supposed to wear Lab Apron. 7.Boys students are asked to tuck-in their shirts while entering the laboratory 8.Students are advised to remove any conducting materials like Gold rings, bracelets etc., to prevent experiencing electrical shock. 9.Separate MCB's based on ratings are placed in the work tables to prevent students from electrocution. 10.Students are instructed not to turn on MCB's without getting permission from lab-in charge/Lab technician.
4	Engineering Practices Laboratory	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. 3.Students are asked to remove ID cards and place it in separate place while conducting experiments 4.Students are advised to wear high insulating leather shoes in order to protect them from experiencing heavy electrical shocks. 5.Earthlings are checked annually for proper electrical conductivity. 6.Separate storage spaces are provided for consumables placing 7.Extension cords shall not be used as a substitute for permanent wiring. 8.Girl Students are supposed to wear Lab Apron. 9.Boys students are asked to tuck-in their shirts while entering the laboratory. 10.Students are advised to remove any conducting materials like Gold rings, bracelets etc., to prevent experiencing electrical shock. 11.Separate MCB's based on ratings are placed in the work tables to prevent students from electrocution. 12.Students are instructed not to turn on MCB's without getting permission from lab-in charge/Lab technician.

5	Linear & Digital Integrated Circuits / Electric Circuits Laboratory	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. 3.Students are asked to remove ID cards and place it in separate place while conducting experiments 4.Students are advised to wear high insulating leather shoes in order to protect them from experiencing heavy electrical shocks. 5.Earthlings are checked annually for proper electrical conductivity. 6.Separate storage spaces are provided for consumables placing 7.Extension cords shall not be used as a substitute for permanent wiring. 8.Girl Students are supposed to wear Lab Apron. 9.Boys students are asked to tuck-in their shirts while entering the laboratory. 10.Students are advised to remove any conducting materials like Gold rings, bracelets etc., to prevent experiencing electrical shock. 11.Separate MCB's based on ratings are placed in the work tables to prevent students from electrocution. 12.Students are instructed not to turn on MCB's without getting permission from lab-in charge/Lab technician.
6	Power System Simulation Laboratory	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. 3.Permission denied for pen drives. 4.First aid box and fire extinguishers are kept in the laboratory. 5.Earthlings are checked annually for proper electrical conductivity. 6.Separate power sockets are assigned for all PC systems. 7.UPS back-up of 12V/65Ah Quanta VRLA/SMF Battery specification is provided in PC systems laboratory exclusively.
7	Research and Development laboratory	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. 3.Students are asked to remove ID cards and place it in separate place while conducting experiments 4.Students are advised to wear high insulating leather shoes in order to protect them from experiencing heavy electrical shocks. 5.Earthlings are checked annually for proper electrical conductivity. 6.Separate storage spaces are provided for consumables placing 7.Extension cords shall not be used as a substitute for permanent wiring. 8.Girl Students are supposed to wear Lab Apron. 9.Boys students are asked to tuck-in their shirts while entering the laboratory. 10.Students are advised to remove any conducting materials like Gold rings, bracelets etc., to prevent experiencing electrical shock. 11.Separate MCB's based on ratings are placed in the work tables to prevent students from electrocution. 12.Students are instructed not to turn on MCB's without getting permission from lab-in charge/Lab technician.
8	Renewable Energy Systems laboratory	1.Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students 2.First aid box and fire extinguishers are kept in the laboratory. 3.Students are asked to remove ID cards and place it in separate place while conducting experiments 4.Students are advised to wear high insulating leather shoes in order to protect them from experiencing heavy electrical shocks. 5.For Solar PV integrated experiments students should take the readings in a careful manner. 6.Earthlings are checked annually for proper electrical conductivity. 7.Separate storage spaces are provided for consumables placing 8.Extension cords shall not be used as a substitute for permanent wiring. 9.Girl Students are supposed to wear Lab Apron. 10.Boys students are asked to tuck-in their shirts while entering the laboratory. 11.Students are advised to remove any conducting materials like Gold rings, bracelets etc., to prevent experiencing electrical shock. 12.Separate MCB's based on ratings are placed in the work tables to prevent students from electrocution. 13.Students are instructed not to turn on MCB's without getting permission from lab-in charge/Lab technician.

D3. Project Laboratory/Research Laboratory

7.5 (A) Project Laboratory:

Project Laboratory is a practical learning space where students apply theoretical knowledge to real-world problems through hands-on projects. It encourages innovation, critical thinking, and teamwork. Students design, build, and test their own ideas using tools, equipment, and software relevant to their field. Based on their area of specialization, students are allocated laboratories where they conduct their projects. The following department laboratories are well-equipped to support research projects at the B.Tech, M.Tech, and Ph.D. levels.

Sl. No.	Laboratory	Utilization	Laboratory Incharge	Technical Staff
PROJECT LABORATORIES				
1	**Electrical Machines Laboratory**	Hardware	Dr.R.Manivasagam	Mr.P.Vigneshwaran
2	**Control and Instrumentation Laboratory**	Hardware & Software	Mr.U.Ramani	Mr.R.Venkatesan
3	**Power Electronics and Drives Laboratory**	Hardware & Software	Mr.S.P.Richard	Ms.D.Vaishnavi
4	**Power System Simulation Laboratory**	Hardware & Software	Dr.R.Arulraj	Mrs.T.Antobani
5	**Renewable Energy Systems Laboratory**	Hardware & Software	Dr.S.Titus	Mr.R.Venkatesan

The **above-mentioned** labs are fully utilized by our students for doing their projects. The sample projects done in our project lab for the past three years are listed below

2022-2023			
S.NO	**NAME OF THE STUDENTS**	**PROJECT TITLE**	**LAB UTILIZATION**
1	GOKULRAJA K M IRFAN BASHA S KENNEDY INFANT S SELVA KUMAR H	Performance Development On E-Bike	1) Renewable Energy Systems Lab 2) Power System Simulation Laboratory
2	ABINAYA R S AGALYA V NELSHINI P PRIYADHARSHINI M	Design And Development of Combined Battery Charging and Swapping Infrastructure for Future EV's Enabled with G2V & V2G Operation	1) Power System Simulation Laboratory 2) Power Electronics & Drives Laboratory
3	KAVIYA R RETHIKA W SARASWATHI M SOWMIYA K	Analysis Of Electrodes Using Nickel Zinc Alloy Battery with Auto Cut Off Charger	1) Control & Instrumentation Laboratory 2) Power System Simulation Laboratory

2023-2024			
S.NO	**NAME OF THE STUDENTS**	**PROJECT TITLE**	**LAB UTILIZATION**
1	CLIVE NELSON C	Synthesis, Characterization and Electrode Preparation of ZnS Nanoparticles	1) Electrical Machines lab 2) Power System Simulation Laboratory
	GUNASINGRAJ J		
	HARIHARAN P		
	MOHANRAJ S		
2	BALAMURUGAN P	Pendulum-Driven Rotor Systems for Wind Energy Conversion and Electricity Generation	1) Power System Simulation Laboratory 2) Research & Development Laboratory
	KARTHICK S		
	SUSWIN GANESH R		
	VAIRAVAN N		
3	ADITHYA R	IOT-Based Weighing and Counting Machine for Commercial Applications	1) Power System Simulation Laboratory 2) Research & Development Laboratory
	PRAGADESHWARAN G		
	RANJITH G		
	RAJAGOPALAN. S		

2024-2025			
S.NO	**NAME OF THE STUDENTS**	**PROJECT TITLE**	**LAB UTILIZATION**
1	YOVEL S	Automated 3-Axis Precision Handwriting Robot	1) Power System Simulation Laboratory 2) Control & Instrumentation Laboratory
	BIMAL P		
	HARISH S		
	ABINESH ROHAN K S		
2	DHIVAKAR S	An Autonomous Vessel for Marine Laundering with Camera Based Navigation	1) Power System Simulation Laboratory 2) Power Electronics & Drives Laboratory
	MANIKKA DEEPAN		
	NAVANEETHRAJ S		
	SARAN A		
3	GOKULRAJ	Fast EV Charging Using Quadratic Converter	1) Renewable Energy Systems Lab 2) Power Electronics & Drives Laboratory
	MOHMAD MUHYMIN KADIR R		
	PRAVEEN S		
	RAJESH		

7.5 (B) Research Laboratory:

Research laboratory is established in our department for conducting various scientific research and experiments, aiming for new discoveries and advancements in a specific field. By the utilization of research laboratories, students and researchers are able to improve their research skills.

Research Laboratory – I:

Total Cost of the Lab.: Rs. 10,12950/-

Area of the Lab : Rs. 96.75 Sq.m

Major Equipment's:

1. Power Quality & Motor Analyser-Fluke-438
2. AC Drives Training Kit G120 With Sinamics 3 Phase IM (Siemens)
3. DC Drives Training Kit Sinamics DC Master 6RA80 (Siemens)

Fig 7.3 Research Laboratory – I

Research Laboratory – II:

Total Cost of the Lab.: Rs. 23,87,499.84/-

Area of the Lab : Rs. 64.154 Sq. m

Major Equipment's:

1. Computer (Lenovo – M72E Desktop) – 20 No's
2. Computer (HP – 208G1) – 05 No's
3. ESS – NI – LVHWB – Lab VIEW – NI MyDAQ Add-on Kit – 10 No's
4. ESS – NI – LVHWB – Lab VIEW – NI FPGA based Test System – 10 Units

Software's:

1. Lab VIEW – 25 users
2. Advanced Design System (ADS) – 5 User's

Fig 7.4 Research Laboratory – II

7.5 (C) Centre of Excellence:

The Centre of Excellence (CoE) in Internet of Things (IoT) serves as a hub for advanced research, innovation, and skill development in IoT technologies. It provides state-of-the-art infrastructure including sensors, microcontrollers, communication modules, and cloud platforms. The CoE facilitates interdisciplinary projects in smart agriculture, water management, health monitoring, and automation. Students are encouraged to undertake real-time

industry-driven projects, certifications.

Internet of Things Laboratory:

Total Cost of the Lab.: Rs. 55,400/-

Area of the Lab : Rs. 96.75 Sq.m

Major Equipment's:

1. Fundamental Kit (ESP8266, Basic sensors etc.,) – 20No's
2. Advanced Controllers (ESP32, ESPcam, Arduino Uno r4 Wifi, Rasbery pi 3) – Each 4 No's
3. Additional Sensor Kit (Ultrasonic Sensor, DHT22 etc.,) - Each 4 No's
4. Additional Actuator Kit (Ultrasonic Sensor, DHT22 etc.,) - Each 4 No's

Fig 7.5 Internet of Things Lab

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)	660	33	33	18	91
2023-24(CAYm1)	660	33	32	24	92
2024-25(CAY)	720	36	34	24	89

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

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

Items	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Infrastructure Built-Up	78.75	66.98	80.00	75.26	35.20	33.87	61.51	58.59
Library	23.89	23.02	21.50	20.50	29.15	27.73	6.29	5.99

Laboratory equipment	75.46	71.87	150.00	142.81	221.60	211.05	39.50	37.23
Teaching and non-teaching staff salary	1138.66	1110.01	1129.30	1075.53	960.00	915.11	706.00	672.35
Outreach Programs	0.78	0.75	0.60	0.47	0.54	0.44	0.53	0.42
R&D	10.86	10.35	59.57	56.74	16.60	15.82	8.80	8.46
Training, Placement and Industry	205.28	195.51	126.56	120.54	175.00	168.08	77.50	73.23
SDGs	4.30	3.44	2.60	2.47	5.25	4.46	2.70	2.50
Entrepreneurship	0.70	0.64	0.50	0.38	0.50	0.45	0.70	0.37
Others, specify	978.45	931.86	754.10	721.19	904.10	882.69	580.00	552.44
Total	**2517.13**	**2414.43**	**2324.73**	**2215.89**	**2347.94**	**2259.70**	**1483.53**	**1411.58**

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

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

Items	**Budgeted in 2024-25**	**Actual Expenses in 2024-25 till**	**Budgeted in 2023-24**	**Actual Expenses in 2023-24 till**	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**
Laboratory equipment	24000	19950	600000	506238	60000	51275	5000	3500
Software	350000	291831.7	200000	160241.6	50000	29553.7	70000	45546.6
SDGs	90000	71300	10000	5456	45000	36570	15000	9830
Support for faculty development	60000	50000	60000	52541	30000	26700	15000	14000
R & D	220000	198000	120000	106600	120000	109400	270000	252600
Industrial Training, Industry expert,	10000	8000	10000	7500	10000	8500	10000	7000
Miscellaneous Expenses*	20000	16100	15000	7850	20000	11250	10000	3988
Total	**774000**	**655181.7**	**1015000**	**846426.6**	**335000**	**273248.7**	**395000**	**336464.6**