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: 11321	**Date of Submission**: 23-12-2025

PART A- Profile of the Institute

A1.Name of the Institute: SAGI RAMAKRISHNAM RAJU ENGINEERING COLLEGE,BHIMAVARAM,ANDHRA PRADESH	
Year of Establishment : 1980,1992	Location of the Institute: SRKR Marg China Amiram
A2. Institute Address:BHIMAVARAM,ANDHRA PRADESH	
City:--Select--	State:Andhra Pradesh
Pin Code:534204	Website:www.srkrec.ac.in
Email:PRINCIPAL@SRKREC.AC.IN	Phone No(with STD Code):08816-223332
A3. Name and Address of the Affiliating University (if any):	
Name of the University : Jawaharlal Nehru Technological University, Kakinad	City: east Godavari
State : Andhra Pradesh	Pin Code: 533003
A4. Type of the Institution: Autonomous CAY(2016-17)	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **12**
- No. of PG programs: **6**

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

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Artificial Intelligence and Data Science	2020	--	Information Technology
2	Engineering & Technology	UG	Artificial Intelligence and Machine Learning	2021	--	Computer Science and Engineering
3	Engineering & Technology	PG	CAD/CAM	2003	--	Mechanical Engineering
4	Engineering & Technology	UG	Civil Engineering	1980	--	Civil Engineering
5	Engineering & Technology	PG	Communication Systems	2006	--	Electronics and Communication Engineering
6	Engineering & Technology	UG	Computer Science & Information Technology	2023	--	Information Technology
7	Engineering & Technology	PG	Computer Science & Technology	2006	--	Computer Science and Engineering
8	Engineering & Technology	UG	Computer Science and Business System	2020	--	Information Technology

9	Engineering & Technology	UG	Computer Science and Design	2021	--	Computer Science and Engineering
10	Engineering & Technology	UG	Computer Science and Engineering	1991	--	Computer Science and Engineering
11	Engineering & Technology	UG	Computer Science and Engineering (Internet of Things and Cyber Security including Blockchain Technology)	2022	--	Computer Science and Engineering
12	Engineering & Technology	UG	Electrical & Electronics Engineering	1994	--	Electrical and Electronics Engineering
13	Engineering & Technology	UG	Electronics & Communication Engineering	1980	--	Electronics and Communication Engineering
14	Engineering & Technology	UG	Information Technology	1999	--	Information Technology
15	Engineering & Technology	PG	Information Technology	2006	--	Information Technology
16	Engineering & Technology	UG	Mechanical Engineering	1980	--	Mechanical Engineering
17	Engineering & Technology	PG	Power Systems & Automation Engineering	2010	--	Electrical and Electronics Engineering
18	Engineering & Technology	PG	Structural Engineering	2009	--	Civil 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
Electrical and Electronics Engineering	No	Electrical & Electronics Engineering	UG
Mechanical Engineering	No	Mechanical Engineering	UG
Civil Engineering	No	Civil Engineering	UG
Electronics and Communication Engineering	No	Electronics & Communication 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 ACCREDITE
1	Electrical & Electronics Engineering	UG	1994 / --	180	Yes	2022	120	2022	South-Central/1-10981175801/2022/EOA	Granted accreditation for 3 years for the period (specify period)	2023	2026	4

Sanctioned Intake for Last Five Years for the Power Systems & Automation Engineering	
Academic Year	**Sanctioned Intake**
2025-26	120
2024-25	120
2023-24	120
2022-23	120
2021-22	180
2020-21	180

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 :	Bhupatiraju R K Varma
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)	120	120	120	120	180	180	240
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	118	119	118	113	139	161	215
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	12	12	12	18	18	24
N3=Separate division if any	0	0	2	7	38	19	17
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	12	12	12	11	18	12	11

Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	130	143	144	143	213	210	267

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)	120	118	12	108.33
2024-25 (CAYm1)	120	119	12	109.17
2023-24 (CAYm2)	120	118	12	108.33

Average [(ER1 + ER2 + ER3) / 3] = 108.61≡ 100

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).	213.00	210.00	267.00
B=No. of students who graduated from the program in the stipulated course duration	199.00	208.00	262.00
Success Rate (SR)= (B/A) * 100	93.43	99.05	98.13

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 96.87

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(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
Mean of CGPA or mean percentage of all successful students(X)	8.04	7.84	7.97
Y=Total no. of successful students	70.00	57.00	68.00
Z=Total no. of students appeared in the examination	130.00	127.00	121.00
API [X*(Y/Z)]	4.33	3.52	4.48

Average API[(AP1+AP2+AP3)/3] : 4.11

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)	7.91	8.01	8.19
Y=Total no. of successful students	141.00	140.00	211.00
Z=Total no. of students appeared in the examination	141.00	136.00	174.00
API [X * (Y/Z)]	7.91	8.25	9.93

Average API [(AP1 + AP2 + AP3)/3] : 8.70

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)	8.09	7.97	7.97
Y=Total no. of successful students	140.00	204.00	210.00
Z=Total no. of students appeared in the examination	140.00	211.00	210.00
API [X*(Y/Z)]:	8.09	7.71	7.97

Average API [(AP1 + AP2 + AP3)/3] : 7.92

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	204.00	210.00	265.00
X=No. of students placed	131.00	138.00	171.00
Y=No. of students admitted to higher studies	6.00	11.00	20.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	67.16	70.95	72.08

Average Placement Index = (P_1 + P_2 + P_3)/3: 70.06 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	Bhupatiraju R K Varma	XXXXXXX18H	M.E. and Ph.D.	NIT Warangal	Power Systems	01/10/1992	33.2	Lecturer	Professor	01/12/2006	Regular	Yes		Yes
2	Nakka Srinivasu	XXXXXXX33J	M.E.	Andhra University	Power Systems and Automation	09/09/1996	29.3	Lecturer	Professor	01/12/2006	Regular	Yes		No
3	Mortha Saiveerraju	XXXXXXX24B	M.E. and Ph.D.	JNTU Hyderabad	High Voltage Engineering	23/06/2003	22.5	Assistant Professor	Professor	19/05/2011	Regular	Yes		No
4	P Kanta Rao	XXXXXXX57F	M.Tech and Ph.D.	Andhra University	Power Systems	18/07/2015	10.5	Professor	Professor	18/07/2015	Regular	Yes		No

5	Gangavath Veeranna	XXXXXXX95F	M.Tech and Ph.D.	JNTU Kakinada	Power Electronics	16/08/2005	20.4	Assistant Professor	Associate Professor	13/09/2024	Regular	Yes		No
6	Gadiraju Harish Kumar Varma	XXXXXXX00K	M.Tech and Ph.D.	NIT Goa	Power Electronics	15/07/2015	10.5	Assistant Professor	Associate Professor	13/09/2024	Regular	Yes		No
7	Pavan Kumar Gorle	XXXXXXX61E	M.Tech and Ph.D.	Andhra University	Control Systems	14/07/2005	20.5	Assistant Professor	Associate Professor	18/12/2024	Regular	Yes		No
8	Md.Azahar Ahmed	XXXXXXX59F	M.E. and Ph.D.	Anna University	Power Systems and Automation	15/07/2015	10.5	Assistant Professor	Associate Professor	01/04/2025	Regular	Yes		No
9	Kusuma Gottapu	XXXXXXX77J	M.E. and Ph.D.	Andhra University	Renewable Energy Sources & Control Systems	15/11/2019	6.1	Assistant Professor	Associate Professor	01/04/2025	Regular	Yes		No
10	Syamnaresh Garlapati	XXXXXXX15P	M.Tech and Ph.D.	University of Padova	Power Electronics & Drives	16/11/2019	6.1	Assistant Professor	Associate Professor	09/05/2025	Regular	Yes		No
11	Murali Chekuri	XXXXXXX45L	M.Tech and Ph.D.	JNTU Kakinada	Power Electronics	17/06/2005	20.6	Assistant Professor	Assistant Professor		Regular	Yes		No
12	K Kiran Kumar	XXXXXXX62L	M.Tech	JNTU Kakinada	Power System Control and Automation	16/08/2005	20.4	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Swetha Kannepally	XXXXXXX04G	M.Tech and Ph.D.	JNTU Kakinada	Power Systems Emphasis with High Voltage Engineering	18/06/2007	18.6	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Satya S Prasad Raju K	XXXXXXX71H	M.Tech and Ph.D.	Andhra University	Power Electronics	06/08/2008	17.4	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Swetha Monica Indukuri	XXXXXXX46P	M.E. and Ph.D.	Nirwana University	Power Systems and Automation	02/11/2009	16.1	Assistant Professor	Assistant Professor		Regular	Yes		No
16	Kumarraja Andanapalli	XXXXXXX77K	M.E. and Ph.D.	NIT Raipur	Power System Protection	01/11/2011	14.1	Assistant Professor	Assistant Professor		Regular	Yes		No
17	Srinivas Vudumudi	XXXXXXX14H	M.E.	Andhra University	Power Systems and Automation	01/10/2012	13.2	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Bhanu Chandar Yenugu	XXXXXXX57A	M.E.	Andhra University	Power Systems and Automation	01/10/2012	13.2	Assistant Professor	Assistant Professor		Regular	Yes		No
19	S K Nazeer	XXXXXXX45C	M.E.	Andhra University	Power Systems and Automation	01/10/2012	13.2	Assistant Professor	Assistant Professor		Regular	Yes		No

20	Nallam Vani Annapurna Bhavani	XXXXXXX36R	M.Tech and Ph.D.	Nirwana University	Power Electronics	01/10/2012	13.2	Assistant Professor	Assistant Professor		Regular	Yes		No
21	Venkata Krishna Bokka	XXXXXXX02B	M.Tech	JNTU Kakinada	High Voltage Engineering	01/10/2013	12.2	Assistant Professor	Assistant Professor		Regular	Yes		No
22	Dadinaboina A K Rao	XXXXXXX49G	M.E. and Ph.D.	Annamalai University	Power Systems and Automation	04/12/2013	12	Assistant Professor	Assistant Professor		Regular	Yes		No
23	Senige Rajasekhar Reddy	XXXXXXX73A	M.E.	Andhra University	Power Systems and Automation	04/12/2013	12	Assistant Professor	Assistant Professor		Regular	Yes		No
24	Bandaru Satya Sai Santosh	XXXXXXX34G	M.E. and Ph.D.	Annamalai University	Power Systems and Automation	01/09/2014	11.3	Assistant Professor	Assistant Professor		Regular	Yes		No
25	Pothula Jagadeesh	XXXXXXX07A	M.Tech and Ph.D.	Annamalai University	Power Systems and Automation	20/08/2015	10.3	Assistant Professor	Assistant Professor		Regular	Yes		No
26	Chinta Durga Prasad	XXXXXXX01K	M.Tech and Ph.D.	NIT Raipur	Power Systems and Automation	11/01/2016	9.11	Assistant Professor	Assistant Professor		Regular	Yes		No
27	E C Vidyasagar Mudunuri	XXXXXXX25F	M.Tech	JNTU Kakinada	Power Systems	07/07/2016	9.5	Assistant Professor	Assistant Professor		Regular	Yes		No
28	Pasam Sailesh Babu	XXXXXXX90J	M.Tech	JNTU Kakinada	Power Systems	11/07/2016	9.5	Assistant Professor	Assistant Professor		Regular	Yes		No
29	Suresh Etukuri	XXXXXXX20L	M.E.	Andhra University	Power Systems and Automation	13/07/2016	9.5	Assistant Professor	Assistant Professor		Regular	Yes		No
30	Bhupathi Raju Sudha Rani	XXXXXXX04M	M.Tech	JNTU Kakinada	Power Electronics	01/08/2016	9.4	Assistant Professor	Assistant Professor		Regular	Yes		No
31	Alluri Hemanth Kumar Raju	XXXXXXX52L	M.Tech	JNTU Kakinada	Power Electronics	10/12/2016	9	Assistant Professor	Assistant Professor		Regular	Yes		No
32	Kurella Pavan Kumar	XXXXXXX19H	M.E.	Andhra University	Control Systems	15/06/2020	5.5	Assistant Professor	Assistant Professor		Regular	Yes		No
33	S P R Swamy Polisetty	XXXXXXX06C	M.E.	Andhra University	Power Systems and Automation	08/06/2017	8.6	Assistant Professor	Assistant Professor		Regular	Yes		No
34	Duddu Rajesh	XXXXXXX05G	M.Tech	Andhra University	Power Systems and Automation	24/10/2019	6.1	Assistant Professor	Assistant Professor		Regular	Yes		No
35	Areti Mounika Siva Venkata Sushma	XXXXXXX43B	M.Tech	JNTU Kakinada	Power Systems and Automation	24/10/2019	6.1	Assistant Professor	Assistant Professor		Regular	Yes		No
36	V V S Narayana Yirrinki	XXXXXXX17B	M.Tech	JNTU Kakinada	Power Systems and Automation	24/10/2019	6.1	Assistant Professor	Assistant Professor		Regular	Yes		No

37	Udayabhanu Pilli	XXXXXXX04H	M.Tech	Andhra University	Power Systems and Automation	24/10/2019	6.1	Assistant Professor	Assistant Professor		Regular	Yes		No
38	Isukapalli Kranthikumar	XXXXXXX24M	M.Tech	Andhra University	Power Systems and Automation	01/11/2019	6.1	Assistant Professor	Assistant Professor		Regular	Yes		No
39	Bireddi Eswararao	XXXXXXX49G	M.Tech	JNTU Kakinada	Power Systems and Automation	22/11/2019	6	Assistant Professor	Assistant Professor		Regular	Yes		No
40	S S L Bharani Josyula	XXXXXXX11M	M.Tech	JNTU Kakinada	Power Systems and Automation	01/02/2023	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No
41	Siva Rama Krishna Madeti	XXXXXXX76Q	M.Tech and Ph.D.	IIT Roorkee	Renewable Energy Systems	03/01/2022	1.11	Associate Professor	Associate Professor		Regular	No	18/12/2023	No
42	Muzeeb Khan Patan	XXXXXXX34M	M.Tech and Ph.D.	Annamalai University	Power Electronics	02/07/2015	8.8	Assistant Professor	Assistant Professor		Regular	No	29/02/2024	No
43	Katari Deepthi	XXXXXXX65J	M.Tech	JNTU Kakinada	Power Systems and Automation	24/10/2019	4.2	Assistant Professor	Assistant Professor		Regular	No	11/01/2024	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	132	132	132
UG1.C	132	132	198
UG1.D	132	198	198
UG1: Electrical & Electronics Engineering	**396**	**462**	**528**
PG1.A	6	6	6
PG1.B	6	6	6

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
PG1: Power Systems & Automation Engineering	**12**	**12**	**12**
DS=Total no. of students in all UG and PG programs in the Department	408	474	540
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=** 408	**S2=** 474	**S3=** 540
DF=Total no. of faculty members in the Department	40	40	40
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=** 40	**F2=** 40	**F3=** 40
FF=The faculty members in F who have a 100% teaching load in the first-year courses	7	7	7
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 12.36**	**SFR2= 14.36**	**SFR3= 16.36**
Average SFR for 3 years	**SFR= 14.36**		

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)	19	21	20.00	34.25
2024-25(CAYm1)	13	27	23.00	25.87
2023-24(CAYm2)	10	30	27.00	20.37

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	2.00	3.00	4.00	6.00	13.00	31.00
2024-25	2.00	3.00	5.00	0.00	15.00	37.00
2023-24	3.00	3.00	6.00	0.00	18.00	37.00
Average	RF1=2.33	AF1=3.00	RF2=5.00	AF2=2.00	RF2=15.33	AF2=35.00

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)

(CAYm2)

(CAYm3)

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	20	19	14
2	No. of peer reviewed conference papers published	20	6	5
3	No. of books/book chapters published	2	0	2

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
G Harish Kumar Varma	Vamsinagaraju, Bhadri Raju, Rambabu, Chalapathi Raju	SRKREC	Science Technology and Innovation Driven Inland Aquaculture Hub for Bhimavaram Suburbs	DST SEED Division	3 Years	96.01
						Amount received (Rs.):96.01

(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
Kurella Pavan Kumar	Gandham venkata sri	SRKREC	Cyber Physical solution for battery swapping station	MSME(MSME INNOVATION SCHEME under IDEATHON-3.0 WOMEN)	1 Year	10.70
Kurella Pavan Kumar	Adimulam Deepa Prabha	SRKREC	Grid Interactive Bi-Directional Charger	MSME(MSME INNOVATION SCHEME under IDEATHON-3.0 WOMEN)	1 Year	9.50
						Amount received (Rs.):20.20

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 116.21

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)

(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
M. Eswar Chandra Vidya Sagar	-	Ministry of Skill Development and Entrepreneurship (MSDE)	Solar PV Installer (Suryamitra)	Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	11-7-2023 to 19-9-2023 & 26-2-2024 to 10- 5-2024	5.54
G. Harish Kumar Varma	-	Ministry of Skill Development and Entrepreneurship (MSDE)	Solar PV Installer-Electrical	Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	5-7-2023 to 23-9-2023 & 27-2-2024 to 28-4-2024	5.43
						Amount received (Rs.):10.97

(CAYm3)

Total amount (Lacs) received for the past 3 years: 10.97

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
B.S.S.Santosh	Partial shading detection and reconfiguration of PV Modules using AI for standalone system.	2 Years	1.50	0.00	Literature survey, one B.Tech .project going on
Kurella Pavan Kumar	3D Lidar-Based Vehicle Localization Prediction System for Autonomous Vehicles	1 Year	0.90	0.90	Student Internship and Placements,Course is designed in Curriculum
			Amount received (Rs.): 2.40		

(CAYm2)

(CAYm3)

Total amount (Lacs) received for the past 3 years : 2.40

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	4	Rectifier unit, BLDC motor, DC shunt motor, DC series motor with mechanical load, DC shunt motor	24 Hours/Week	V.Ramu	Junior Foremen	MA, ITI
2	Electrical Machines Laboratory-II	4	3-φ Squirrel cage Induction motor 3-φ Slip ring Induction motor with mechanical load, DC shunt	24 Hours/Week	V.Ramu	Junior Foremen	MA, ITI
3	Basic Electrical Systems Laboratory	4	DC shunt motor, DC series motor with mechanical load, DC shunt motor with mechanical load , DC	36 Hours/Week	G.Madhu Kumar	Junior Technician	ITI, PMKVY Certified Sc
4	Electrical Systems Simulation Laboratory	1	MAT LAB-25 Users ETAP -5 Users PSCAD-25 Users DELL OPTFLEX 3046 MT Desktop, I5-6500	24 Hours/Week	K.V. Satyanarayana Raj	Technician	ITI
5	Smart Systems Laboratory	4	Arduino Uno , Arduino Mega with adapter, 12V DC Motor, Servo Motor, Stepper Motor , , Motor Driver	24 Hours/Week	K.V. Satyanarayana Raj	Technician	ITI
6	Networks Laboratory	4	A Rectifier unit with control Panel, Regulated power supply, Function Generators, Cathode Ray	24 Hours/Week	L. Appa Rao	Junior Foremen	ITI
7	Power Electronics Laboratory	4	SCR, IGBT&MOSFET study kit ,DC Motor speed control using Single phase Full Converter, 1-Phase	24 Hours/Week	I.Lokesh Varma	Junior Technician	ITI, PMKVY Certified Sc
8	Microprocessor and Microcontroller Laboratory	4	INTEL 8085 Microprocessor Trainer Kit, A/D System Designers, Microprocessor Trainer Kits,	24 Hours/Week	I.Lokesh Varma	Junior Technician	ITI, PMKVY Certified Sc
9	Electronics Engineering Workshop	4	Dell OPTIPLEX3090 computers, Digital Storage Oscilloscope 50MHz, , Bread Board Trainer Kits,	36 Hours/Week	K.Durga Prasad	Junior Technician	ITI, PMKVY Certified Sc
10	Solar Energy Systems Laboratory	4	Dell OptiPlex 3020 Computer, Solar radiation measurement kit, Characteristics of PV cell,	24 Hours/Week	K.Durga Prasad	Junior Technician	ITI, PMKVY Certified Sc
11	Control Systems Laboratory	4	Dell optiplex 3060 computers, PID Controller D.C Position Control System Stepper Motor With MP AC	24 Hours/Week	K.Sathi Babu	Technician	ITI
12	Electrical Vehicles Laboratory	4	Single Phase Hall effect Voltage & Current Sensor Card,Bi directional power converter for electric	24 Hours/Week	K.Sathi Babu	Technician	ITI
13	Digital Design Laboratory	4	PHY-450 DIGI LOGIC TRAINER, A/D SYSTEM Designer	12 Hours/Week	K.Sathi Babu	Technician	ITI
14	Tinkering Laboratory	4	ESP32 MODULE with cable ESP32 CAM MODULE LoRa sx1278 MODULE with Antenna, Rheostats,	12 Hours/Week	L. Appa Rao	Junior Foremen	ITI
15	PG Simulation Laboratory	1	MAT LAB-25 Users ETAP -5 Users PSCAD-25 Users Computers	3 Hours/Week	K.V. Satyanarayana Raj	Technician	ITI
16	PERI Laboratory	1	Micro wind Module setup, Maximum Power Point Tracking Controller, Solar IV Curve Tracer, laptop	3 Hours/Week	K.Durga Prasad	Junior Technician	ITI, PMKVY Certified Sc

17	Power Systems Laboratory	1	ThreeWinding Transformer ,Over Curent Relay, Negative Sequence Relay, Over Voltage Relay, Differential Relay, T/P Line Model, Current	3 Hours/Week	V.Ramu	Junior Foremen	MA,ITI

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-I	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Emergency power shutdown facility is provided. • Insulation mats are provided on the ground to prevent shocks. • Students are instructed to wear apron and shoes. • All the panel boards are double earthed. • The earth points are tested once in 3 months and necessary maintenance is done.
2	Electrical Machines Laboratory-II	• First aid kit. • Dry type fire extinguisher. • Students are instructed to wear apron & shoes. • Electrical earthing is well maintained. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Emergency power shutdown facility provided. • Insulation mats are provided on the ground to prevent shocks. • All the panel boards are double earthed. • The earth points are tested once in 3 months and necessary maintenance is done.
3	Networks Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained. • Students are instructed to wear apron & shoes. • Insulation mats are provided on the ground to prevent shocks. • All the panel boards are double earthed. • The earth points are tested once in 3 months and necessary maintenance is done.
4	Power Electronics Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Students are instructed to wear apron & shoes.
5	Control Systems Laboratory	• First aid kit. • Dry type fire extinguisher. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Students are instructed to wear apron & shoes. • Electrical earthing is well maintained.
6	Electrical System Simulation Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained.
7	PERI Laboratory	• First aid kit. • Dry type fire extinguisher. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Electrical earthing is well maintained.
8	Electronics Engineering Workshop	• First aid kit. • Dry type fire extinguisher. • Students are instructed to wear apron & shoes. • Electrical earthing is well maintained.
9	Solar Energy Systems Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Students are instructed to wear apron & shoes.

10	Electrical Vehicles Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical Earthing is well maintained. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Insulation mats are provided on the ground to prevent shocks. • Students are instructed to wear apron & shoes.
11	Microprocessor and Microcontroller Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained.
12	Basic Electrical Systems Laboratory	• First aid kit. • Dry type fire extinguisher. • Insulation mats are provided on the ground to prevent shocks. • Electrical Earthing is well maintained. • Emergency power shutdown facility provided. • Students are instructed to wear apron & shoes.
13	Smart Systems Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained.
14	Digital Design Laboratory	• First aid kit. • Dry type fire extinguisher.
15	Tinkering Laboratory	• First aid kit. • Dry type fire extinguisher. • Emergency power shutdown facility provided. • Electrical earthing is well maintained.
16	PG Simulation Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained.
17	Power Systems Laboratory	• First aid kit. • Dry type fire extinguisher. • Electrical earthing is well maintained. • Power supply terminals connected to any circuit are energized with the presence of the instructor or lab staff. • Emergency power shutdown facility is provided. • Insulation mats are provided on the ground to prevent shocks. • Students are instructed to wear apron and shoes. • All the panel boards are double earthed. • The earth points are tested once in 3 months and necessary maintenance is done.
18	Power Safety Measures	• SRKREC receives electric power from EPDCL through 3 phase 11 KV. Feeders. It is distributed at 440V, 3ø, using overhead lines and underground cables. • All overhead structures are earthed. • The electrical safety of all installations in the college is checked every year by the Dy. Electrical Inspector of Govt. of A.P. • SRKREC has power backup with two 320 KVA and one 150 KVA generators.
19	Fire-Fighting Measures	• Effective safety arrangements with emergency / multiple exits and ventilation/exhausts in auditoriums and large classrooms/laboratories, fire-fighting equipment and raining, availability of water, and other such facilities. • Effective safety arrangements with emergency / multiple exist have been made and Fire-extinguishers installed at all the laboratories, Class Rooms, Auditorium and seminar halls.

20	A. Basic Safety Measures: DO’s and DONT’s inside the Labs	✅ DO’s: 1. Maintain proper dress code (Boys: tuck in with shoes; Girls: apron and shoes). 2. Be aware of operating equipment. 3. Stay at your experiment table; unnecessary movement is restricted. 4. Verify circuits with the lab instructor after completing connections. 5. Ensure all switches are OFF and connections removed after work. 6. Turn off the system properly while leaving the Lab 7. Report any injury immediately to the lab supervisor. 8. Report equipment damage immediately to the lab supervisor. ❌ DON’Ts: 1. Don’t enter wearing golden rings, bracelets, or bangles. 2. Don’t bring CD’s, DVD’s and Pen-drives into the Lab 3. Don’t make or remove connections with power ON. 4. Don’t switch ON supply without staff verification. 5. Don’t leave the lab without permission of the lecturer in-charge.

D3. Project Laboratory/Research Laboratory

A. Project Laboratory:

The Project Laboratory plays a key role in promoting practical learning and innovation by providing dedicated space and hardware resources for knowledge sharing, discussion and execution of ideas, mini, major and final-year curriculum projects provided to enhance the quality of student projects and future training programs on emerging technologies planned to up skill students with two such facilities Sadhana Project Laboratory and AICTE IDEA Project Laboratory.

Table 7.2 Project Laboratories and Utilization

S.No	Name of the Project Labs	Name of the Major Equipment	Utilization of the Laboratory
1	Sadhana Projects Laboratory	1.Dremel 3000-15 Multifunctional Tool	• Students are provided with workspace and respective tools based on their requirement during regular and non-working hours. • Students practice, idea pitching activities and develop their prototypes. Aid in class room teaching, In-house projects, Internship and placements. • Interface boards, components were provided to the students for learning and prototype development purposes. • Students are trained with workshops on hardware, Software and prototype models
		2. Dremel 220-01 workstation	
		3. Raspberry pi Boards	
		4.Gate Driver Board	
2	AICTE Idea Project Laboratory	1.3D printers and scanners	. ◦ Advanced software tools such as FUSION 360, LAB VIEW, AUTO DESK, REVIT, CATIA, SOLID WORKS and MATLAB are provided to support design, simulation and analysis activities. ◦ Smart class rooms and makers space are made available to facilitate collaborative learning, brainstorming and interactive sessions for students. ◦ Regular training programs are conducted for students and faculty on latest and emerging technologies, enhancing technical competence and up skilling. ◦ Organize outreach programs for school students, promoting STEM education, innovation awareness and early exposure to technology. ◦ The laboratory support the complete innovation lifecycle, including ideation to prototype development, academic projects and curriculum support, hands-on experience and skill building, innovation competitions and exhibitions, research activities, publications and patent filing, internships and industry exposure and entrepreneurship and startup development.
		2.CNC machines and laser cutters	
		3.PCB design and fabrication tools	
		4.IoT kits and embedded systems	
		5.Proto-typing work stations	
		6.Power Tools	
		7.Computer work stations	
		8. GPU facility.	

Highlights:

The Project Laboratories have led to significant student accomplishments and hands-on learning outcomes.

1. Top 10 national-level finalists at the e-Yantra Innovation Challenge (IIT Bombay) for a Cotton Ginning Machine for small-scale farmers

2. First Position (Joint Winners) at the Smart India Hackathon 2025 with a cash award of ₹75,000 for the Smart Electric Fence Tamper Detection and Prevention System developed by Team JAYASTRA.

3. A total of 15 training programs were organized in the Sadhana Lab and IDEA Lab resulting in the successful completion of 36 student projects.

Table 7.3 Mapping of Project Laboratories with POs and PSOs

S.No	Project Laboratory	POs and PSOs	Justification
1	Sadhana Projects Lab	PO1, PO2, PO3,PO4, PO5, PO9, PO10, PO11, PO12,PSO1, PSO2	The laboratory enables students to apply engineering fundamentals and electrical concepts while developing mini, major and curriculum based projects. Students analyze real world problems, design and implement hardware based solutions and utilize modern tools and interface boards. Activities such as idea pitching, prototype development, workshops, internships and placement oriented projects enhance teamwork, communication skills and project management abilities and promote continuous learning.

2	AICTE IDEA Project Lab	PO1, PO2, PO3, PO4, PO5, PO7, PO9,PO10,PO11,PO12,PSO1,PSO2	The IDEA Lab supports the complete innovation lifecycle from ideation to prototype development using advanced tools such as 3D printers, CNC machines, PCB fabrication tools, IoT kits, CATIA, and MATLAB. Students engage in research, innovation competitions, exhibitions, publications, patents, internships and entrepreneurship, fostering sustainable solutions, interdisciplinary teamwork and lifelong learning.

B. Research Laboratory:

The establishment of a Research Laboratory in the Department is essential to support advanced learning, innovation, and industry-oriented research. The laboratory also enables faculty to carry out sponsored research, publications, patents and industry collaboration.

Research laboratories with hardware and software facilities are listed in the below Table.

Table 7.4 Research Laboratories and Utilization

S.No	Name of the Research Laboratory	Name of the major Equipment	Utilization of the laboratory
1	Renewable Energy Research Laboratory	1.Computer with MATLAB 2018b 2.PV panels 3.Interleaved Boost Converter 4.MPPT Controller 5.I-V & P-V Curve Tracker	• Facilitates faculty and student research in Power Electronics and Renewable Energy, focusing on photovoltaic systems and advanced renewable energy technologies. • The laboratory is accessible 24×7 with robust internet connectivity and computing facilities. • Supports PMKVY skill development and certification programs in Solar PV technologies, contributing to workforce readiness and addressing skill gaps in the PV sector. • Promotes industry interaction and collaboration, working towards the establishment of a Centre of Excellence in renewable energy. • Utilized by students for active participation in project expos, Hackathons and skill competitions.
2	E-mobility Research Lab	1. Encoder Motor 2. Lidar 3. NVIDIA Jetson Board 4. Li-ion Batteries 5. Battery Management System 6. Electronic load 7. Bi-directional EV Charger(DAB, Front end Rectifier, LCL Filter,TI Launch Pad)	• An E-Mobility Research Lab is a specialized facility focused on electric vehicle (EV) with autonomy technologies, EV Charging Technologies and sustainable transport systems. • These labs support practical experimentation, prototype development, simulation, testing, and research in electric mobility from subsystems like batteries, V2G Chargers with Solar assistance and Autonomous Vehicle system control using ROS. • The E-Mobility Research Lab actively supports student participation in national and international Hackathons and project expos by providing 24×7 access to simulation tools, hardware platforms, and mentorship from domain experts, and prototyping facilities, enabling students to design, develop, test and demonstrate innovative electric mobility solutions. • The lab actively promotes industry–academia collaboration, providing a platform for joint research, consultancy, and sponsored projects. • The lab facilitates problem-based research projects aligned with real-time industry challenges, making it attractive for sponsored R&D projects. • The laboratory supports skill development and certification programs in E-Mobility, contributing to workforce readiness and addressing the skill gap in the electric mobility sector.

Highlights:

1. A total of 21 research papers have been published by faculty and students through research work carried out in the E-Mobility Research Lab and Renewable Energy Research Lab in reputed national and international journals and conferences.

2. A total of 102 students were trained and certified under the PMKVY scheme in Green Jobs – Solar PV Installer through the Renewable Energy Research Lab.

3. A student team proposed a redefined solution for optimal planning of EV charging infrastructure in urban areas and participated in the Smart India Hackathon (SIH) 2022 (Problem Statement Code: BV806). The team reached the national finals, represented the institute at Jaipur Manipal University, and secured Second Position.

4. The E-Mobility Research Lab has successfully executed a ₹71.78 lakh Grid-Supportive EV Charger and Charging Infrastructure project at LT level in collaboration with IIT Delhi, focusing on grid-integrated EV charging, smart charging strategies, IoT-enabled monitoring, load management, and grid stability.

5. The lab has secured externally funded projects, including a ₹9.45 lakh MSME-funded Grid-Interactive Bidirectional Charger, and achieved national recognition through Smart India Hackathon participation (SIH 2022 Finalist and SIH 2025 Smart Grid Edge Control solution).

6. The lab actively promotes academic and industry collaboration through a DST-STUTI FDP with GITAM University and partnership with Boson Motors Pvt. Ltd., resulting in industry-defined projects and student placements. Its core strengths include EV charging infrastructure design, V2G bidirectional chargers, battery swapping systems, EV-grid integration, and renewable hosting capacity enhancement.

Table 7.5.Mapping of Research Laboratories with POs and PSOs

S.No	Research Laboratory	POs and PSOs	Justification

1	Renewable Energy Research Laboratory	PO1, PO2, PO3, PO4, PO5,PO6,PO7,PO9, PO10, PO12,PSO1,PSO2	The laboratory enables application of engineering fundamentals and power electronics knowledge in photovoltaic and renewable energy systems. Students and faculty analyze real-world problems such as renewable energy integration, power quality, and grid sustainability, design and validate solutions using modern tools (MATLAB, PV panels), and address societal and environmental needs. Activities promote teamwork, technical communication through publications and continuous learning via PMKVY, FDPs and research projects.
2	E-Mobility Research Lab	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9, PO10, PO11, PO12, PSO1, PSO2	The lab supports electric vehicle and sustainable transport technologies, integrating power electronics, embedded systems, control systems, and AI-based platforms. Students design, prototype, test, and validate EV subsystems and vehicle-level solutions using modern tools such as Jetson boards, BMS, Li-ion batteries and simulation platforms. The lab encourages industry-linked projects, hackathons, teamwork, project management and lifelong learning in emerging e-mobility technologies.

C. Centers of Excellence:

The cumulative outcomes of research publications, industry collaboration, sponsored projects, skill development programs and national-level Hackathon achievements have laid a strong foundation for establishing Center of Excellence in Solar Energy Systems and Cyber-Physical Systems.

Ongoing initiatives include industry-supported projects such as Solar Tiles development in collaboration with NRGX Industry, AI-based power and energy management systems for industrial and commercial facilities and continued Smart India Hackathon winning projects driven by student innovation.

Highlights:

1. The project titled “Improving Renewable Energy Hosting Capacity of Distribution Feeders with Enhanced Power Quality during High RE Injection”, developed by Team ECO GRID INNOVATORS addressed a real-world problem statement given by the Government of Kerala and won First Position (Joint Winners) at the Smart India Hackathon (SIH) 2025 Grand Finale held at VNR VJIET, Hyderabad during December 8–12, 2025 along with a cash award of ₹75,000.

2. A student achieved Gold Medal at the State Level in the India Skills Competition 2025 (Renewable Energy Sector).

3. The Center has consistently demonstrated excellence in the Smart India Hackathon (SIH) by contributing innovative solutions in Smart EV Infrastructure (2022) and Intelligent Energy Management & Smart Buildings (2023). In SIH 2025 it secured two prestigious awards for projects on Smart Grid Edge Control (IEEE 2030.5) and Smart Electric Fence Tamper Detection. Additionally, the Center received ₹10.7 lakh in external funding for a Cyber-Physical Battery Swapping Station project.

4. Strong industry collaboration with Boson Motors Pvt. Ltd. has facilitated industry-defined projects and enhanced student placement opportunities. The lab also maintains international research collaborations with PSK Research Foundation, SunSpec Alliance and DER Security Corporation. A six month SunSpec license for DERMS research was obtained, enabling advanced research in distributed energy resource management systems.

5. Through four CPS internships, research publications in DERMS and Cyber-Physical Systems and the development of real-time CPS test beds integrating smart grids, IoT, embedded systems, AI and Cyber security the lab has built core expertise in Smart Grids, DERMS, Intelligent Energy Management Systems (EMS), IoT-enabled infrastructure, Autonomous Systems and Cyber-Physical Energy Systems.

Table 7.6.Mapping of Centers of Excellence with POs and PSOs

S.No	Centers of Excellence	POs and PSOs	Justification
1	Solar Energy Systems	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9, PO10, PO12, PSO1, PSO2	Application of power electronics and renewable energy concepts; analysis and design of solar PV systems; investigation of power quality and grid integration issues; use of modern tools (MATLAB, PV testing); focus on sustainability, societal needs, teamwork, research publications and continuous skill development.
2	Cyber-Physical Systems	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO11, PO12, PSO1, PSO2	Integration of embedded systems, IoT, AI, control systems and EV technologies; design and validation of intelligent systems; use of modern tools and prototyping platforms; teamwork, project management, industry-linked projects and lifelong learning.

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)	1860	93	87	20	79
2024-25(CAYm1)	1860	93	87	20	79
2025-26(CAY)	1860	93	84	20	77

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	140000000	77598230	150000000	146202039	90000000	79014295	75000000	67938104

Library	4000000	154305	4000000	3211149	4000000	3084585	4000000	2497758
Laboratory equipment	20000000	5902057	19200000	14479485	50000000	32309745	30000000	28359698
Teaching and non-teaching staff salary	520000000	265346910	510000000	502955822	500000000	472269762	465000000	464400355
Outreach Programs	2000000	1490762	2000000	1553420	500000	280080	100000	61507
R&D	2500000	1512200	2500000	2205217	1500000	1398318	1200000	1060302
Training, Placement and Industry linkage	33000000	14139740	32000000	30398673	37600000	34800667	39000000	37709910
SDGs	2000000	512085	3000000	2659146	2000000	1287536	1200000	1033608
Entrepreneurship	400000	195000	400000	335000	400000	392196	400000	287417
Repairs & Maintenance, University Fees ,Reg, taxes	200000000	77775096	200000000	174226563	158500000	137931882	149000000	143356145
Total	**923900000**	**444626385**	**923100000**	**878226514**	**844500000**	**762769066**	**764900000**	**746704804**

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	700000	148822	1000000	701862	2500000	2485488	2500000	2425397
Software	0	0	0	0	0	0	0	0
SDGs	100000	0	150000	103017	150000	116620	100000	100000
Support for faculty development	100000	36002	50000	37520	0	0	0	0
R & D	50000	0	100000	50000	50000	0	100000	100000
Industrial Training, Industry expert, Internship	100000	0	100000	68080	250000	108000	300000	274276
Maintenance & Spares	450000	157358	300000	216720	600000	552701	400000	327582
Total	**1500000**	**342182**	**1700000**	**1177199**	**3550000**	**3262809**	**3400000**	**3227255**