NATIONAL BOARD OF ACCREDITATION

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

Program Name : Electrical and Electronics Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10572	**Date of Submission**: 23-04-2025

PART A- Profile of the Institute

A1.Name of the Institute: PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY	
Year of Establishment : 1998	Location of the Institute: Lat 16.4877°, Long 80.6941°
A2. Institute Address:VASANTHA NAGAR -POST KANURU	
City:VIJAYAWADA	State:Andhra Pradesh
Pin Code:520007	Website:www.pvpsiddhartha.ac.in
Email:PRINCIPAL@PVPSIDDHARTHA.AC.IN	Phone No(with STD Code):0866-2581699
A3. Name and Address of the Affiliating University (if any):	
Name of the University : JNTU KAKINADA	City: east Godavari
State : Andhra Pradesh	Pin Code: 533003
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: **3**

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

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Civil Engineering	2008	--	Civil Engineering
2	Engineering & Technology	UG	Computer Science and Engineering	1999	--	Computer Science and Engineering
3	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2022	--	Computer Science and Engineering (Artificial Intelligence and Machine Learning)
4	Engineering & Technology	UG	Computer Science and Engineering (Data Science)	2022	--	Computer Science and Engineering (Artificial Intelligence and Machine Learning)
5	Engineering & Technology	UG	Electrical and Electronics Engineering	2001	--	Electrical and Electronics Engineering
6	Engineering & Technology	UG	Electronics & Communication Engineering	2000	--	Electronics and Communication Engineering
7	Engineering & Technology	UG	Information Technology	1998	--	Information Technology

8	Engineering & Technology	PG	Machine Design	2008	--	Mechanical Engineering
9	Engineering & Technology	UG	Mechanical Engineering	1998	--	Mechanical Engineering
10	Engineering & Technology	PG	Microwave & Communication Engineering	2010	--	Electronics and Communication Engineering
11	Management	PG	Master of Business Administration	2008	--	Management

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

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

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Computer Science and Engineering	Yes	Computer Science and Engineering	UG
Information Technology	Yes	Information Technology	UG
Electronics and Communication Engineering	No	Electronics & Communication Engineering	UG
Electrical and Electronics Engineering	No	Electrical and Electronics Engineering	UG
Mechanical Engineering	No	Mechanical Engineering	UG

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

No Record

PART-B: Program information

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

Table No. B1: Program details.
A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITE
1	Electrical and Electronics Engineering	UG	2001 / --	60	Yes	2022	60	2022	F.No. South-Central/1-10973783567/2022/EOA; dated 7.7.2022	Granted accreditation for 3 years for the period (specify period)	2022	2025	5

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

List of the Allied Departments/Cluster and Programs:

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

A. Name of the HoD :	Dr. Ch. Padmanabha Raju
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	120	120	120	120
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	59	57	48	83	95	103	94
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	9	18	23	25	18	38
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	6	6	6	11	7	8	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	65	72	72	117	127	129	132

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	6	0	108.33
2023-24 (CAYm1)	60	6	0	105.00
2022-23 (CAYm2)	60	6	0	90.00

Average [(ER1 + ER2 + ER3) / 3] = 101.11≡ 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	**(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).	145.00	138.00	158.00
B=No. of students who graduated from the program in the stipulated course duration	104.00	112.00	108.00

Success Rate (SR)= (B/A) * 100	71.72	81.16	68.35

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 73.74

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

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

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
Mean of CGPA or mean percentage of all successful students(X)	6.73	7.45	7.59
Y=Total no. of successful students	62.00	53.00	91.00
Z=Total no. of students appeared in the examination	62.00	53.00	91.00
API [X*(Y/Z)]	6.73	7.45	7.59

Average API[(AP1+AP2+AP3)/3] : 7.26

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)	6.62	6.71	6.60
Y=Total no. of successful students	67.00	111.00	123.00
Z=Total no. of students appeared in the examination	71.00	114.00	127.00
API [X * (Y/Z)]	6.25	6.53	6.39

Average API [(AP1 + AP2 + AP3)/3] : 6.39

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)	7.38	7.66	7.58
Y=Total no. of successful students	109.00	122.00	126.00
Z=Total no. of students appeared in the examination	111.00	123.00	126.00
API [X*(Y/Z)]:	7.25	7.60	7.58

Average API [(AP1 + AP2 + AP3)/3] : 7.48

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	145.00	138.00	158.00
X=No. of students placed	102.00	95.00	80.00
Y=No. of students admitted to higher studies	3.00	6.00	10.00
Z=Total no. of students appeared in the examination	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	72.41	73.19	56.96

Average Placement Index = (P_1 + P_2 + P_3)/3: 67.52 Placement Index Points:

PART C: Faculty Details in Department and Allied Departments

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

C1. Faculty details of Department and Allied Departments

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

Sr.No	Name of the Faculty	PAN No.	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?
1	Dr. Ch. Padmanabha Raju	XXXXXXX41N	Ph.D	JNTUK, Kakinada	Electrical & Electronics Engineering	20/06/2006	18.10	Associate Professor	Professor	17/03/2011	Regular	Yes		Yes
2	Dr. K. Lenin	XXXXXXX74H	Ph.D	JNTUH, Hyderabad	Electrical & Electronics Engineering	20/07/2017	7.9	Professor	Professor	20/07/2017	Regular	Yes		No
3	Dr. M. V. Ramesh	XXXXXXX53A	Ph.D	JNTUH, Hyderabad	Electrical & Electronics Engineering	16/06/2003	21.10	Assistant Professor	Associate Professor	01/03/2010	Regular	Yes		No
4	Dr. N. Vijaya Anand	XXXXXXX86J	Ph.D	JNTUK, Kakinada	Electrical & Electronics Engineering	11/01/2005	20.3	Assistant Professor	Associate Professor	01/03/2010	Regular	Yes		No
5	Dr. C. Kumar	XXXXXXX27N	Ph.D	JNTUA, Ananthapuramu	Electrical Engineering	26/07/2000	24.9	Lecturer	Associate Professor	23/08/2006	Regular	Yes		No
6	Dr. P. Muthu Kumar	XXXXXXX79H	Ph.D	Anna University, Chennai	Electrical Engineering	11/06/2018	5.8	Associate Professor	Associate Professor	11/06/2018	Regular	No	21/02/2024	No
7	Dr. D. Ragaleela	XXXXXXX29K	Ph.D	JNTUK, Kakinada	Electrical & Electronics Engineering	20/06/2008	16.10	Assistant Professor	Assistant Professor		Regular	Yes		No
8	Dr. R. Swathi	XXXXXXX93N	Ph.D	Gitam (Deemed to be University), Visakhapatnam	Electronics & Communication Engineering	16/11/2011	13.5	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Ms. J. Hemalatha	XXXXXXX29H	M.E/M.Tech	Uttar Pradesh Technical University, Lucknow	Power Electronics & Drives	25/01/2006	19.3	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Mr. Y. Vishnumurthulu	XXXXXXX45M	M.E/M.Tech	JNTU, Hyderabad	Electrical Power Engineering	04/12/2008	15.5	Assistant Professor	Assistant Professor		Regular	No	03/05/2024	No

11	Dr. B. Baddu Naik	XXXXXXX09A	Ph.D	JNTUK, Kakinada	Electrical & Electronics Engineering	15/06/2010	14.10	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Ms. K. Bhavana	XXXXXXX98D	M.E/M.Tech	JNTUK, Kakinada	Power Electronics	18/11/2010	14.5	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Ms. V. Sai Geetha Lakshmi	XXXXXXX62M	M.E/M.Tech	JNTUK, Kakinada	Power Systems with Emphasis on High Voltage Engineering	18/11/2010	14.5	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Ms. G. Madhavi	XXXXXXX89L	M.E/M.Tech	Acharya Nagarjuna University, Nagarjuna Nagar	Power Systems Engineering	29/11/2011	13.4	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Mr. M. Hemanth Sai	XXXXXXX33R	M.E/M.Tech	Acharya Nagarjuna University, Nagarjuna Nagar	Power Systems Engineering	21/05/2012	12.11	Assistant Professor	Assistant Professor		Regular	Yes		No
16	Mr. B. Mohan	XXXXXXX40K	M.E/M.Tech	NIT Warangal	Power Systems Engineering	25/05/2012	12.11	Assistant Professor	Assistant Professor		Regular	Yes		No
17	Mr. B. Bala Sai Babu	XXXXXXX04B	M.E/M.Tech	Acharya Nagarjuna University, Nagarjuna Nagar	Power Systems Engineering	10/06/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Ms. M. Devika Rani	XXXXXXX26H	M.E/M.Tech	JNTUK, Kakinada	Power Electronics	10/06/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No
19	Mr. P. Karunakar	XXXXXXX92G	M.E/M.Tech	JNTUK, Kakinada	Instrumentation & Control Systems	28/06/2005	19.9	Assistant Professor	Assistant Professor		Regular	Yes		No
20	Ms. V. Harika	XXXXXXX76D	M.E/M.Tech	Andhra University, Visakhapatnam	Power Systems & Automation	29/06/2015	9.9	Assistant Professor	Assistant Professor		Regular	Yes		No
21	Mr. M. Seshu	XXXXXXX70F	M.E/M.Tech	JNTUK, Kakinada	Power Systems - High Voltage	31/05/2012	12.10	Assistant Professor	Assistant Professor		Regular	Yes		No
22	Mr. T. Srinivasa Rao	XXXXXXX02F	M.E/M.Tech	Andhra University, Visakhapatnam	Power Systems & Automation	17/06/2014	10.10	Assistant Professor	Assistant Professor		Regular	Yes		No

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

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)

C= No. of Students in UG 3rd year (ST)
D= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
A= No. of Students in PG 1st year
B= No. of Students in PG 2nd year
Student Faculty Ratio **(SFR)** = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.
No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)
Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.
F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

No. of UG Programs in the Department1 No. of PG Programs in the Department0

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

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	66	66	132
UG1.C	66	132	132
UG1.D	132	132	132
UG1: Electrical and Electronics Engineering	**264**	**330**	**396**
DS=Total no. of students in all UG and PG programs in the Department	264	330	396
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=** 264	**S2=** 330	**S3=** 396
DF=Total no. of faculty members in the Department	20	21	22
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=** 20	**F2=** 21	**F3=** 22
FF=The faculty members in F who have a 100% teaching load in the first-year courses	2	2	1
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 14.67**	**SFR2= 17.37**	**SFR3= 18.86**
Average SFR for 3 years	**SFR= 16.97**		

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)	8	12	13.00	24.62
2023-24(CAYm1)	8	13	16.00	20.62
2022-23(CAYm2)	8	14	19.00	17.89

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	2.00	2.00	3.00	8.00	15.00
2023-24	1.00	2.00	3.00	3.00	11.00	16.00
2022-23	2.00	2.00	4.00	4.00	13.00	16.00
Average	RF1=1.33	AF1=2.00	RF2=3.00	AF2=3.33	RF2=10.67	AF2=15.67

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

(CAYm2)

(CAYm3)

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	44	44	42
2	No. of peer reviewed conference papers published	16	17	7
3	No. of books/book chapters published	1	1	1

C7. Sponsored Research Project

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

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.D.Ragaleela	Dr.Ch.Padmanabha Raju	Electrical & Electronics Engineering	Development of an automated coconut breaking Machine	Unnat Bharath Abhiyan under SEG on Rural Energy System IIT Delhi, GOI	6 months	0.91
Dr.D.Ragaleela	--	Electrical & Electronics Engineering	Tender Coconut Punching Machine	MSME Idea Hackathon 3.0 (women)	1 year	15.00
						Amount received (Rs.):15.91

(CAYm2)

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 15.91

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
Mr.T.Srinivasa Rao	--	Electrical & Electronics Engineering	Quality Connect Program	Bureau of Indian Standards	--	3.95
						Amount received (Rs.):3.95

(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
Mr.T.Srinivasa Rao	--	Electrical & Electronics Engineering	Quality Connect Program	Bureau of Indian Standards	--	2.45
						Amount received (Rs.):2.45

(CAYm3)

Total amount (Lacs) received for the past 3 years: 6.40

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. Ch.Padmanabha Raju	Locating various power plants in AP using IOT	6 months	0.20	0.20	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Dr. K. Lenin	Biomedical waste monitoring system using IOT	6 months	0.30	0.30	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Dr. M. V. Ramesh	Multifunctional fire-fighting robot	6 months	0.25	0.26	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Ms.J. Hemalatha	Interactive Robot with Speech Recognition and Realistic Simulation	6 months	0.20	0.20	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Ms.K.Bhavana	Automatic lawn Mover	6 months	0.20	0.19	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Ms.M. Devika Rani	Agri Tech Master	6 months	0.25	0.26	Developed prototype / working models used to meet safety, societal needs & environmental consideration
			Amount received (Rs.): 1.40		

(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.C.Kumar	Design and simulation of automatic sun	6 months	0.17	0.16	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Dr.M.V.Ramesh	Smart charging stations for electric vehicles through IOT interface	6 months	0.28	0.30	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Dr.P.Muthukumar	FPGA trainer	6 months	0.20	0.22	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Ms.V.Sai Geetha Lakshmi	A smart Helmet for improving safety in mining industry	6 months	0.12	0.12	Developed prototype / working models used to meet safety, societal needs & environmental consideration
Mr.P.Karunakar	Underwater surveillance vehicle	6 months	0.15	0.12	Developed prototype / working models used to meet safety, societal needs & environmental consideration
			Amount received (Rs.): 0.92		

(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.N.Vijaya anand,Dr.C.Kumar,Dr.D.Ragaleela	Hardware Implementation & Design of Electric Vehicle Two & Three Wheeler	2 years	2.90	2.91	Prototype of two and three wheeler Electric vehicles
			Amount received (Rs.): 2.90		

Total amount (Lacs) received for the past 3 years : 5.22

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	Power Systems Laboratory	3	• Alternator test kit+3ϕ Variac + AC Alternator coupled Induction Motor • Static Negative	6 hours/week (:	Mr.Y.Ramakoti	Lab Technician	I.T.I
2	Electrical Machines-I Laboratory	3	• Main Control Panel • DC Shunt Motor-DC Shunt Generator:3kW, 220V • DC Shunt Motor-DC	6 hours/week (:	Mr. V. Siva Kiran Kumar	Lab Technician	I.T.I
3	Electrical Machines-II Laboratory	3	• Main Control Panel • AC Slip Ring Induction Motor:5HP, 415V, 1440RPM • AC Squirrel cage	6 hours/week (:	Mr. V. Siva Kiran Kumar	Lab Technician	I.T.I
4	Electrical Circuits Laboratory	3	• 50 MHz Dual channel digital storage oscilloscopes • Function Generators 2MHz 10319L •	6 hours/week (:	Mr. D. Balaji	Lab Technician	I.T.I
5	Control Systems Laboratory	3	• Synchro Transmitter & Receiver Pair • Magnetic Amplifiers • Temperature Control System •	6 hours/week (:	Mr.Y.Ramakoti	Lab Technician	I.T.I
6	Power Electronics Laboratory	3	• Single phase fully controlled bridge converter with R and RL loads • Three Phase half-controlled	6 hours/week (:	Mr. B. Naga Raju	Lab Technician	I.T.I
7	Electronic Devices and Amplifier Circuits Laboratory	3	• Digital storage Oscilloscopes-50MHz • Regulated DC Power supplies • Function Generators •	6 hours/week (:	Mr. B. Naga Raju	Lab Technician	I.T.I
8	Micro Processors & Micro Controllers Laboratory	1	• 8086 Microprocessors Trainer kits • 8051 Microcontroller Trainer Kits • Stepper Motor	6 hours/week (:	Mr. D. Pitcheswara Rao	Lab Technician	M. Sc. (IT)
9	Electrical Simulation Laboratory	1	• MATLAB R2019b Tool boxes i. Control System Toolbox ii. Simscape iii. Simscape Electrical •	6 hours/week (:	Mr. D. Pitcheswara Rao	Lab Technician	M. Sc. (IT)

10	IoT Applications to Electrical Engineering Laboratory	2	• Multi Function Energy Meters L&T WL 4400 • Raspberry Pi 4 Module • HP ProDesk	3 hours/week (	Mr. D. Pitcheswara Rao	Lab Technician	M. Sc. (IT)
11	Electrical Workshop	3	• Megger Meter • Lux Meter • Cables • Earth Tester • MCB • Fuses • Isolator • Multimeters	6 hours/week (:	Mr. Y. Ramakoti	Lab Technician	I.T.I
12	Electrical & Electronics Engineering Workshop (Common to I B. Tech all	6	• DC shunt motor coupled to a DC shunt generator 3kW with 3-point starter • 1kVA, 230/115V 1-	21 hours/week	Mr. D. Balaji & Mr. B. Na	Lab Technician	I.T.I

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Electrical Workshop	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on the treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker
2	Power Systems Laboratory	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on the treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker • Insulation Mat
3	Electrical Machines-I Laboratory	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker • Insulation Mat
4	Electrical Machines-II Laboratory	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker • Insulation Mat
5	Electrical Circuits Laboratory	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker • Insulation Mat
6	Electrical & Electronics Engineering Workshop	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker • Insulation Mat
7	Power Electronics Laboratory	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker
8	Electronic Devices and Amplifier Circuits Laboratory	Basic Safety Measures • Do's & Don'ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker

9	Control Systems Laboratory	Basic Safety Measures • Do’s & Don’ts in the Lab • Dress code • Wear closed-toe shoes • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher Lab Specific Safety Measures • Wooden stools • Wooden tables • Effective Earthing • Miniature Circuit Breaker • Insulation Mat
10	Micro Processors & Micro Controllers Laboratory	Basic Safety Measures • First aid kit • Fire extinguisher • Proper Ventilation Lab Specific Safety Measures • Switch off power supply whenever equipment is not in use • Effective Earthing • Miniature Circuit Breaker
11	Electrical Simulation Laboratory	Basic Safety Measures • First aid kit • Fire extinguisher • Proper Ventilation • Air Conditioners Lab Specific Safety Measures • Switch off power supply whenever equipment is not in use • Data Backup • Software Updates • Effective Earthing • Miniature Circuit Breaker
12	IoT Applications to Electrical Engineering Laboratory	Basic Safety Measures • Do’s & Don’ts in the Lab • Awareness charts on treatment of Electric Shock • First aid kit • Fire extinguisher • Proper Ventilation Lab Specific Safety Measures • Effective Earthing • Miniature Circuit Breaker

D3. Project Laboratory/Research Laboratory

- Project implementations are carried out in the Projects lab (Room No.133).
- As a part of Curriculum IV B. Tech students utilize this lab for implementing Mini/Major Projects.
- For all EEE students, skill is imparted through coding and circuit design platforms such as MATLAB, Simulink, PSIM, PSCAD, MYPOWER, PSpice, etc.

List of project laboratory/research laboratory /Centre of Excellence

S.No.	Room No	Name of the Laboratory
1	342	Projects/Research
2	133	Projects Lab: Projects, Innovation and Model builds

S. No.	Availability of the Facility	Details	Purpose for creating facility	Utilization	Relevance to POs/PSOs
1	Development of Three-Wheeler Electric Vehicle	• Top speed - 30 Kmph • Battery capacity -6KWh • Battery Voltage – 60V • Battery Current-100Ah • Battery Type-Lithium Ferrous phosphate Battery (LiFePO4) with Smart BMS technology • Motor Type – Permanent Magnet Synchronous motor (PMSM) • Motor Power – 3KW	This development provides insights into the design and operation of EV.	B.Tech Project work titled “Performance analysis of two and three Wheeler EV”	PO2, PO4, PO12, PSO1, PSO2
2	Study of Two Wheeler Electric Vehicle	• Top speed - 60 Kmph • Battery capacity -1.822kWh • Battery • Voltage – 60V • Battery Type-Lithium Ion • Motor Type – BLDC Motor • Motor Power – 1000W	This study provides insights into the design, operation and evaluate speed, acceleration, Torque-speed relationship.	B.Tech Project work titled “Performance analysis of two and three Wheeler EV”	PO2, PO4, PO12, PSO1, PSO2

3	Development of Drones for different applications	• APM Flight Controllers • TopXGun Flight controller • Pixhawk Flight Controller • 935 kV BLDC Motors • Propellers & Frames • Lipo Batteries • Electronic Speed Controllers (ESC)	Provides students hands-on experience to build a drone from basics and perform different applications.	B.Tech Project work titled i. Integrated Delivery Drone with Precision Flower Dropping ii. Analyzing Photovoltaic Efficiency Using Drone Technology	PO2, PO4, PO12, PSO1, PSO2
4	Calibration Equipment	• Power Quality Analyzer • Mixed Signal Oscilloscope • Digital Precision Meter	These meters helps to measure power quality and meter errors.	The equipment is used in testing to projects	PO2, PO4, PO12, PSO1, PSO2
5	NI-MY RIO Kits	NI MY RIO-1900	Provides students hands-on experience to develop projects	B.Tech Project work titled “Goods Segregation Robot”	PO2, PO4, PO12, PSO1, PSO2

JUSTIFICATION FOR MAPPING WITH POs/PSOs

Development of Three-Wheeler Electric Vehicle

- **PO-2 (Problem Analysis)**: Students will identify and analyze performance-related issues in electric vehicles, ensuring effective design and optimization.
- **PO-4 (Investigations)**: The project involves researching and testing EV systems to derive meaningful insights and improve vehicle performance.
- **PO-12 (Life-Long Learning)**: The rapidly evolving field of EV technology will encourage students to continuously engage in learning and adaptation.
- **PSO-1 (Allied Engineering Knowledge and Technical Skills)**: Students apply their technical skills in engineering disciplines to tackle real-world problems in EV performance and design.
- **PSO-2 (Competence in Innovative, Environmentally Conscious Technologies)**: The project involves developing sustainable, innovative solutions to create a green and efficient electric vehicle.

These outcomes ensure that the project aligns with the overall goals of the engineering program and equips students with the skills needed for real-world engineering challenges in the field of electric vehicles.

Study of Two-wheeler Electric Vehicle

- **PO-2 (Problem Analysis)**: Students will need to identify, analyze, and solve complex problems related to the design and performance of the two-wheeler EV, from power efficiency to vehicle range.
- **PO-4 (Investigations)**: The project requires students to conduct **experiments and research** to investigate various aspects of EV performance and optimize the design based on data and experimentation.
- **PO-12 (Life-Long Learning)**: As EV technology is rapidly evolving, students will be encouraged to engage in continuous learning and adapt to new technological advancements throughout their careers.
- **PSO-1 (Allied Engineering Knowledge and Technical Skills)**: Students will apply a **wide range of engineering knowledge**—from electrical systems to mechanical dynamics—in the design and development of the two-wheeler EV.
- **PSO-2 (Innovative and Environmentally Conscious Technologies)**: The project focuses on **innovative solutions** that are environmentally friendly and contribute to the development of **sustainable** and **efficient transportation** systems.

These outcomes ensure that the project provides students with the necessary technical, analytical, and practical skills to tackle the challenges in designing and analyzing two-wheeler EVs, while also emphasizing the importance of innovation and sustainability in modern engineering practice.

Development of Drones for different applications

- **PO-2 (Problem Analysis)**: Both projects require students to **identify, formulate, and solve complex engineering problems** related to system design, performance optimization, and integration, using engineering principles.
- **PO-4 (Investigations of Complex Problems)**: Students will need to **conduct research and experiments** to optimize the design and performance of drones and robots, analyzing experimental data to refine their solutions.
- **PO-12 (Life-Long Learning)**: As both fields (drones and robotics) evolve rapidly, students will need to engage in **continuous learning** to stay updated with new developments, ensuring they can adapt to technological advances.
- **PSO-1 (Allied Engineering Knowledge and Technical Skills)**: The development of drones and goods segregation robots requires **interdisciplinary knowledge** across electrical, mechanical, control systems, and software engineering, demonstrating students ability to apply **technical skills** to solve real-world challenges.
- **PSO-2 (Innovative and Environmentally Conscious Technologies)**: Both projects emphasize the **innovation** and **environmental sustainability** of the designs, ensuring that the solutions are not only technologically advanced but also contribute to sustainable practices in various industries.

These outcomes ensure that students gain valuable, hands-on experience in designing and developing cutting-edge technologies while addressing **real-world applications** and **societal needs**.

Calibration Equipment (Power Quality Analyzer)

- **PO-2 (Problem Analysis)**: Students will need to **analyze complex power quality issues** and **calibration challenges**, identifying the underlying problems and applying appropriate engineering principles to solve them.
- **PO-4 (Investigations of Complex Problems)**: The projects will require students to **investigate power disturbances** and **calibration techniques**, using data analysis and testing to validate and improve their solutions.
- **PO-12 (Life-Long Learning)**: Students will need to **engage in ongoing learning** to stay current with the evolving standards and technologies in power quality analysis and calibration.
- **PSO-1 (Allied Engineering Knowledge and Technical Skills)**: Both projects will require students to apply **multi-disciplinary engineering knowledge** in **electrical engineering, instrumentation, and control systems** to solve real-world problems in power quality and calibration.
- **PSO-2 (Innovative and Environmentally Conscious Technologies)**: The projects emphasize the development of **innovative solutions** that improve **power quality**, **measurement accuracy**, and contribute to **energy efficiency** and sustainability.

These outcomes ensure that the students gain the necessary technical, analytical, and problem-solving skills to tackle the challenges in power quality and measurement calibration, while also considering the broader societal and environmental impacts of their work.

NI-My RIO Kits

- **PO-2 (Problem Analysis)**: Students will need to **identify, analyze, and solve complex problems** related to the robots design, control, and performance, using principles from various engineering fields.
- **PO-4 (Investigations of Complex Problems)**: The project will require students to **conduct experiments and investigations** into the robots design, from sensor integration to motor control and object recognition, to optimize its functionality.
- **PO-12 (Life-Long Learning)**: Robotics is an evolving field, and students will need to continuously **learn and adapt** to new technologies and advancements in robotics, machine learning, and automation.
- **PSO-1 (Allied Engineering Knowledge and Technical Skills)**: The development of the robot requires applying knowledge from **electrical engineering, mechanical engineering, control systems, and software programming**, ensuring students develop **interdisciplinary technical skills**.
- **PSO-2 (Innovative and Environmentally Conscious Technologies)**: The robot offers a chance to develop **innovative, energy-efficient, and environmentally friendly technologies** that can be applied in industries to improve automation and efficiency.

These outcomes ensure that students gain the necessary skills to tackle complex, interdisciplinary problems in the field of robotics while contributing to sustainable, efficient, and innovative technological solutions.

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)	720	36	28	11	68
2023-24(CAYm1)	720	36	27	14	68
2024-25(CAY)	780	39	25	14	58

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	3700000	17455000	3200000	4376000	3150000	1653000	5450000	1019000
Library	3095000	2979000	2550000	3295000	2478000	2996000	2365000	2554000
Laboratory equipment	54656000	33844000	39012000	28548000	32204000	26598000	14464000	19884000
Teaching and non-teaching staff salary	241021000	245419000	230845000	242250000	219853000	227822000	213439000	219550000
Outreach Programs	2117000	2475000	1118000	2158000	1512000	856000	1109000	92000
R&D	2525000	973000	1817000	1183000	1725000	818000	1450000	488000
Training, Placement and Industry linkage	5055000	5013000	4770000	4216000	3038000	3395000	3980000	1024000
SDGs	165000	1970000	376000	1783000	195000	369000	1220000	344000
Entrepreneurship	485000	29000	392000	98000	301000	145000	194000	12000
Others, specify	20871000	31828000	21967000	20927000	20911000	25766000	19499000	21467000
Total	**333690000**	**341985000**	**306047000**	**308834000**	**285367000**	**290418000**	**263170000**	**266434000**

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	1622000	1514018	890000	599652	269000	260438	51200	0
Software	0	0	0	0	0	0	0	0
SDGs	250000	248574	160000	138640	100000	88646	290000	290629
Support for faculty development	110000	90040	190000	86202	120000	44501	120000	69534
R & D	0	0	0	0	0	0	0	0
Industrial Training, Industry expert, Internship	0	0	0	0	5000	0	5000	0
Miscellaneous Expenses*	816600	925225	572500	666149	387500	416408	200400	302166
Total	**2798600**	**2777857**	**1812500**	**1490643**	**881500**	**809993**	**666600**	**662329**