NATIONAL BOARD OF ACCREDITATION

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

Program Name : Electronics & Communication Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10691	**Date of Submission**: 15-05-2025

PART A- Profile of the Institute

A1.Name of the Institute: CMR TECHNICAL CAMPUS	
Year of Establishment : 2009	Location of the Institute: Hyderabad
A2. Institute Address:KANDLAKOYA MEDCHAL HYDERABAD - 501401	
City:Ranga Reddy	State:Telangana
Pin Code:501401	Website:www.cmrtc.ac.in
Email:director@cmrtc.ac.in	Phone No(with STD Code):92470-33440
A3. Name and Address of the Affiliating University (if any):	
Name of the University : JNTU HYDERABAD	City: Medchal
State : Telangana	Pin Code: 500085
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: **9**
- No. of PG programs: **3**

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

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Artificial Intelligence and Machine Learning	2021	2023	Computer Science and Engineering (Artificial Intelligence and Machine Learning)
2	Engineering & Technology	UG	Computer Science & Information Technology	2023	2024	Information Technology
3	Engineering & Technology	UG	Computer Science and Design	2021	2022	Computer Science and Engineering (Data Science)
4	Engineering & Technology	UG	Computer Science and Engineering	2010	--	Computer Science and Engineering
5	Engineering & Technology	PG	Computer Science and Engineering	2011	--	Computer Science and Engineering
6	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2020	--	Computer Science and Engineering (Artificial Intelligence and Machine Learning)
7	Engineering & Technology	UG	Computer Science and Engineering (Cyber Security)	2022	2023	Computer Science and Engineering (Data Science)

8	Engineering & Technology	UG	Computer Science and Engineering (Data Science)	2020	--	Computer Science and Engineering (Data Science)
9	Engineering & Technology	UG	Electronics & Communication Engineering	2009	--	Electronics and Communication Engineering
10	Engineering & Technology	PG	Embedded Systems	2012	--	Electronics and Communication Engineering
11	Engineering & Technology	UG	Information Technology	2017	2024	Information Technology
12	Management	PG	Master of Business Administration	2009	--	Management

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

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

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

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

No Record

PART-B: Program information

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

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

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Electronics & Communication Engineering	UG	2009 / --	60	Yes	2024	60	2024	South-Central/1-43658446340/2024/EOA	Granted accreditation for 3 years for the period (specify period)	2022	2025	3	4

Sanctioned Intake for Last Five Years for the Embedded Systems	
Academic Year	**Sanctioned Intake**
2024-25	60
2023-24	120
2022-23	120
2021-22	180
2020-21	180
2019-20	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 :	Dr. Ch. Sudhamani
B. Nature of appointment:	Regular
C. Qualification:	ME/M. Tech and PhD

B3. Program Details

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

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	120	120	180	180	180	180
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	60	120	120	180	180	180	180
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	13	12	18	18	18	18
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	2	8	8	14	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	62	141	140	212	198	198	198

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	2	0	103.33
2023-24 (CAYm1)	120	8	0	106.67
2022-23 (CAYm2)	120	8	0	106.67

Average [(ER1 + ER2 + ER3) / 3] = 105.56≡ 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).	198.00	198.00	198.00
B=No. of students who graduated from the program in the stipulated course duration	149.00	144.00	142.00
Success Rate (SR)= (B/A) * 100	75.25	72.73	71.72

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 73.23

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)	8.22	8.19	7.82
Y=Total no. of successful students	124.00	127.00	189.00
Z=Total no. of students appeared in the examination	126.00	127.00	194.00
API [X*(Y/Z)]	8.09	8.19	7.62

Average API[(AP1+AP2+AP3)/3] : 7.97

B7: Academic Performance of the Second Year Students of the Program

Table No.B7.1: Academic Performance of the Second Year Students of the Program.

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	8.29	8.05	7.73
Y=Total no. of successful students	139.00	207.00	194.00
Z=Total no. of students appeared in the examination	139.00	207.00	197.00
API [X * (Y/Z)]	8.29	8.05	7.61

Average API [(AP1 + AP2 + AP3)/3] : 7.98

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

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	8.24	8.27	8.35
Y=Total no. of successful students	199.00	184.00	193.00
Z=Total no. of students appeared in the examination	207.00	194.00	195.00
API [X*(Y/Z)]:	7.92	7.84	8.26

Average API [(AP1 + AP2 + AP3)/3] : 8.01

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	198.00	198.00	198.00
X=No. of students placed	92.00	109.00	106.00
Y=No. of students admitted to higher studies	11.00	15.00	14.00
Z=Total no. of students appeared in the examination	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	52.02	62.63	60.61

Average Placement Index = (P_1 + P_2 + P_3)/3: 58.42 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. Sudhamani	XXXXXXX53F	XXXXXXXXXXXXXXXPhD	Acharya Nagarjuna University	Wireless Communications	17/06/2013	11.10	Assistant Professor	Associate Professor	01/02/2020	Regular	Yes		Yes
2	Dr. P. Venkata Krishnan	XXXXXXX84N	XXXXXXXXXXXXXXXPhD	Anna University	Communication Systems	23/12/2016	8.4	Professor	Professor		Regular	Yes		No
3	Dr. Bandi Doss	XXXXXXX54P	XXXXXXXXXXXXXXXPhD	JNTU Anantapur	VLSI and Signal Processing	03/06/2019	5.11	Associate Professor	Professor	02/06/2021	Regular	Yes		No
4	Dr. K. Bharath Kumar	XXXXXXX84M	XXXXXXXXXXXXXXXPhD	Pondicherry University	Microwave Antennas	19/11/2018	6.5	Assistant Professor	Professor	01/08/2024	Regular	Yes		No
5	Dr. Sireesha Pendem	XXXXXXX71G	XXXXXXXXXXXXXXXPhD	OPJS University	Wireless Communications	01/06/2017	7.11	Assistant Professor	Professor	01/08/2022	Regular	Yes		No
6	Dr. Sudha Chandrika M P	XXXXXXX26L	XXXXXXXXXXXXXXXPhD	JNTU Hyderabad	Wireless Communications	02/07/2015	9.10	Assistant Professor	Professor	01/08/2023	Regular	No	03/05/2025	No
7	Dr. Mahesh V Sonth	XXXXXXX81Q	XXXXXXXXXXXXXXXPhD	VTU	VLSI Photonics	24/06/2019	5.10	Assistant Professor	Professor	01/08/2024	Regular	No	03/05/2025	No
8	Dr. G. Srikanth	XXXXXXX04E	XXXXXXXXXXXXXXXPhD	JNTU Hyderabad	Signal Processing & VLSI	12/07/2010	14.10	Assistant Professor	Associate Professor	03/06/2024	Regular	Yes		No
9	Sudhamalla Mallesh	XXXXXXX48R	M.E/M.Tech	JNTU Hyderabad	VLSI System Design	01/10/2014	10.7	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Bandaru Karuna Sree	XXXXXXX57P	M.E/M.Tech	JNTU Hyderabad	VLSI Systems Design	18/06/2012	12.10	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Swarna Venkatesh	XXXXXXX11J	M.E/M.Tech	JNTU Hyderabad	Computers and Communication Engineering	18/06/2012	12.10	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Adavalli Vamshidhar Reddy	XXXXXXX02Q	M.E/M.Tech	JNTU Hyderabad	VLSI System Design	25/06/2014	10.10	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Mohammad Abdul Naqi	XXXXXXX14B	M.E/M.Tech	JNTU Hyderabad	VLSI System Design	17/06/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No
14	D. Sreekanth	XXXXXXX91E	M.E/M.Tech	JNTU Hyderabad	Wireless and Mobile Communications	17/06/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No

15	Narendar Chirumalla	XXXXXXX45H	M.E/M.Tech	JNTU Hyderabad	Digital Systems and Computer Electronics	24/06/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No
16	Matam Sravanthi	XXXXXXX60D	M.E/M.Tech	JNTU Hyderabad	Embedded Systems	11/07/2011	13.10	Assistant Professor	Assistant Professor		Regular	Yes		No
17	Dilshad Shaik	XXXXXXX20P	M.E/M.Tech	JNTU Hyderabad	VLSI System Design	18/06/2012	12.10	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Nagarjuna Tanikonda	XXXXXXX92H	M.E/M.Tech	JNTU Hyderabad	VLSI System Design	15/06/2015	9.10	Assistant Professor	Assistant Professor		Regular	Yes		No
19	Renuka N	XXXXXXX74K	M.E/M.Tech	JNTU Hyderabad	Embedded Systems	08/12/2014	10.5	Assistant Professor	Assistant Professor		Regular	Yes		No
20	Bandari Thanuja	XXXXXXX70G	M.E/M.Tech	JNTU Hyderabad	Embedded Systems	01/07/2019	5.10	Assistant Professor	Assistant Professor		Regular	Yes		No
21	Gurram Sravanthi	XXXXXXX51R	M.E/M.Tech	JNTU Hyderabad	VLSI System Design	18/02/2022	3.2	Assistant Professor	Assistant Professor		Regular	Yes		No
22	Kukkala Prasanna Kumari	XXXXXXX71J	M.E/M.Tech	JNTU Hyderabad	Embedded Systems	04/03/2022	3.2	Assistant Professor	Assistant Professor		Regular	Yes		No
23	Chintapula Vinay Kumar	XXXXXXX77C	M.E/M.Tech	JNTU Hyderabad	VLSI & Embedded Systems	17/06/2021	3.10	Assistant Professor	Assistant Professor		Regular	Yes		No
24	A. Sri Divya	XXXXXXX24R	M.E/M.Tech	JNTU Hyderabad	JNTU Kakinada	07/07/2022	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No
25	V. Mounika	XXXXXXX78R	M.E/M.Tech	JNTU Kakinada	VLSI	01/08/2022	2.9	Assistant Professor	Assistant Professor		Regular	Yes		No
26	Ravi Chinkera	XXXXXXX02A	M.E/M.Tech	VTU	Electronics	17/06/2021	3.10	Assistant Professor	Assistant Professor		Regular	No	03/05/2025	No
27	Tulluri Sateesh	XXXXXXX66J	M.E/M.Tech	JNTU Hyderabad	Embedded Systems	04/05/2015	10	Assistant Professor	Assistant Professor		Regular	No	03/05/2025	No
28	Dr. Suraya Mubeen	XXXXXXX29N	XXXXXXXXXXXXXXXPhD	JNTU Kakinada	Microwave Antennas	16/06/2014	10	Assistant Professor	Professor	02/01/2023	Regular	No	01/07/2024	No
29	Dr. K. Mohana lakshmi	XXXXXXX06P	XXXXXXXXXXXXXXXPhD	Acharya Nagarjuna University	Image Processing	17/06/2013	11	Assistant Professor	Associate Professor	17/02/2024	Regular	No	01/07/2024	No
30	Mohd Ameenuddin	XXXXXXX06J	M.E/M.Tech	JNTU Hyderabad	Digital Systems and Computer Electronics	19/07/2011	11.9	Assistant Professor	Assistant Professor		Regular	No	05/05/2023	No
31	V. Bhavana	XXXXXXX62J	M.E/M.Tech	JNTU Hyderabad	Digital Systems and Computer Electronics	06/07/2022	1	Assistant Professor	Assistant Professor		Regular	No	04/08/2023	No
32	Rode Manoj Prakash Rao	XXXXXXX93E	M.E/M.Tech	JNTU Hyderabad	Electronics and Communication Engineering	14/02/2018	5.3	Assistant Professor	Assistant Professor		Regular	No	01/06/2023	No

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

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)
C= No. of Students in UG 3rd year (ST)
D= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
A= No. of Students in PG 1st year
B= No. of Students in PG 2nd year
Student Faculty Ratio **(SFR)** = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.
No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)
Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.
F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

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

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

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	132	132	198
UG1.C	132	198	198
UG1.D	198	198	198
UG1: Electronics & Communication Engineering	**462**	**528**	**594**
PG1.A	12	12	12
PG1.B	12	12	18
PG1: Embedded Systems	**24**	**24**	**30**
DS=Total no. of students in all UG and PG programs in the Department	486	552	624
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=** 486	**S2=** 552	**S3=** 624
DF=Total no. of faculty members in the Department	27	29	32
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=** 27	**F2=** 29	**F3=** 32
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 18.00**	**SFR2= 19.03**	**SFR3= 19.50**
Average SFR for 3 years	**SFR= 18.84**		

C3. Faculty Qualification

- Faculty qualification index (FQI) = 2.5 * [(10X +4Y)/RF] where
- X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
- Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/ UGC norms.
- RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section C2 of this documents: (RF=S/20).

Table No.C3.1: Faculty qualification.

Year	X	Y	RF	FQ = 2.5 x [(10X + 4Y) / RF)]
2024-25(CAY)	8	19	24.00	16.25
2023-24(CAYm1)	9	20	27.00	15.74
2022-23(CAYm2)	9	23	31.00	14.68

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	2.00	6.00	5.00	2.00	16.00	19.00
2023-24	3.00	5.00	6.00	3.00	18.00	21.00
2022-23	3.00	3.00	6.00	5.00	20.00	24.00
Average	RF1=2.67	AF1=4.67	RF2=5.67	AF2=3.33	RF2=18.00	AF2=21.33

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Pratiksha Shukla	Technical Trainer	Pyramid Consulting & IT Learnings	Advanced Training in VHDL Programming	32.00
2	Pratiksha Shukla	Technical Trainer	Pyramid Consulting & IT Learnings	Advanced Training in Python, Java, and Full Stack	32.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Pratiksha Shukla	Technical Trainer	Pyramid Consulting & IT Learnings	Advanced Training in VHDL Programming	32.00
2	Pratiksha Shukla	Technical Trainer	Pyramid Consulting & IT Learnings	Advanced Training in Python, Java, and Full Stack	32.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Pratiksha Shukla	Technical Trainer	Pyramid Consulting & IT Learnings	Advanced Training in VHDL Programming	32.00
2	Pratiksha Shukla	Technical Trainer	Pyramid Consulting & IT Learnings	Advanced Training in Python, Java, and Full Stack	32.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of Peer Reviewed Journal Papers Published	49	23	19
2	No. of Peer Reviewed Conference Papers Published	39	38	10
3	No. of Books/Book Chapters Published	5	3	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.P.Venkatakrishnan	NA	ECE	Training Activities Entrepreneur	DST New Delhi	1 Year	2.50
Dr.A.Raji Reddy	G. Srikanth	ECE	For PG Colleges at Level - 0	DST-FIST	5 Years	21.50
						Amount received (Rs.):24.00

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.A.Raji Reddy	G. Srikanth	ECE	For PG Colleges at Level - 0	DST-FIST	5 Years	21.50
Dr.A.Raji Reddy	G. Srikanth	ECE	Study of Stimulating Research in Indian University for Socio-Economic Development of India	DST- NSTMIS	3 Years	14.10
Dr.P.Venkatakrishnan	NA	ECE	Augmentation of Data Processing Lab	AICTE - MODROB	2 Years	23.00
						Amount received (Rs.):58.60

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.P.Venkatakrishnan	NA	ECE	Augmentation of Data Processing Lab	AICTE - MODROB	2 Years	23.00
Dr.A.Raji Reddy	G. Srikanth	ECE	For PG Colleges at Level - 0	DST-FIST	5 Years	21.50
Dr.A.Raji Reddy	G. Srikanth	ECE	Study of Stimulating Research in Indian University for Socio-Economic Development of India	DST- NSTMIS	3 Years	14.10
						Amount received (Rs.):58.60

Total Amount (Lacs) Received for the Past 3 Years: 141.20

Note*:

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

C8. Consultancy Work

Table No. C8.1: List of consultancy projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.K.Bharath Kumar	Dr. Mahesh V Sonth	ECE	Arduino Based Load Control and Monitoring using IVRS System	San Prints Pvt.Ltd	6 Months	3.00
Dr.Ch.Sudhamani	Dr. Sudha Arvind	ECE	ESP32 Cam Based Motion and Waste Detection System for Urban Areas	NSEIT Limited	6 Months	3.00
						Amount received (Rs.):6.00

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.Ch.Sudhamani	Dr.K. Bharath Kumar	ECE	Sensor Based Water Quality Monitoring System for Underground Water	San Prints Pvt.Ltd	6 Months	2.00
Dr.P.Venkatkrishnan	Dr.Mahesh V Sonth	ECE	Ultrasonic Navigation Stick for the Blind using STM32	Vision Tech Park Pvt.Ltd	6 Months	1.45
Dr. Suraya Mubeen	Dr. Sudha Arvind	ECE	Multifunctional Ground Device for Agriculture Device	AICTE	6 Months	2.00
						Amount received (Rs.):5.45

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.Suraya Mubeen	G.Srikanth	ECE	GSM Based Bank Locker Security System	San Prints Pvt.Ltd	6 Months	2.00
Dr.K.Bharath Kumar	Dr.Bandi Doss	ECE	Waste Segregation System	San Prints Pvt.Ltd	3 Months	1.50
Dr.Mahesh V Sonth	Dr.Sudha Arvind	ECE	Fingerprint and RFID based Bike and Car Ignition System	Vsion Tech Park Pvt.Ltd	6 Months	2.50
						Amount received (Rs.):6.00

Total amount (Lacs) received for the past 3 years: 17.45

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
S.Mallesh	Design of an Advanced Electric Vehicle Battery Management System	6 Months	0.34	0.35	Low Complexity ACC-DCT Based Video Compression
Dr. Suraya Mubeen	IoT Based Underground Water Safety System	6 Months	0.30	0.30	QoE-Driven Integrated Heterogeneous Traffic Resources Allocation Based on Cooperative Learning For 5G Cognitive Radio Networks
Dr. K.Bharath Kumar	Smart Parking IOT System	4 Months	0.13	0.13	Utilizing an IORT-Based Remote Access Vehicle for Monitoring
Dr.K.Mohana Lakshmi	Automation of LPG Booking System using IOT	5 Months	0.15	0.15	Robust Security Framework for Cloud-Based Logistics Services
Dr.P.Sireesha	Wireless Notice Board System	6 Months	0.15	0.15	Detection of Diabetes Using 5G Network
Dr.Sudha Arvind	Design and Implementation of Smart Cart System	3 Months	0.06	0.06	Efficiency Gains Alternative Sources and Environmental Tracking Systems for Telecommunications Networks
MD.Abdul Naqi	Enemy Ship Detection using 89C52	3 Months	0.05	0.05	High Accuracy Bank Locker Security System using GSM and GPS
D.Sreekanth	Railway Track Monitoring System using an Arduino	3 Months	0.05	0.05	Performance Analysis of CD NOMA in 5G Communication Systems
Dr.G.Srikanth	Android-Based Smart Home Automation System Design using Raspberry Pi 3	3 Months	0.05	0.05	Occupancy Detection of Smart Buildings Using Android IOT
Dr.Mahesh V Sonth	Fire Alaram System	5 Months	0.17	0.18	Design Of Safety Monitoring and Alerting Module for The Employees Working in The Coal Mining Industry
			Amount received (Rs.): 1.45		

(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. Suraya Mubeen	Intelligent 3D Scanning with AI Based Optimization Technique	6 Months	0.55	0.55	Integrated Learning Algorithms-Based Epileptologist Assistive Tool for Seizure Detection and Prediction
Dr Mahesh V Sonth	Design and Implementation of Seven Segment Display Using Reversible Logic Gates	4 Months	0.19	0.19	Design and Simulation of Reconfigurable Optical Logic Gates for Integrated Optical Crcuits
Dr. P Venkatakrishnan	Implementation Web of Things Based Smart Grid to Remotely Monitor and Control	6 Months	0.23	0.24	Spectrum and Power Allocation Scheme Using HoDEPSO-RP Approach for Cognitive Radio Network
Dr. Sudha Arvind	Smart Assistant for Blind People	6 Months	0.31	0.32	Identification of Traffic Signals for Blind People
Dr.K.Mohana Lakshmi	IoT Based Underground Water Safety System	6 Months	0.42	0.42	Underwater Image Enhancement Using Wavelet Fusion
Dr. K.Bharath Kumar	Design and Implementation of Smart Borewell Child Rescue System	5 Months	0.21	0.21	Implementation of Smart Bore-Well Child Rescue System
			Amount received (Rs.): 1.91		

(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.Mahesh V Sonth	Adjustable Road Divider Using IoT	6 Months	0.29	0.29	Design and Analysis of Two-Dimensional Electromagnetic Band Gap Antenna for WIFI Applications
Dr.Ch.Sudhamani	Underwater Audio and Data Transmission using LiFi	6 Months	0.33	0.33	Improved Detection Performance of Energy Detection Based Spectrum Sensing in Cognitive Radio Networks
Dr.K. Suraya Mubeen	Fingerprint and RFID based Bike and Car Ignition System	3 Months	0.22	0.22	Virtually Locking and Unlocking System with Keypad Security Lock with Changeable Codes
D.Sreekanth	Design and implementation of 3D printer	5 Months	0.15	0.15	E-Voting System Using Facial Recognition
			Amount received (Rs.): 0.99		

Total amount (Lacs) received for the past 3 years : 4.35

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	Electronic Devices & Circuits Lab	3	CRO(0-20MHz), Regulated Power supply(0-30V), Function Generator(0-1MHz), Voltmeters, Ammeters,	18 Hours	Mrs. N. Sangamma	Lab Assistant	Diploma
2	Basic Simulation Lab	1	MATLAB software (9.0)-2016b, Computer systems, DSO(0-20MHz), Function generators (0-1MHz)	18 Hours	Mrs. T. Geetha	Lab Assistant	Diploma
3	Digital Systems Design Lab	3	CRO(0-20MHz), Regulated Power supply(0-30V), Function Generator(0-2MHz) ,Voltmeters, Ammeters,	18 Hours	Mrs.B. Krishna veni	Lab Assistant	B. Tech.
4	Analog & Digital Communications Lab	3	Function Generators (0-2MHz), CROs (0-20MHz), Spectrum Analyzer (9KHz-1.5GHz), Trainer Kits	18 Hours	Mr. G. Sai Genesh	Lab Assistant	B. Tech.
5	Database Management System	1	Linux OS and Ruby, TCL, Perl installed, Computers	12 Hours	Ms. M. Papa	Lab Assistant	B. Tech.
6	Electronic Circuit Analysis Lab	3	CRO(0-20MHz), Regulated Power supply(0-30V), Function Generator(0-1MHz), Voltmeters, Ammeters,	18 Hours	Mrs. N. Sangamma	Lab Assistant	Diploma
7	Linear and Digital Integrated Circuit Applications Lab	3	Regulated Power Supply (0-5V,2A), CROs (0-30MHz), Function Generators(0-1MHz), Bread boards/General	18 Hours	Mrs.B. Krishna veni	Lab Assistant	B. Tech.

8	Internet of Things lab	1	Computers, Arduino IDE, Raspberry Pi and its other Peripherals	12 Hours	Mrs. T. Geetha	Lab Assistant	Diploma
9	Microcontrollers Lab	1	Dosbox/MASM or its equivalent software, 8086 Kits, 8051 Kits, Interfacing 7 Segment Display To 8051,	18 Hours	Ms. M. Papa	Lab Assistant	B. Tech.
10	Digital Signal Processing Lab	1	MATLAB software (9.0)-2016b, Computer systems, DSO (0-20MHz), Function generators (0-1MHz), CC	18 Hours	Mrs. T. Geetha	Lab Assistant	Diploma
11	Microwave Engineering Lab	3	Gunn diode based microwave bench setup, Klystron based microwave bench setup, VSWR Meter, Microwave	18 Hours	Mr. G. Sai Genesh	Lab Assistant	B. Tech.
12	Advanced Digital Signal Processing Lab	1	MATLAB software (9.0)-2016b, Computer systems, DSO (0-20MHz), Function generators (0-1MHz), CC	3 Hours	Mrs. T. Geetha	Lab Assistant	Diploma
13	System Design with Embedded Linux Lab	1	Raspberry Pi Beagle Bone, Black-Rev C Set ,Computers, Rasbian Operating System	3 Hours	Ms. M. Papa	Lab Assistant	B. Tech.
14	ARM Microcontrollers Lab	1	Cortex-M3 Control Board Set, Arduino IDE, Computers loaded with eqiivallent GNU-Tool Chain	3 Hours	Mrs.K. Swathi	Lab Assistant	B. Tech.
15	Digital system Design with FPGAs Lab	1	Xilinx FPGA Spartan 3e - 100 or 250, Xilinx Vivado 2017.3, Computers, ZedBoard (Zynq-7000 XC7Z020),	3 Hours	Mrs.K. Swathi	Lab Assistant	B. Tech.
16	CMOS VLSI & eCAD Lab	1	Xilinx software installed,computers	18 Hours	Mrs.K. Swathi	Lab Assistant	B. Tech.

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Electronic Devices & Circuits Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
2	Digital Systems Design Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
3	Electronic Circuit Analysis Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories

4	Analog & Digital Communications Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
5	Linear and Digital Integrated Circuit Applications Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
6	Internet of Things lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
7	Micro controllers Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
8	Microwave Engineering Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
9	System Design with Embedded Linux Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
10	ARM Micro controllers Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories
11	Digital system Design with FPGAs Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Shoes are mandatory while performing experiments. 2. High Quality MCB is used to trip excess voltages if any. 3. Student should immediately inform the lab in charge if there's any defect/damage observed at hardware laboratories. 4. All the equipment should be turned off properly before leaving the laboratories

12	Basic Simulation Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Students should leave their footwear before entering into the computer laboratories 2. 30 Minutes power backup facility available from the Generator setup. 3. Permission denied for pen drives in computer laboratories. 4. Student must check the computer unit and its peripherals attached before using it. 5. Student must immediately inform the lab incharge if there's any defect, damage observed at computer laboratories. 6. All the computers should be turned off properly before leaving the laboratories.
13	Database Management System Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Students should leave their footwear before entering into the computer laboratories 2. 30 Minutes power backup facility available from the Generator setup. 3. Permission denied for pen drives in computer laboratories. 4. Student must check the computer unit and its peripherals attached before using it. 5. Student must immediately inform the lab incharge if there's any defect, damage observed at computer laboratories. 6. All the computers should be turned off properly before leaving the laboratories.
14	Digital Signal Processing Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Students should leave their footwear before entering into the computer laboratories 2. 30 Minutes power backup facility available from the Generator setup. 3. Permission denied for pen drives in computer laboratories. 4. Student must check the computer unit and its peripherals attached before using it. 5. Student must immediately inform the lab incharge if there's any defect, damage observed at computer laboratories. 6. All the computers should be turned off properly before leaving the laboratories.
15	CMOS VLSI & eCAD Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Students should leave their footwear before entering into the computer laboratories 2. 30 Minutes power backup facility available from the Generator setup. 3. Permission denied for pen drives in computer laboratories. 4. Student must check the computer unit and its peripherals attached before using it. 5. Student must immediately inform the lab incharge if there's any defect, damage observed at computer laboratories. 6. All the computers should be turned off properly before leaving the laboratories.
16	Advanced Digital Signal Processing Lab	A. Basic Safety Measures: 1. Apron is mandatory while entering the laboratory. 2. Signature is mandatory while entering and leaving the laboratory. 3. First aid box is kept in the laboratory. 4. Fire extinguisher is kept near the laboratory. 5. Periodical servicing will be done for the laboratory equipment. 6. All the labs are maintained clean and organized properly. 7. Cell Phones are strictly not allowed in the laboratories. B. Lab Specific Safety measures: 1. Students should leave their footwear before entering into the computer laboratories 2. 30 Minutes power backup facility available from the Generator setup. 3. Permission denied for pen drives in computer laboratories. 4. Student must check the computer unit and its peripherals attached before using it. 5. Student must immediately inform the lab incharge if there's any defect, damage observed at computer laboratories. 6. All the computers should be turned off properly before leaving the laboratories.

D3. Project Laboratory/Research Laboratory

A. Availability of Project Laboratory (Room No.: 430):

Project laboratories are available year-round for students to design, develop, and implement academic and research-based projects, supported with essential hardware, software tools, and faculty guidance.

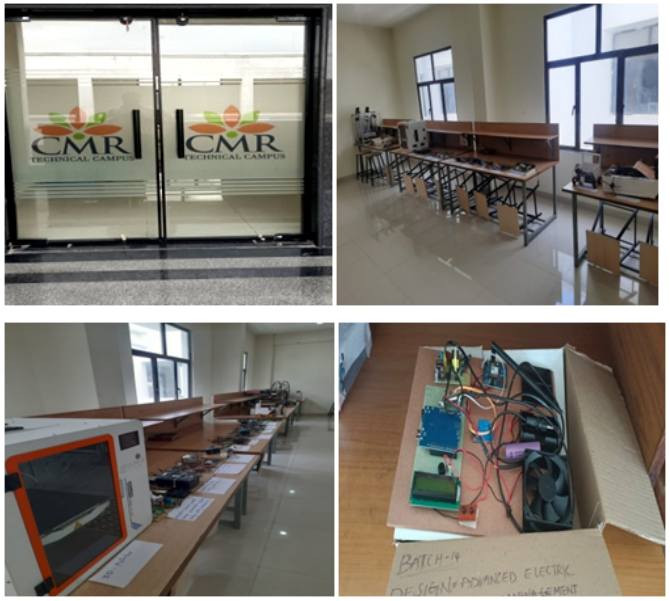

Fig.7.5.1. Project Lab and example outcome kit

The ECE department has a designated lab where students can complete Major projects / Mini projects through the Project Laboratory, undergraduate students gain hands-on experience and develop their project ideas into realistic initiatives.

- Students in this lab have completed many successful projects.
- These systems are always able to access high-speed internet.
- All semester mini-projects and final year projects are completed in this lab.
- The details of the project lab are depicted in the Table. 7.5.1

Table. 7.5.1. Project Lab Lab Available Facility Details

Sl.No	Lab Name	Available Facilities	Quantity	Utilization

1	Project Lab	Cortex-M3 Control Board Set	10	UG ,PG students and Research Scholars
		Arduino IDE	5	
		Raspberry Pi	5	
		RaspberryPi-3 cards	6	
		NI-myDAQ	10	UG ,PG students and Research Scholars
		NI-myRIO	10	
		NI-USRP	10	
		Python Open Source Software	10	
		NI LabView Academy School Licensed Software	5 systems	In-house projects.

Table. 7.5.2. Sample Best Projects of Project Lab

S.No	Project name
1	Smart Assistance for Blind
2.	Android Based Smart home Automation system design using Raspberry Pi3
3.	Automation of LPG Booking system using IOT

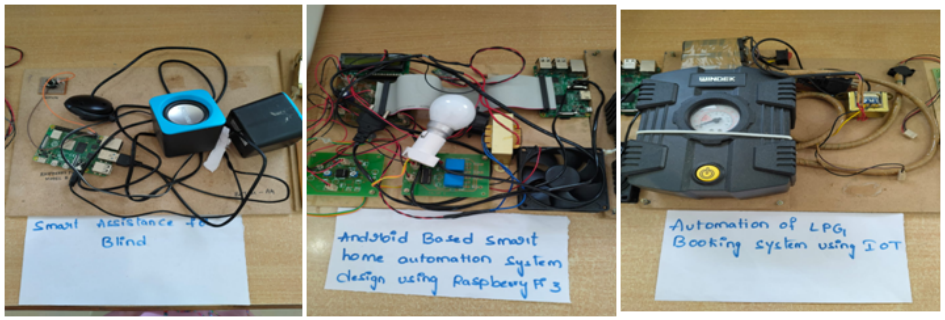

Fig.7.5.2: Few Best Projects of Project Lab

Project Lab Outcomes:

- Students Participated in Project Expos and Hackathons in various colleges
- Students and faculty published papers in reputed journals and conferences
- Provided solutions to the real time problems
- Utilized for enhancement of student and faculty research quality

Project Lab Enhancements

1. Over 100+ student projects completed in the last 3 years.

2. 5+ recognitions in national/state-level hackathons (e.g., Smart India Hackathon, MSME).
3. 6+ faculty-guided prototypes submitted under MSME schemes.

Fig. 7.5.3. Project Lab outcome: First Prize in Project Expo

Fig. 7.5.4. Project Lab outcome: participation certificate from IIT Varanasi

Fig. 7.5.5. Project Lab outcome: First Prize in BITs Pilani, Hyderabad

Research Laboratoty(Room Number 430):

To encourage creativity and progress in research in cutting-edge technologies, the ECE Department has a specialized research laboratory.

- Students and faculty actively participate in multidisciplinary research and proof-of-concept development through this Research Lab.
- High-performance computer equipment and a constant high-speed internet connection are available in the lab to support real-time and data-intensive applications.
- Projects carried out in this lab have produced many research publications, prototypes, and patentable breakthroughs.
- The lab facilitates research at the undergraduate and graduate levels, including faculty-led funded projects and M. Tech. projects.
- Students use this lab space to explore advanced domains such as VLSI, Embedded Systems , Signal and Image Processing and AIML etc.

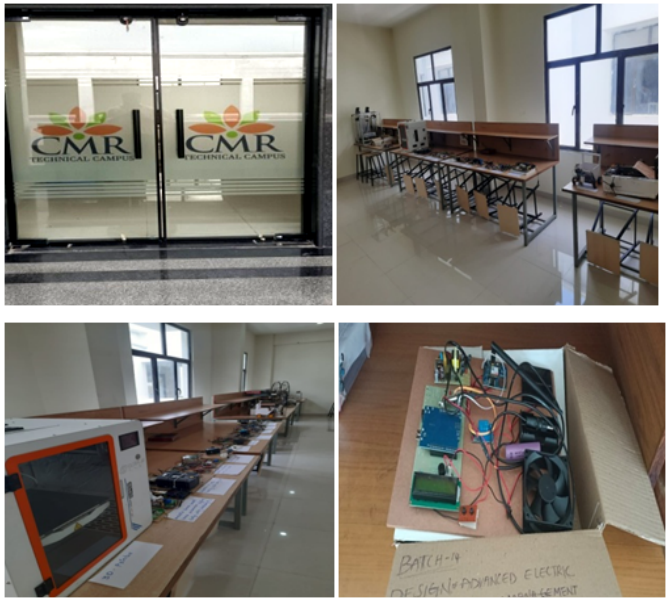

Figure 7.5.6. Research Lab

Table. 7.5.3. Research Lab Available Facility Details

Sl.No	Lab Name	Available Facilities	Quantity	Utilization
1	Research Lab	Mentor Graphics Licensed Software	5 System	UG ,PG students and Research Scholars and Faculty Members for their research purposes.
		Python Open Source Software	10 Systems	
		Raspberry Pi	5	
		Cortex-M3 Control Board Set	10	
		Arduino IDE	5	

Faculty Publications:

Table. 7.5.4. Faculty Publications

S/No.	Description	2021-22	2022-23	2023-24

1	No. of Peer Reviewed Journal Papers Published	19	23	49
2	No. of Peer Reviewed Conference Papers Published	10	38	39
3	No. of Books/Book Chapters Published	1	3	5

Student Publications:

Table. 7.5.5. Student Publications

S/No.	Description	2021-22	2022-23	2023-24
1	No. of Papers Published	4	33	44

B. Availability of Center of Excellence:

The institution hosts dedicated Centers of Excellence (CoEs) in emerging technologies to promote advanced learning, research, and industry collaboration, accessible to students and faculty throughout the academic year.

The department of Electronics & Communication Engineering is running 3 research centers . Those are

- **Center for VLSI & Embedded system design**
- **Center for Advanced Communication Systems**
- **Center for Signal & Image Processing**

Centre for VLSI and Embedded System Design(324):-

The Centre for VLSI and Embedded System Design is a dedicated facility established to support academic, research, and industry-relevant activities in the domains of Very Large Scale Integration (VLSI) and Embedded Systems. The center plays a pivotal role in enhancing the technical competence of students and faculty in core electronics and design-based fields.

VISION

- To become a centre of excellence in the area of VLSI & Embedded Systems through research & consultancy.

MISSION

- Enhancing the career opportunities for students through industry-institute interaction, value added projects in cutting- edge of technology.
- Inculcating entrepreneurial mind set in the students to make them job creators.
- Supporting the Research & Development activities as a consultancy for industrial projects.

OBJECTIVES:-

- Our group is to address the research, development and design problems and advance their solutions in VLSI circuits and embedded system applications.
- Setting up an inter-university co-operative program in which graduate students from other institutes can come from other institute and do their research projects to the facility created.
- Running courses in embedded and VLSI for academicians and industry professionals.

CENTER OUTCOMES:

Table.7.5.6 Center outcomes for VLSI of Centre and Embedded System Design

CO1:	Apply knowledge of VLSI circuits and embedded systems to solve real-time design and research problems.
CO2:	Conduct independent or collaborative research projects using state-of-the-art tools and hardware provided in the center.

CO3:	Collaborate with students and faculty from other institutions through inter-university research programs and shared learning.
CO4:	Gain practical skills and in-depth understanding by participating in specialized courses and hands-on training in VLSI and embedded domains.
CO5:	Demonstrate enhanced technical and professional skills required for academic research, industrial roles, or further innovation in embedded and VLSI technologies

Table. 7.5.7. Executive Body of Centre for VLSI and Embedded System Design

Governing Body		
Faculty committee		
Name	Designation	Email
Prof.G Srikanth	Advisor	gsrikanth.ece@cmrtc.ac.in
Dr.Bandi Doss	Advisor	bandi.doss@cmretc.ac.in
Dr. P. Sireesha	Member Faculty	Sireesha.pendem@cmrtc.ac.in
Mis B.Karuna Sree	Member Faculty	karunasree.ece@cmrtc.ac.in
Mrs.SK Dilshad	Member Faculty	skdilshad.ece@cmrtc.ac.in
Mrs.N.Renuka	Member Faculty	renuka.ece@cmrtc.ac.in
Mis B.Thanuja	Member Faculty	thanuja.ece@cmrtc.ac.in
Student Committee		
Gondala Aravind Kumar	President	227r1a0424@cmrtc.ac.in
Samrudhi Shailesh Kale	Vice President	237R1A0456@cmrtc.ac.in
Komura Bhargavi	Secretary	227R1A0431@cmrtc.ac.in
Gokani Thulasi	Technical/ event Coordinator	227R1A0423@cmrtc.ac.in

Events Oraganised :-

Table. 7.5.8. List of FDPs and STTPs organised

S.No.	**Name of theProgram**	**Date of the Program**	**Duration of the program**	**Name of the Speaker & Designation and Organization**	**No. of People attended**

1	One Week Faculty Development Program on “Emerging trends in VLSI, Communications & AI Enabled IoT Applications”	3/07/2023 - 08/07/2023	6 Days	1.**Mr. P. Madhu**, CEO, Make Skilled, Hyderabad **2.Dr .K. Mallikarjuna Lingam,** HOD, ECE, Mallareddy college of Engineering and Technology 3.**V Srinivasa Rao Kandukuri,** Professor ECE, Aurora college of Engineering, **4.Mr. K. Sudhakar, Trainer,** Lineysha and Thevan Software Technologies, Vijayawada	56
2	One Week Faculty Development Program on “Latest Advances in Smart Materials and Sensor Technology”	12/02/2024 -17/02/2024	6 Days	1.**Mr.Sekaran C**, Technical Consultant and Trainer, HMT (Rtd AGM) **2.Dr Savitha Soma,** Associate Professor, Gurunanak Dev Engineering College, Bidar 3.**Dr Amarnath Gaini,** Associate Professsor,MLRITM, Dundigal,Hyderabad 4.**Dr.Suneetha Rikhari**, Associate Profesor, Malla Reddy University	52
3	3 Days STTP on IoRT-Internet of Robotic Things	16/11/2023 to 18/11/2023	3Days	Anvesh Reddy, CorporateTrainer, Arc Labs, Noida	55

Achievements:

- Professor G.Sreekanth completed his Ph.D

Center of Advanced Communication Systems(Room Number 323):-

Centre for Advanced Communication Systems (Wireless, Mobile and Vehicular Communication Satellite Communication, Co-operative Communication, Cognitive Radio, RF & Microwave Communication, Telecom Networks, Device to Device and Multihop Communication, Multiuser MIMO, Massive MIMO, Information Theory and Coding, Smart Grid Communication, Secure Communication) is a start-up centre in ECE Department for the Academic Year 217-18 which targets the needs of researchers and industry in a fast-paced and technical communications sector, which continues to bring many of the advances that make ultra-fast communications possible. The programme reflects the latest developments in communications.

VISION:-

- To be a Research Centre with its social, ecological and economic environment striving for excellence in education, research and technological services for the society in terms of long-term technical planning.

MISSION

- To provide knowledge-based technological services to satisfy the needs of society and the industry.
- To create and sustain a community of learning in which Aspirants acquire knowledge and learn to apply it professionally with due consideration for Technological Issues.
- To provide an environment for enhancing Advanced Communications related Research at the Department or College Level.
- To Collaborate with R&D industries for further Enhance.
- To develop the solutions for addressing Technological challenges related to Advanced Communications.

OBJECTIVES

- To stimulate, encourage & enhance the quality of Research Development in Advanced Communications.
- To conduct, contract & consultancy services for Project proposals related to Advanced Communications.
- To provide Technical Training programs (SDP’s and FDP’s) in the field of Advanced Communication Systems for both students and Faculty.
- To make the Activities more relevant to the Applications by including Industries and users.
- The long-term relevance of the research will be assured by establishing future needs within the different application areas, from knowledge inside and outside the network.
- Internships for Aspirants into communication domain Industries
- Enabling students of CACS for In house projects which will be reflected as Good Journal publications and as well serving Applications to the Society.

CENTER OUTCOMES:

Table. 7.5.9 Center outcomes for Center of Advanced Communication Systems

CO1:	Demonstrate an understanding of advanced research and development in communication systems.
CO2:	Apply knowledge to develop project proposals and provide consultancy in advanced communication domains.
CO3:	Conduct and participate in technical training (FDPs/SDPs) to build competency in communication systems.
CO4:	Collaborate with industries to develop application-relevant communication technologies.
CO5:	Engage in research activities leading to internships, in-house projects, publications, and societal applications.

Table. 7.5.10. Executive Body *of* Center of Advanced Communication Systems

Governing Body		
Faculty committee		
Name	Designation	Email
Dr.Suraya Mubeen	Advisor	surayamubeen.ece@cmrtc.ac.in
Dr Ch.Sudhamani	Advisor	sudhamani.ece@cmrtc.ac.in
Mr.D.Sreekanth	Member Faculty	sreekanth.ece@cmrtc.ac.in
Dr. K. Bharath Kumar	Member Faculty	bharathkumar.ece@cmrtc.ac.in
Mr.T.Nagarjuna	Member Faculty	nagarjuna.ece@cmrtc.ac.in
Student Committee		
Radarapu sri vardhan	President	227R1A04B4@*cmrtc.ac.in*
M. Laxmi Sai Charan	Vice President	247R5A0404@*cmrtc.ac.in*
Kattekola Sathwik	Secretary	227R1A0486@*cmrtc.ac.in*
Sakhamudi Manaswini	Technical/ event Coordinator	237R1A04B7@*cmrtc.ac.in*

Events Organised:-

Table. 7.5.11.List of FDPs and STTPs Organised

S.No.	Name of the Program	Date of the Program	Duration of the program	Name of the Speaker & Designation and Organization	No. of People attended
1	One Week Faculty Development Program on “Modern Trends and Design Methodologies in Antenna Engineering"	06/03/2023 - 11/03/2023	6 Days	1.Dr.K.Prabhakara Rao, Professor, ,BVRIT, Narsapur, Hyderabad 2.Dr. B.R. Sanjeeva Reddy, Professor and HoD, BVRIT, Narsapur, Hyderabad 3.Dr.D.Rajani, Professor &HoD ECE, SVCN College,North Rajulapalem,SPSR, Nellore(D.T), Andhra Pradesh 4.Dr. Suraya Mubeen, Associate Professor, ECE, CMR Technical Campus	61
2	STTP on “Innovations in Electronics: Shaping the Future of Technology”	22/02/2025	1 Day	Dr. K. Mallikarjuna Lingam, Professor, HOD-ECE Malla Reddy College of Engineering and Technology, Hyderabad	58

Achievements:

- CH Sudhamani completed her Ph.D
- Sudha Chadrika M P completed her Ph.D

Center for Signal & Image Processing(Room Number 323)::-

A role of Mathematics in Engineering for Analysis and understanding of any real-life research problem with a proper understanding of the basics of 1D, 2D and MD(Multi-Dimensional)which are Signals, Image and Video Processing. A role of Signal Transform which leads to multilayer’s such as Communications (Analog /Digital), Signal Processing (Analog/Digital) in the modern era. The centre provides a board area of research problems to work for Under Grad, Post Grad, faculty members to gain potential in that specific domain and also provide assistance for the Research work and Research articles to publish in reputed Journal likes Scopus, SCI, Springer, Elsevier, IEEE etc.

The Center has a potential Faculty Members in the area of Signal Processing, Communications, Image & Video Processing, Antennas too.

VISION

- Transforming the research ideas into reality which satisfies the needs of Society enhancement.

MISSION

- To create the research work environment for both student and Faculty Communities.
- To create learning-based research work from Beginning of the course.
- To inculcate the concept of Interdisciplinary research work among students with all departments.
- To support the R&D activity from the consultancy for projects.
- Training the Grad Students for solving Real-time research works with the help of team CSIP to achieve great heights.

OBJECTIVES

- To enhances the knowledge of Students with the help of ICT tools and Short Term Training Programs in fields of Signal Image Video and Antenna (SIVA).
- To organize Various Faculty Development Program for Faculty and PG Students.
- The Centre also provide Internship program for Under Grad and Post Grad with association with IEEE CMRTC Student Branch.
- The centre also provides support for Project Proposals under SERB, FIST, TARA etc., with the help of team CSIP.
- The Centre provides Industries tie-Up for knowledge and Technological updates enhancement for UG Grads, PG Grad.

CENTRE OUTCOMES:

Table. 7.5.12. Center Outcomes of Center for Signal & Image Processing

CO1:	Apply ICT tools and short-term training programs to enhance knowledge in signal, image, video, and antenna domains (SIVA).
CO2:	Organize and participate in Faculty Development Programs to strengthen academic and research capabilities..
CO3:	Engage in internship programs through institutional and IETE, ISTE student branch collaborations for UG and PG students..
CO4:	Support project proposal development under funding agencies like SERB, FIST, TARA, through the CSIP team..
CO5:	Collaborate with industries for knowledge transfer and technological updates for students and faculty.

Table. 7.5.13. Executive Body of Center for Signal & Image Processing

Governing Body		
Faculty committee		
Name	Designation	Email
Dr.P. Venkatakrishnan	Advisor	surayamubeen.ece@cmrtc.ac.in
Dr.Suraya Mubeen	Advisor	sudhamani.ece@cmrtc.ac.in
Mr. S.Mallesh Narayan	Member Faculty	sreekanth.ece@cmrtc.ac.in
Dr. K.Mohana Lakshmi	Member Faculty	bharathkumar.ece@cmrtc.ac.in
Mr S.Venkatesh	Member Faculty	venkatesh.swarna@cmrtc.ac.in
Md.Abdul Naqi	Member Faculty	mohdabdulnaqi.ece@cmrtc.ac.in
Mr. A.Vamshidhar Reddy	Member Faculty	vamshidharreddy.ece@cmrtc.ac.in

Student Committee		
Polina Akhil	President	227r1a0448@cmrtc.ac.in
B.Yashaswini	Vice President	237r1a0410@cmrtc.ac.in
Shaik Aslam	Secretary	227r1a04B8@cmrtc.ac.in
Akula Spoorthi	Technical/ event Coordinator	227r1a0467@cmrtc.ac.in

Events Organised:-

Table. 7.5.14.List of FDPs and STTPs organised

S.No.	Name of the Event	Date	Duration	Resource Persons	Number of Participants Attended
1	One Week Faculty Development Program on "Decomposition of Multi-Array(Tensor)Data Samples:Application to Low-Rank Matrix-Machine Accurate Learning"	13/12/2021to 18/12/2021	6 days	1.**Dr K Hariharan** Prof,ECE,TCE Madurai 2.**Dr. D.Vaithiyanathan** Assistant Professor Department of Electronics and Communication Engineering National Institute of Technology Delhi 3.**Girish Chandrashekar** Senior Engineer at Advanced Technology Group,NetApp,Bengaluru	58
2	One Week Faculty Development Program On "IoT - Sensors Data Processing-Application to MATLAB – Research Focus"	24/04/2022 - 29/04/2022	6 Days	1.**D.Rajesh Reddy**, Advanced Data Processing Research Institute(ADRIN),ISRO,Dept. of Space,Govt. of India,Secunderbad 2.**Dr.P.Venkatkrishnan**, Professor, ECE, CMRTC, 3.**Dr.Hariharan**, Professor, ECE, TCE Madurai 4.**Dr Vaithyanathan,** Assistant Professor, Department of Electronics and Communication Engineering, National Institute of Technology, Delhi.	50
3	Wavelet Transform and its limitations compared with Fourier Transform	11.10.2022	1 Day	Quantronics Pvt Ltd. Mr. Karthikeyan	108

Achievements:

- K.Mohana Lakshmi completed her Ph.D

C. Utilization of project laboratories/Research laboratory/ Centre of excellence

Table. 7.5.15. Years wise and center wise Papers Publications

Name of the center	2023-24	2022-23	2021-22
CSIP	11	3	0
CVESD	19	8	2
CACS	19	15	1
Total	41	26	3

D. Relevance to Pos/PSOs:-

Centre for VLSI and Embedded System Design:-

CO and PO MAPPING:-

Table. 7.5.16. CO and Po mapping of Centre for VLSI and Embedded System Design

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO 12	PSO1	PSO2	PSO3
CO1	3	2	3	2	3				2	2	2	2	3	3	1
CO2	3	3	3	3	2				2	1	2	2	3	2	1
CO3	2	2	2	1	2	1			3	3	2	2	2	2	1
CO4	3	2	3	2	3				2	2	2	2	3	3	1
CO5	2	2	2	2	2	1			3	3	2	2	2	3	1

Center of Advanced Communication Systems:-

Table. 7.5.17. CO and Po mapping of Advanced Communication Systems:-

CO and PO MAPPING:-

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO 12	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	1			2	2	2	3	3	2	1
CO2	3	3	3	2	2		1		2	2	2	2	3	3	1
CO3	2	2	2	2	2	1			3	3	2	2	2	3	1
CO4	2	2	3	2	3	1	1		3	2	3	2	3	3	1
CO5	3	2	3	2	2	2	2	1	3	2	2	3	3	3	1

Center for Signal & Image Processing:-

CO and PO MAPPING:-

Table. 7.5.18. CO and Po mapping of Centre for Signal and Image Processing

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	3	3	3	1	1		2	2	2	3	3	2	1
CO2	2	2	2	2	2		1		3	3	2	2	2	2	1
CO3	3	2	3	2	3	1		1	3	2	2	2	3	2	1
CO4	3	3	3	3	2		1		2	2	2	2	3	3	1
CO5	2	2	2	2	3	1	1	1	3	3	3	3	2	3	1

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)	1020	51	41	23	73
2023-24(CAYm1)	1200	60	47	24	71
2024-25(CAY)	960	48	38	19	71

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	52500000.00	44373829.20	50000000.00	36978191.00	55000000.00	25235974.00	53000000.00	8065847.00
Library	7500000.00	6879486.00	5000000.00	5732905.00	2500000.00	3716937.00	2150000.00	3640140.00
Laboratory equipment	27500000.00	27140662.80	25000000.00	22617219.00	29650000.00	18324132.00	10000000.00	9888720.00

Teaching and non-teaching staff salary	420000000.00	5935684.80	350000000.00	371258370.00	225000000.00	297708530.00	220000000.00	242407227.00
Outreach Programs	8000000.00	445510044.00	7500000.00	4946404.00	9650000.00	3633622.00	5000000.00	3139279.00
R&D	12500000.00	31887256.80	10000000.00	9814289.00	7500000.00	8290034.00	6425000.00	7497063.00
Training, Placement and Industry linkage	20000000.00	11777146.80	15000000.00	20445381.00	5000000.00	14357439.00	4250000.00	9857797.00
SDGs	16500000.00	14720674.32	15000000.00	15943628.40	10350000.00	11093893.80	7500000.00	9306262.80
Entrepreneurship	11000000.00	9813782.88	10000000.00	10629085.60	6900000.00	7395929.20	5000000.00	6204175.20
Others, specify	150000000.00	161524126.80	125000000.00	134603439.00	54300000.00	123137162.00	23810000.00	85303359.00
Total	**725500000.00**	**759562694.40**	**612500000.00**	**632968912.00**	**405850000.00**	**512893653.00**	**337135000.00**	**385309870.00**

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	1250000	1189898.90	1500000	1574157.33	1500000	1431052.12	1430000	1300956.48
Software	50000	65384.39	50000	59440.36	50000	54036.69	50000	49124.26
SDGs	400000	368642.47	350000	335129.52	300000	304663.20	396000	276966.55
Support for faculty development	150000	95165.67	125000	86514.24	100000	78649.31	25000	71499.38
R & D	300000	357470.26	250000	340447.87	250000	309498.06	200000	281361.88
Industrial Training, Industry expert, Internship	100000	70936	75000	64487.82	100000	58625.29	24000	53295.72
Miscellaneous Expenses*	250000	254250.15	150000	231136.50	200000	210124.09	75000	191021.90
Total	**2500000**	**2401747.84**	**2500000**	**2691313.64**	**2500000**	**2446648.76**	**2200000**	**2224226.17**