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: 11764	**Date of Submission**: 06-05-2026

PART A- Profile of the Institute

A1.Name of the Institute: SREENIVASA INSTITUTE OF TECH. AND MANAGEMENT STUDIES	
Year of Establishment : 1998	Location of the Institute: Bangalore Tirupati Bye Pass Road
A2. Institute Address:DR. VISWESWARAIAH ROAD (BANGALORE-TIRUPATHI BYE-PASS ROAD), MURUKAMBATTU POST	
City:CHITTOOR	State:Andhra Pradesh
Pin Code:517127	Website:www.sitams.org
Email:PRINCIPAL@SITAMS.ORG	Phone No(with STD Code):08572-246299
A3. Name and Address of the Affiliating University (if any):	
Name of the University : JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY,ANANTAPUR	City: Anantpur
State : Andhra Pradesh	Pin Code: 515002
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: **10**
- No. of PG programs: **9**

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	Computer Application	PG	Master of Computer Application	1999	--	Computer Application
2	Engineering & Technology	UG	Civil Engineering	2012	--	Civil Engineering
3	Engineering & Technology	PG	Communication Systems	2010	2020	Electronics and Communication Engineering
4	Engineering & Technology	PG	Computer Science and Engineering	2009	--	Computer Science and Engineering
5	Engineering & Technology	UG	Computer Science and Engineering	1998	--	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 (Artificial Intelligence)	2021	--	Computer Science and Engineering (Artificial Intelligence)
8	Engineering & Technology	UG	Computer Science and Engineering (Data Science)	2021	--	Computer Science and Engineering (Data Science)
9	Engineering & Technology	UG	Electrical and Electronics Engineering	1999	--	Electrical and Electronics Engineering
10	Engineering & Technology	PG	Electrical Power Engineering	2007	2020	Electrical and Electronics Engineering
11	Engineering & Technology	UG	Electronics & Communication Engineering	1998	--	Electronics and Communication Engineering
12	Engineering & Technology	UG	Electronics & Instrumentation Engineering	1998	2016	Electronics and Instrumentation Engineering
13	Engineering & Technology	UG	Information Technology	1998	2016	Information Technology

14	Engineering & Technology	UG	Mechanical Engineering	2012	--	Mechanical Engineering
15	Engineering & Technology	PG	Power Electronics	2009	--	Electrical and Electronics Engineering
16	Engineering & Technology	PG	Product Design	2020	--	Mechanical Engineering
17	Engineering & Technology	PG	Software Engineering	2009	2020	Software Engineering
18	Engineering & Technology	PG	VLSI System Design	2006	--	Electronics and Communication Engineering
19	Management	PG	Master of Business Administration	2000	--	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

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/COM AUTHORIT DETAILS
1	Electronics & Communication Engineering	UG	1998 / --	180	No	NA	180	1998	AICTE-F.No Central/1-109750227(Jul-2022

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 :	K Yogaprasad
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)	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)	2021-22 (CAYm4)	2020-21 (CAYm5)	2019-20 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	180	180	180	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	37	133	110	143	150	180	180

N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	54	71	23	20	18	23
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	0	0	0	0	0	6	7
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	37	187	181	166	170	204	210

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

B4. Enrolment Ratio in the First Year

Table No. B4.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2025-26 (CAY)	180	37	0	20.56
2024-25 (CAYm1)	180	133	0	73.89
2023-24 (CAYm2)	180	110	0	61.11

Average [(ER1 + ER2 + ER3) / 3] = 51.85≡ 8.00

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

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

Item	(2021-22) LYG	(2020-21) LYGm1	(2019-20) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	198.00	204.00	210.00
B=No. of students who graduated from the program in the stipulated course duration	142.00	158.00	159.00

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 74.96

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

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

Academic Performance	CAYm1(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
Mean of CGPA or mean percentage of all successful students(X)	7.11	7.08	7.09
Y=Total no. of successful students	122.00	105.00	134.00
Z=Total no. of students appeared in the examination	122.00	105.00	134.00
API [X*(Y/Z)]	7.11	7.08	7.09

Average API[(AP1+AP2+AP3)/3] : 7.09

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

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

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.70	7.43	7.50
Y=Total no. of successful students	115.00	121.00	143.00
Z=Total no. of students appeared in the examination	131.00	129.00	147.00
API [X * (Y/Z)]	6.76	6.97	7.30

Average API [(AP1 + AP2 + AP3)/3] : 7.01

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

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

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.75	7.90	8.02
Y=Total no. of successful students	121.00	142.00	158.00
Z=Total no. of students appeared in the examination	121.00	143.00	159.00

API [X*(Y/Z)]:	7.75	7.84	7.97

Average API [(AP1 + AP2 + AP3)/3] : 7.85

B9. Placement, Higher Studies, and Entrepreneurship

Table No.B9.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2021-22)	LYGm1(2020-21)	LYGm2(2019-20)
FS*=Total no. of final year students	198.00	204.00	210.00
X=No. of students placed	120.00	130.00	135.00
Y=No. of students admitted to higher studies	0.00	2.00	4.00
Z= No. of students taking up entrepreneurship	0.00	3.00	3.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	60.61	66.18	67.62

Average Placement Index = (P_1 + P_2 + P_3)/3: 64.80 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	N A (I C A
1	S Sugumaran	XXXXXXX37J	Ph.D	Sri Chandrasekarendra Saraswathi Viswa Maha Vidyalaya	ECE	08/10/2021	4.6	Associate Professor	Professor	01/11/2024	R
2	K Yogaprasad	XXXXXXX98F	Ph.D	Rayalseema University	Antenna	16/06/2007	18.10	Associate Professor	Professor	24/07/2024	R
3	S Vijayakumar	XXXXXXX23J	Ph.D	Anna University	Low Power VLSI Design	15/07/2015	10.9	Associate Professor	Professor	22/07/2021	R
4	S Narendra Kumar	XXXXXXX72P	M.E.	Anna University	Applied Electronics	22/04/2021	4.11	Assistant Professor	Assistant Professor		R
5	K Varunkumar	XXXXXXX39N	Ph.D	Vellore Institute of Technology	Nano Technologies	29/07/2024	1.8	Associate Professor	Associate Professor	29/07/2024	R
6	S Ashmad	XXXXXXX29E	M.Tech	JNTUA,Ananthapuramu	Embedded Systems	15/06/2007	16	Assistant Professor	Assistant Professor		R
7	K.M.Hemambaran	XXXXXXX04F	M.Tech and Ph.D.	Rayalseema University	Digital Image Processing	08/08/2005	20.8	Lecturer	Associate Professor	25/04/2025	R
8	B.R.Usha Rani	XXXXXXX34Q	M.Tech	JNTUA,Ananthapuramu	Digital Electronics and Communication Systems	08/10/2021	4.6	Assistant Professor	Assistant Professor		R
9	R.Anitha	XXXXXXX32N	M.E.	Anna University	VLSI DESIGN	26/09/2022	3.6	Assistant Professor	Assistant Professor		R
10	M.Padma	XXXXXXX60E	M.E.	Anna University	Applied Electronics	26/09/2022	3.6	Assistant Professor	Assistant Professor		R
11	Shaik Reshma	XXXXXXX90A	M.E.	OSMAMIA UNIVERSITY	DIGITAL SYSTEMS	01/09/2023	2.7	Assistant Professor	Assistant Professor		R
12	G Geethanjali	XXXXXXX67P	M.Tech	JNTUA,Ananthapuramu	DIGITAL SYSTEM & COMPUTER ELECTRONICS	04/07/2022	3.9	Assistant Professor	Assistant Professor		R
13	K. Yasmin	XXXXXXX37D	M.Tech	JNTUA,Ananthapuramu	VLSI DESIGN	01/07/2024	1.9	Assistant Professor	Assistant Professor		R
14	S.P.Sasirekha	XXXXXXX20B	M.Tech	Dr.M.G.R University	Applied Electronics	22/07/2021	4.8	Assistant Professor	Assistant Professor		R
15	V G Hamsaveni	XXXXXXX05R	M.Tech	S V University,tirupathi	energy mangement	07/06/2005	20.10	Assistant Professor	Associate Professor	07/06/2010	R

16	C Kavitha	XXXXXXX55H	Ph.D	Vellore Institute of Technology	Spindle Radial Error Measurement in Machine Tools using Machine Visison System	06/06/2018	7.10	Associate Professor	Associate Professor		R
17	R Mynuddin Sulthani	XXXXXXX11K	M.Tech	JNTUA,Ananthapuramu	Digital Systems & Computer Electronics	28/06/2010	15.9	Professor	Professor		R
18	Y Ravikiran Varma	XXXXXXX80N	M.Tech	JNTUA,Ananthapuramu	VLSI System Design	07/06/2008	17.10	Assistant Professor	Assistant Professor		R
19	M Saravanan	XXXXXXX15B	Ph.D	St. Peters University, Chennai	Signal Processing	16/07/2018	7.5	Professor	Professor	16/07/2018	R
20	Dr K Prabu Chandran	XXXXXXX68H	Ph.D	St. Peters University, Chennai	ECE	30/08/2018	7.7	Associate Professor	Associate Professor	30/08/2018	R
21	Y J Nazeer Ahmed	XXXXXXX46C	Ph.D	Crescent Institute of Science Technology	Antenna Design	08/09/2021	3.7	Associate Professor	Associate Professor	08/09/2021	R
22	K Dhanusha	XXXXXXX63L	M.Tech	JNTUA,Ananthapuramu	Control System	11/07/2024	1.9	Assistant Professor	Assistant Professor		R
23	P Bharath Kumar	XXXXXXX96N	M.E.	Anna University	VLSI DESIGN	13/07/2020	5	Assistant Professor	Assistant Professor		R
24	K Gopi	XXXXXXX85N	Ph.D	S V University,tirupathi	ECE	28/06/2004	20	Assistant Professor	Professor	22/07/2021	R
25	K Ramadurai	XXXXXXX07H	M.E.	Sathyabama University, Chennai	Applied Electronics	25/10/2023	2.5	Assistant Professor	Assistant Professor		R
26	T Senthil	XXXXXXX02J	Ph.D	Anna University	Machine Learning	06/01/2025	1.3	Associate Professor	Associate Professor	06/01/2025	R
27	DR.D.Bright Anand	XXXXXXX87G	Ph.D	Anna University Chennai	DIGITAL IMAGE PROCESSING	03/01/2024	2.3	Associate Professor	Associate Professor	03/01/2024	R
28	V R Chandini	XXXXXXX31A	M.E.	Anna University	Communication and Networking Engineering	01/10/2021	4.6	Assistant Professor	Assistant Professor		R
29	K Naveena	XXXXXXX76Q	M.Tech	JNTUA,Ananthapuramu	Embedded Systems	13/12/2021	2.7	Assistant Professor	Assistant Professor		R
30	P SreeKavya	XXXXXXX68N	M.Tech	JNTUA,Ananthapuramu	VLSI DESIGN	26/11/2008	17.4	Assistant Professor	Assistant Professor		R
31	Munipraveena Rela	XXXXXXX44E	Ph.D	JNTUA,Ananthapuramu	Image Processing	09/10/2023	2.6	Associate Professor	Associate Professor	09/10/2023	R
32	D Gowtham	XXXXXXX25L	M.E.	Anna University	Applied Electronics	26/09/2022	3.6	Assistant Professor	Assistant Professor		R
33	B Nazeer Hussain	XXXXXXX89M	M.Tech	JNTUA,Ananthapuramu	Communication System	05/07/2021	4.9	Assistant Professor	Assistant Professor		R
34	S Sai Chandana	XXXXXXX87L	M.Tech	JNTUA,Ananthapuramu	VLSI System Design	01/07/2024	1.9	Assistant Professor	Assistant Professor		R
35	C Poorna Chandra	XXXXXXX04F	M.Tech	JNTUA,Ananthapuramu	Embedded Systems	07/12/2021	3.5	Assistant Professor	Assistant Professor		R
36	N Kiran Singh Nayak	XXXXXXX35H	M.Tech	JNTUH,Hyderabad	ECE	29/07/2023	1.10	Assistant Professor	Assistant Professor		R
37	J Prabin Jose	XXXXXXX25E	Ph.D	Anna University	Image Processing	29/07/2023	1.8	Associate Professor	Associate Professor	29/07/2023	R
38	Punnuru Divya	XXXXXXX37R	M.Tech	JNTUA,Ananthapuramu	Digital Electronics and Communication Systems	03/04/2023	2.1	Assistant Professor	Assistant Professor		R

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

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)
C= No. of Students in UG 3rd year (ST)

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

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

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

Description	**CAY(2025-26)**	**CAYm1 (2024-25)**	**CAYm2 (2023-24)**
UG1.B	198	198	198
UG1.C	198	198	198
UG1.D	198	198	198
UG1: Electronics & Communication Engineering	**594**	**594**	**594**
PG1.A	9	9	9
PG1.B	9	9	9
PG1: VLSI System Design	**18**	**18**	**18**
DS=Total no. of students in all UG and PG programs in the Department	612	612	612
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=** 612	**S2=** 612	**S3=** 612
DF=Total no. of faculty members in the Department	28	31	27
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=** 28	**F2=** 31	**F3=** 27
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= 21.86**	**SFR2= 19.74**	**SFR3= 22.67**
Average SFR for 3 years	**SFR= 21.42**		

C3. Faculty Qualification

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

Table No.C3.1: Faculty qualification.

Year	**X**	**Y**	**RF**	**FQ = 2.5 x [(10X + 4Y) / RF)]**
2025-26(CAY)	9	19	30.00	13.83
2024-25(CAYm1)	9	22	30.00	14.83
2023-24(CAYm2)	7	20	30.00	12.50

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = 1/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents:.
- RF2= No. of Associate Professors required = 2/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- RF3= No. of Assistant Professors required = 6/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

Year	**Professors**		**Associate Professors**		**Assistant Professors**	
	Required RF1	**Available AF1**	**Required RF2**	**Available AF1**	**Required RF3**	**Available AF3**
2025-26	3.00	3.00	6.00	6.00	20.00	19.00
2024-25	3.00	3.00	6.00	6.00	20.00	22.00

2023-24	3.00	3.00	6.00	4.00	20.00	20.00
Average	RF1=3.00	AF1=3.00	RF2=6.00	AF2=5.33	RF2=20.00	AF2=20.33

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	Dr. D. Vivekananda	Professor of practice	Indian Space Research Organization Scientist, Bangalore	Electromagnetic Waves and Transmission Lines (23ESC241)	52.00
2	Mr. M. Mohan Babu	Adjunct faculty	Infosys	Digital Signal Processing (23ECE361T)	58.00
3	Dr. N. Nanda Kumar	Visiting faculty	Prime-Bio medical System, Tiruppur	Microprocessor and Microcontroller (23ECE354T)	54.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. P. Niranjana Reddy	Professor of Practice	Indian Space Research Organization	Electromagnetic Waves and Transmission Lines (20ECE352)	60.00
2	Mr. M. Mohan Babu	Adjunct faculty	Infosys	Digital Signal Processing (20ECE361)	52.00
3	Dr. N. Nanda Kumar	Visiting faculty	Prime-Bio medical System, Tiruppurir	Computer Architecture and Microprocessor (20ECE242), Microcontroller and Arduino (20ECE355)	55.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. P. Niranjana Reddy	Professor of Practice	Indian Space Research Organization	Electromagnetic Waves and Transmission Lines (20ECE352	59.00
2	Mr. M. Mohan Babu	Adjunct faculty	Infosys	Digital Signal Processing (20ECE361)	55.00
3	Dr. N. Nandakumar	Visiting faculty	Prime-Bio medical System, Tiruppur	Computer Architecture and Microprocessor (20ECE242), Microcontroller and Arduino (20ECE355)	53.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of peer reviewed journal papers published	11	12	12
2	No. of peer reviewed conference papers published	45	48	56
3	No. of books/book chapters published	1	2	0

C7. Sponsored Research Project

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

(CAYm1)

(CAYm2)

(CAYm3)

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

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 Yogaprasad		Electronics and Communication Engineering	Soil moisture monitoring for agriculture irrigation	WARRIONS Consulting Services and Solutions PVT LTD., Bangaluru	1 Year	1.25
						Amount received (Rs.):1.25

(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 Munipraveena Rela		Electronics and Communication Engineering	Low Cost Water Level Control System	WARRIONS Consulting Services and Solutions PVT LTD., Bangaluru	1 Year	1.00
						Amount received (Rs.):1.00

(CAYm3)

Total amount (Lacs) received for the past 3 years: 2.25

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)

(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 Kavitha	Battery State of Charge (SoC) Estimation using Machine Learning	1 Year	1.12	1.12	Battery Charging State Monitoring and Control, Effective Uses of Technology, Economic Impact and Innovation in Technology
Dr S Sugumaran	Energy Optimization Techniques in Mobile Adhoc Networks	1 Year	1.13	1.13	Energy Optimization Techniques for MANETs, Energy Efficient Routing
			Amount received (Rs.): 2.25		

(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 S Vijayakumar	Design of Power Efficient Arithmetic Blocks and Level Shifter	2 Years	4.25	4.25	Power Efficient Adders, Level Shifters, and arithmetic circuits - Energy Efficiency and Power Reduction
			Amount received (Rs.): 4.25		

Total amount (Lacs) received for the past 3 years : 6.50

PART D: Laboratory Infrastructure in the Department

(Data to be filled in for the Department)

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

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

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification

1	Electrical and Electronics Engineering Workshop	3	Cathode Ray Oscilloscope(20MHz,Dual channel), Function Generator (3MHz)	Both Even and	Mrs.K.Karuna	Lab Technicia	DECE
2	Digital Circuit Design Lab	3	Cathode Ray Oscilloscope(20MHz,Dual channel), Regulated Power Supply (Dual	Odd semester	Mr.M.Sankar	Lab Technicia	BE
3	Electronics Devices and Circuits Lab	3	Function Generator(3MHz), Regulated Power Supply (Dual Channel, 0-30V/DC,2Amp), CRO	Odd semester	Mrs.K.Karuna	Lab Technicia	DECE
4	Python Programming Lab	1	Computer systems(8 GB RAM,1TB Hard disk) Python(Open Source	Odd semester	Mr.MunwarBa	Lab Technicia	DECE
5	Analog &Digital IC Applications Lab	3	Cathode Ray Oscilloscope(20MHz,Dual channel), Regulated Power Supply (Dual	Odd semester	Mr.M.Sankar	Lab Technicia	BE
6	Micro Processor and Micro Controllers Lab	1	Microprocessors kits(8086/88), Interfacing modules, Micro controller Kits(8051/51), Interfacing	Odd semester	Mr.K.Gnanas	Lab Technicia	DECE
7	PCB Design and Proto type development Lab	3	Ni-Mulltisim, Computer Systems(8 GB RAM,1TB Hard disk),Soldering kit and tools	Odd semester	Mr.Munwar B	Lab Technicia	DECE
8	RF system design Lab	1	Computer systems (8 GB RAM,1TB Hard disk)	Odd semester	Mr.Munwar B	Lab Technicia	DECE
9	Tinkering Lab	1	Arduino board, Raspberry Pi Board, Sensors and Actuators	Odd semester	Mr.M.Sankar	Lab Technicia	BE
10	Analog and Digital Communications Lab	3	DC Trainer Kits, AC Trainer Kits, Digital Storage Oscilloscopes(50MHz), Optical	Even semester	Ms.Priscilla	Lab Technicia	DECE
11	Electronic Circuit Analysis Lab	1	Computer Systems(2 GB RAM,500 GB Hard disk), NI-MULTISIM-PSPICE Software, Cathode Ray	Even semester	Mr.K.Gnanas	Lab Technicia	DECE
12	Micro Wave and Optical Communications Lab	4	Klystron Microwave Bench Setup, Gunn Setup, Optical Kits, Optical Module, CRO(20MHz Dual	Even semester	Ms.Priscilla	Lab Technicia	DECE
13	VLSI Design Lab	1	Universal FPGA Development Board (FPGA&CPLD), XILINX VIVADO, Computer Systems(8 GB	Even semester	Mr.Munwar B	Lab Technicia	DECE
14	Machine Learning & DSP Lab	1	Python Open Source S/W, Matlab 2018 S/W with 7 tools , Computer Systems(8 GB RAM,1TB Hard	Even semester	Mr.MunwarBa	Lab Technicia	DECE
15	Design Thinking and Innovation Lab	4	classroom with flexible seating arrangement, Projector/Smart TV and multimedia system, Desktop	Even semester	Mr.M.Sankar	Lab Technicia	BE

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Electrical and Electronics Engineering Workshop	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment is used, and adequate components are provided for experiments. 4. Laboratory equipment undergoes regular servicing and maintenance. 5. The laboratory is maintained in a clean, organized, and safe condition. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. Laboratory Do's and Don'ts are prominently displayed for students. 10. Faculty members and technical staff monitor laboratory activities to ensure safety compliance.
2	Digital Circuit Design Laboratory	1. Safety rules and guidelines are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory activities. 4. Laboratory equipment is regularly inspected and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear appropriate footwear and laboratory aprons for safety. 9. Laboratory Do's and Don'ts are prominently displayed. 10. Faculty and technical staff supervise laboratory activities to ensure safety compliance. 11. Proper grounding and electrical protection are provided for all equipment. 12. Students are instructed to switch off power supplies before making circuit connections or modifications.

3	Electronic Devices and Circuits Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory experiments. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. Laboratory Do's and Don'ts are prominently displayed for students. 10. Faculty and technical staff monitor laboratory activities to ensure safety and proper equipment handling.
4	Python Programming Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and systems are used for laboratory activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear appropriate footwear and laboratory aprons during laboratory sessions. 9. UPS backup facility is available to prevent data loss and ensure uninterrupted operation. 10. The laboratory is air-conditioned to maintain a conducive working environment. 11. Laboratory Do's and Don'ts are prominently displayed for students. 12. Faculty and technical staff monitor laboratory activities to ensure safety and proper use of resources.
5	Analog &Digital IC Applications Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory experiments. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. Laboratory Do's and Don'ts are prominently displayed for students. 10. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment.
6	Microprocessor and Micro controller Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory experiments. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. UPS backup facility is available to ensure uninterrupted operation and protect equipment. 10. Laboratory Do's and Don'ts are prominently displayed for students. 11. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment.
7	PCB Design Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Laboratory computers are regularly serviced and maintained. 4. The laboratory is kept clean, organized, and safe. 5. Students are instructed to avoid the use of mobile phones during laboratory sessions. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. UPS backup facility is available to protect systems and prevent data loss. 9. The laboratory is air-conditioned to provide a comfortable working environment. 10. Laboratory Do's and Don'ts are prominently displayed for students. 11. Faculty and technical staff monitor laboratory activities to ensure safety and proper use of resources.
8	RF system design Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. UPS backup facility is available to ensure uninterrupted operation and equipment protection. 10. The laboratory is air-conditioned to provide a comfortable working environment. 11. Laboratory Do's and Don'ts are prominently displayed for students. 12. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment.

9	Analog & Digital Communications Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory experiments. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. Laboratory Do's and Don'ts are prominently displayed for students. 10. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment.
10	Electronic Circuit Analysis Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory experiments. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. UPS backup facility is available to ensure uninterrupted operation and equipment protection. 10. Laboratory Do's and Don'ts are prominently displayed for students. 11. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment.
11	Microwave and Optical Communications Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory experiments. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. Laboratory Do's and Don'ts are prominently displayed for students. 10. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment.
12	VLSI Design Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for laboratory activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. UPS backup facility is available to ensure uninterrupted operation and equipment protection. 10. The laboratory is air-conditioned to provide a comfortable working environment. 11. Laboratory Do's and Don'ts are prominently displayed for students. 12. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment.
13	Machine Learning & DSP Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and systems are used for laboratory activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. UPS backup facility is available to ensure uninterrupted operation and equipment protection. 10. The laboratory is air-conditioned to provide a comfortable working environment. 11. Laboratory Do's and Don'ts are prominently displayed for students. 12. Faculty and technical staff monitor laboratory activities to ensure safety and proper use of equipment and resources.
14	Design Thinking And Innovation Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and materials are used for laboratory activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Students are advised to avoid the use of mobile phones during laboratory sessions. 7. Storage facilities are provided for students' personal belongings. 8. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 9. Laboratory Do's and Don'ts are prominently displayed for students. 10. Faculty and technical staff monitor laboratory activities to ensure safety and proper use of equipment.

15	Tinkering Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment, tools, and components are used for laboratory activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical and workshop hazards. 9. Laboratory Do's and Don'ts are prominently displayed for students. 10. Faculty and technical staff monitor laboratory activities to ensure safety and proper handling of equipment and tools.
16	Project Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment, tools, and components are used for project activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students wear shoes and laboratory aprons to minimize electrical hazards. 9. UPS backup facility is available to ensure uninterrupted operation and equipment protection. 10. The laboratory is air-conditioned to provide a comfortable working environment. 11. Laboratory Do's and Don'ts are prominently displayed for students. 12. Faculty and technical staff monitor laboratory activities to ensure safety and proper use of equipment and tools.
17	Research Laboratory	1. Safety rules and instructions are clearly displayed in the laboratory. 2. First-aid boxes and fire extinguishers are available at accessible locations. 3. Only functional equipment and components are used for research activities. 4. Laboratory equipment is regularly serviced and maintained. 5. The laboratory is kept clean, organized, and safe. 6. Storage facilities are provided for researchers' and students' personal belongings. 7. Stabilizer-controlled power supply ensures safe and uninterrupted operation. 8. Students and researchers wear appropriate footwear and laboratory aprons to minimize electrical hazards. 9. UPS backup facility is available to ensure uninterrupted operation and equipment protection. 10. The laboratory is air-conditioned to provide a comfortable research environment. 11. Faculty members, researchers, and technical staff follow established safety procedures while handling laboratory equipment.

D3. Project Laboratory/Research Laboratory

The Department of Electronics and Communication Engineering has established several advanced facilities to support project-based learning, research activities, innovation, entrepreneurship, and startup initiatives. These facilities are separate from the regular instructional laboratories listed under Sections 7.1 and 7.2 and are exclusively utilized for projects and product development.

Project Laboratory:

The **Project Laboratory** is a specialized facility established to support students in the planning, design, development, implementation, and testing of innovative engineering projects. The laboratory provides a conducive environment for students to apply theoretical concepts acquired through academic coursework to address real-world engineering challenges through hands-on project development.

The laboratory is equipped with advanced hardware and software resources, including microcontroller and embedded system development kits, Internet of Things (IoT) platforms, communication system trainers, FPGA and VLSI design tools, PCB design and fabrication facilities, simulation software, sensors, testing and measurement instruments, robotics kits, and rapid prototyping equipment. These facilities enable students to undertake projects across various emerging technology domains.

Objectives of the Project Laboratory

1. To provide practical exposure to engineering design and project implementation.
2. To facilitate the application of theoretical knowledge to solve real-world problems.
3. To promote innovation, creativity, and research-oriented thinking.
4. To develop technical, analytical, and problem-solving skills.
5. To encourage interdisciplinary collaboration and teamwork.
6. To support entrepreneurship, product development, and industry-oriented projects.

Major Areas of Project Development

- Embedded Systems and Microcontroller Applications
- Internet of Things (IoT)
- VLSI and FPGA-Based Design
- Signal and Image Processing
- Wireless and Mobile Communication
- Robotics and Automation
- Artificial Intelligence and Machine Learning
- Smart Systems and Industry 4.0 Applications

Outcomes and Benefits

The Project Laboratory enables students to:

- Design and develop engineering solutions to complex problems.
- Gain practical experience in system integration, testing, and validation.
- Enhance innovation, critical thinking, and research capabilities.
- Develop project management, teamwork, and communication skills.
- Build industry-relevant competencies using modern engineering tools.
- Transform innovative ideas into functional prototypes and products.

The **Project Laboratory** plays a significant role in strengthening experiential learning, innovation, research, and entrepreneurship within the institution. It serves as a bridge between academic learning and industry requirements, preparing students for successful careers in engineering, technology development, higher studies, and startup ventures.

Table 7.5.1 Project Laboratory Facilities:

S.No	Name of the Facility	Details	Purpose
1	DSP Software & Hardware kits	TI DSP Starter Kits, TMS 320C6713 with CCS	Development and testing of real-time Digital Signal Processing applications
2	Spectrum Analyzer	RF spectrum analysis up to the 1000MHz frequency range	Analysis of communication signals, wireless systems, and RF projects
3	Frequency Counters	Digital frequency measuring instrument(1 GHz)	Measurement and verification of oscillator and communication signals.
4	**Pulse Generator**	**50 n sec duration, rise time of 3-5 ns**	**Generation of clock and test signals for embedded and communication projects**
5	Embedded System Boards	ARM Cortex, STM32, LPC2148, Raspberry Pi, Arduino Boards, ESP32 boards	Development of embedded systems, IoT, automation, and real-time applications
6	AM/FM Generator	0.1 to 110 MHz Frequency Range	Generating signals for doing projects



Fig 7.5.1.1 –Project Lab





Fig 7.5.1.2 – Spectrum Analyzer and Digital Storage Oscilloscope

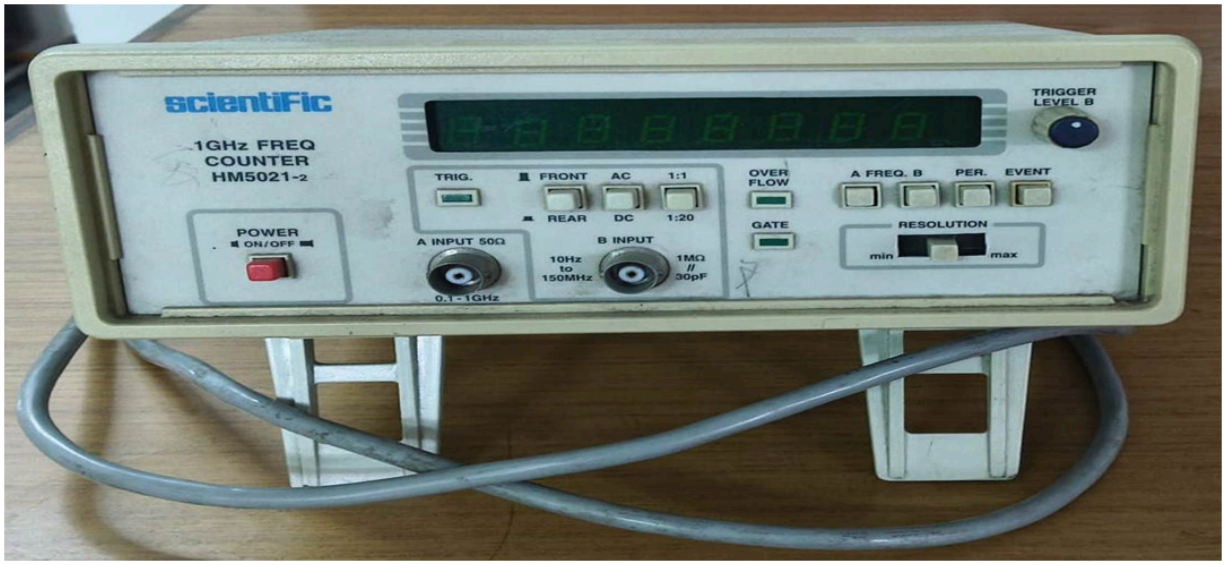


Fig 7.5.1.3 –Frequency Counter



Fig 7.5.1.4–AM-FM Generator

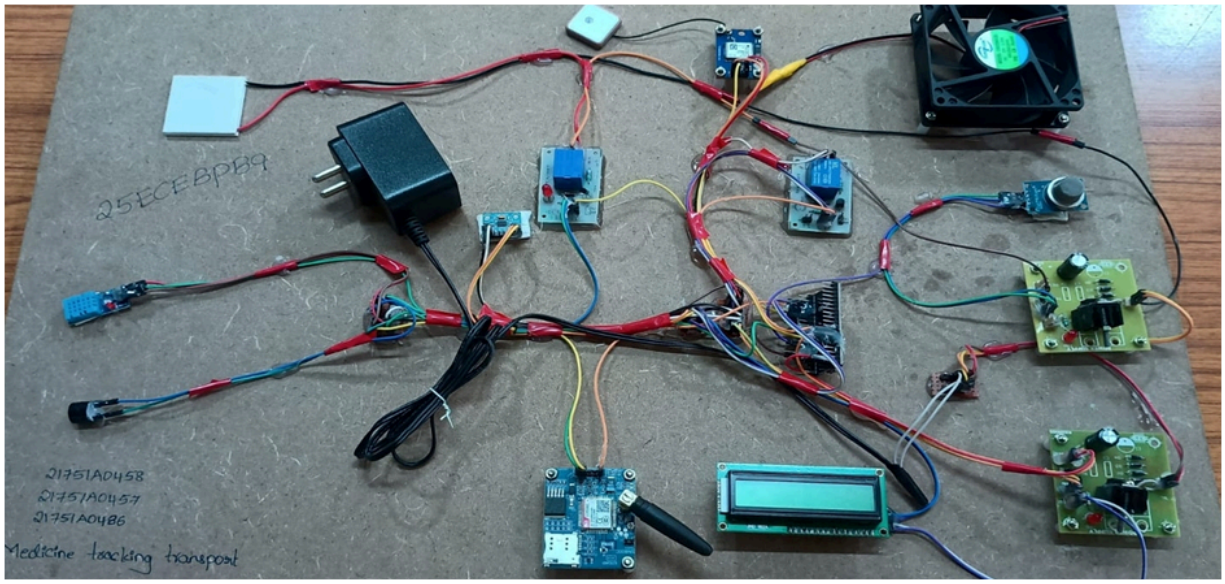


Fig 7.5.1.5.1 –Sample Project (Medicine tracking transport)

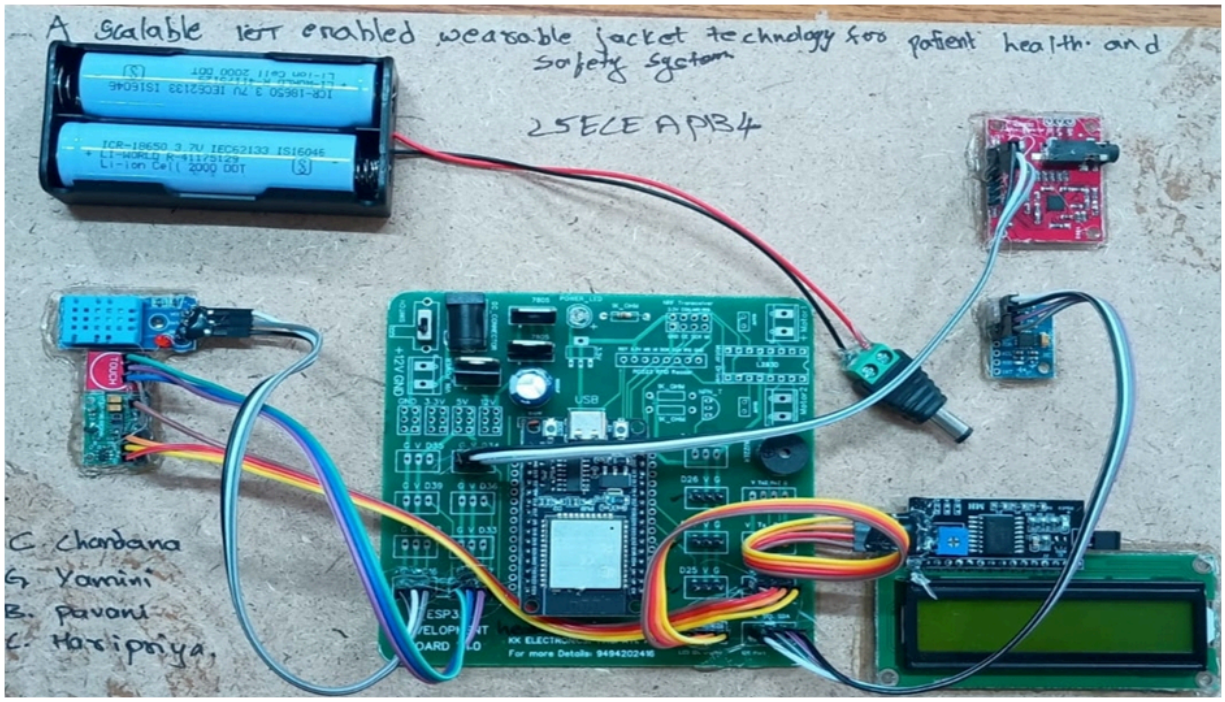


Fig 7.5.1.5.2 –Sample Project (A Scalable IOT enabled wearable jacket technology for patient health and safety system)

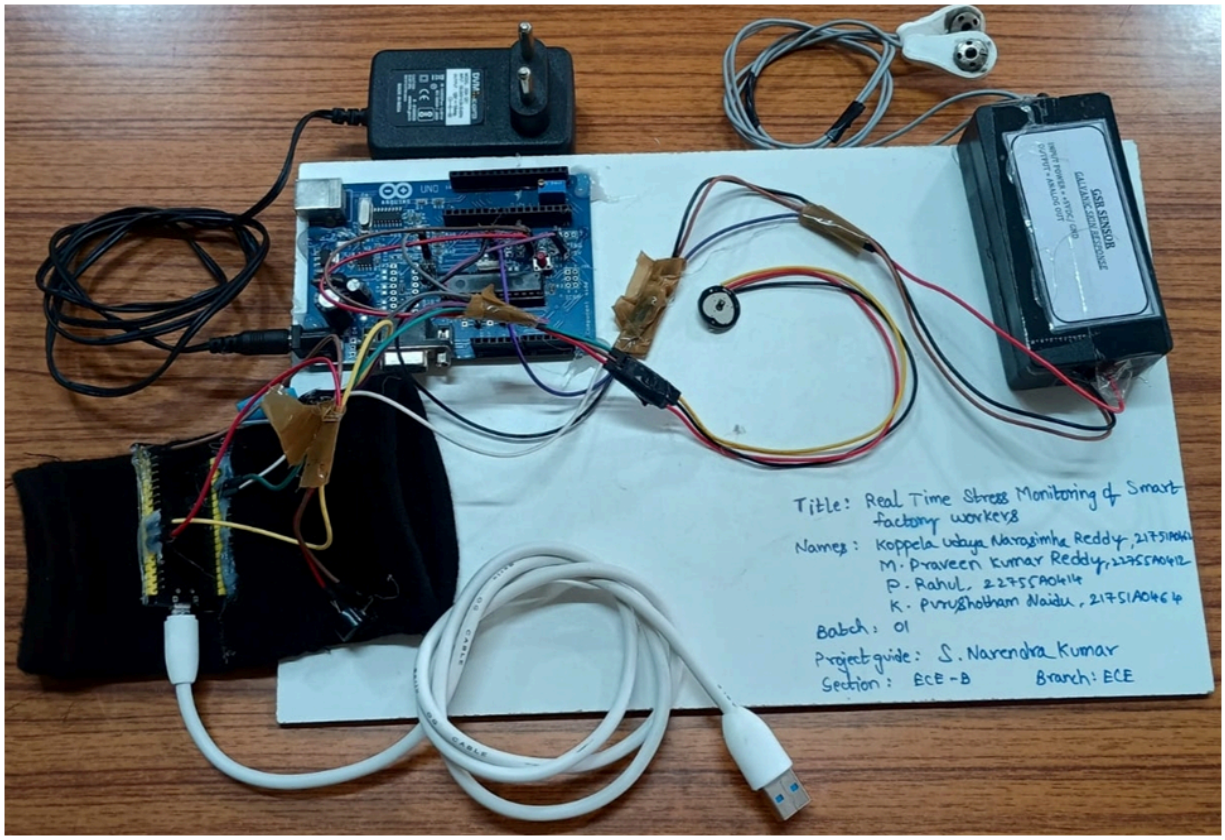


Fig 7.5.1.5.3 –Sample Project (Real time stress monitoring of smart factory workers)

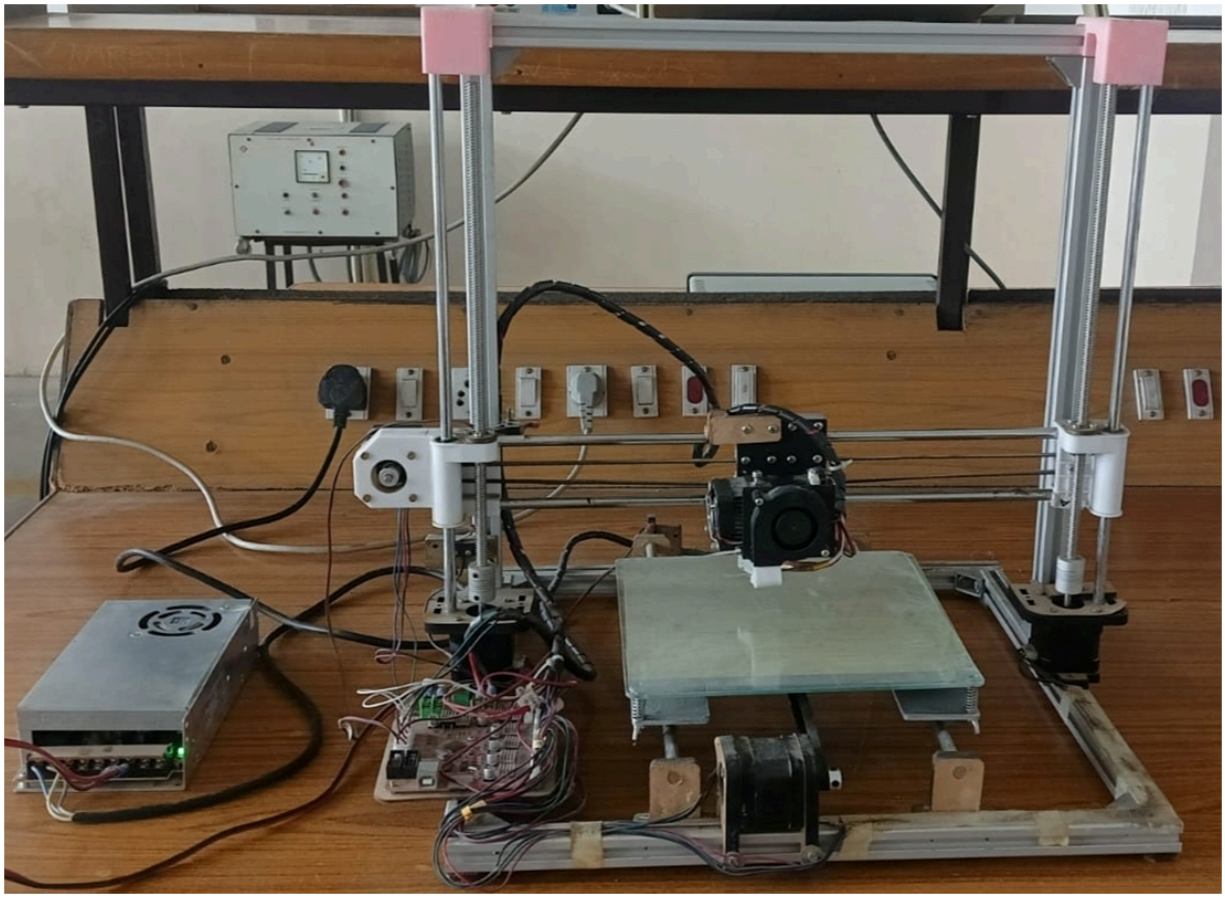


Fig 7.5.1.5.4 –Sample Project (3D-Printer)

Research Laboratory:

The **Research Laboratory** of the Electronics and Communication Engineering (ECE) Department serves as a dedicated center for advanced learning, innovation, research, and technology development. The laboratory provides a conducive environment for students, faculty members, and research scholars to undertake research activities in emerging and interdisciplinary domains of Electronics and Communication Engineering.

The laboratory is equipped with state-of-the-art hardware platforms, simulation software, development kits, testing and measurement instruments, communication analyzers, embedded system tools, FPGA and VLSI design platforms, IoT development boards, RF and microwave testing equipment, and advanced computing resources. These facilities enable researchers to perform experimentation, modeling, analysis, validation, and prototype development in cutting-edge technology areas.

Objectives of the Research Laboratory

1. To promote research and innovation in emerging areas of Electronics and Communication Engineering.
2. To facilitate advanced experimentation, analysis, and technology development.
3. To encourage interdisciplinary and industry-oriented research activities.
4. To support funded research projects, consultancy work, and product development.
5. To foster a research culture among students and faculty members.
6. To enhance publication, patenting, and entrepreneurship activities.

Major Research Areas

- Communication Systems and Networks
- Digital Signal and Image Processing
- VLSI Design and FPGA-Based Systems
- Embedded Systems and Real-Time Applications
- Internet of Things (IoT) and Smart Devices
- Artificial Intelligence and Machine Learning
- RF and Microwave Engineering
- Wireless Sensor Networks and 5G Technologies
- Robotics and Automation Systems
- Industry 4.0 and Intelligent Systems

Outcomes and Benefits

The Research Laboratory enables students and faculty members to:

- Apply advanced engineering concepts to solve complex real-world problems.
- Develop innovative solutions and technology-driven products.
- Strengthen research, analytical, and critical thinking skills.

- Publish research findings in reputed journals and conferences.
- Generate intellectual property through patents and technology transfer.
- Enhance collaboration with industry and research organizations.
- Foster entrepreneurship and startup development initiatives.

The **Research Laboratory** plays a pivotal role in strengthening the department's research ecosystem by promoting innovation, scientific inquiry, and technological excellence. Through its advanced facilities and collaborative environment, the laboratory contributes significantly to academic excellence, research productivity, industry engagement, and entrepreneurial development, thereby preparing students and faculty members to address future technological challenges and opportunities.

Departmental Innovation Ecosystem

Through the establishment of specialized facilities such as the **Project Laboratory** and **Research Laboratory**, the department has created a vibrant ecosystem that nurtures creativity, innovation, research excellence, and entrepreneurship. These laboratories collectively provide students with opportunities for experiential learning, prototype development, advanced research, industry interaction, and startup incubation, thereby fostering holistic technical and professional growth aligned with the needs of modern engineering and technological advancements.

Table 7.5.2 Research Laboratory Facilities:

S.NO	Name of the Facility	Details	Purpose for Creating the Facility
1	CMOS Analog IC Design	Computer Systems(8 GB RAM,1TB Hard disk), Tanner Tools,	To facilitate the design, simulation, and verification of CMOS analog integrated circuits such as amplifiers, current mirrors, voltage references, and operational amplifiers
2	CMOS Digital IC Design	Universal FPGA Development station(FPGA&CPLD), XILINX –VIVADO, Computer Systems(8 GB RAM,1TB Hard disk), Artex Board, ZED Development Board	To enable the design, implementation, simulation, and verification of digital VLSI circuits and FPGA-based systems using industry-standard tools.
3	CMOS Mixed Signal IC Design	Computer Systems(8 GB RAM,1TB Hard disk) , Tanner Tools,	To support the design and simulation of mixed-signal integrated circuits combining analog and digital functionalities, including ADCs, DACs, PLLs, and sensor interfaces.
4	Physical design Automation	Computer Systems(8 GB RAM,1TB Hard disk) , Tanner Tools,	To provide hands-on experience in IC physical design, floor planning, placement, routing, layout verification, timing analysis, and chip optimization using EDA tools.
5	Moku :Go Tool	Analog input/outputs-Two 12 bit, Input bandwidth 30MHz,Digital I/O-16 channels, Output Bandwidth-20MHz,M2 Power supplies	To provide hands-on experience on experiments ,analysis and designing



Figure 7.5.2.1-MOKU GO: Tool



Figure 7.5.2.2-Tech Nisha Robo (Sample)

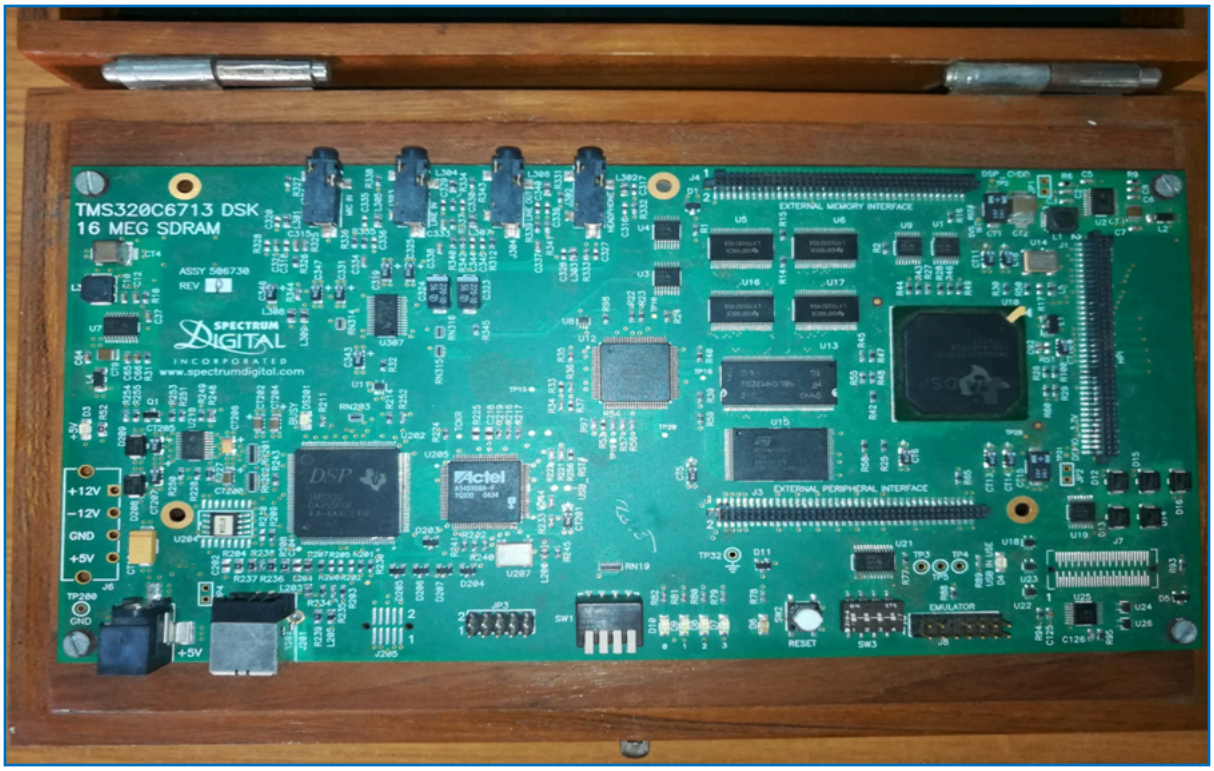


Figure 7.5.2.3- DSP Kit

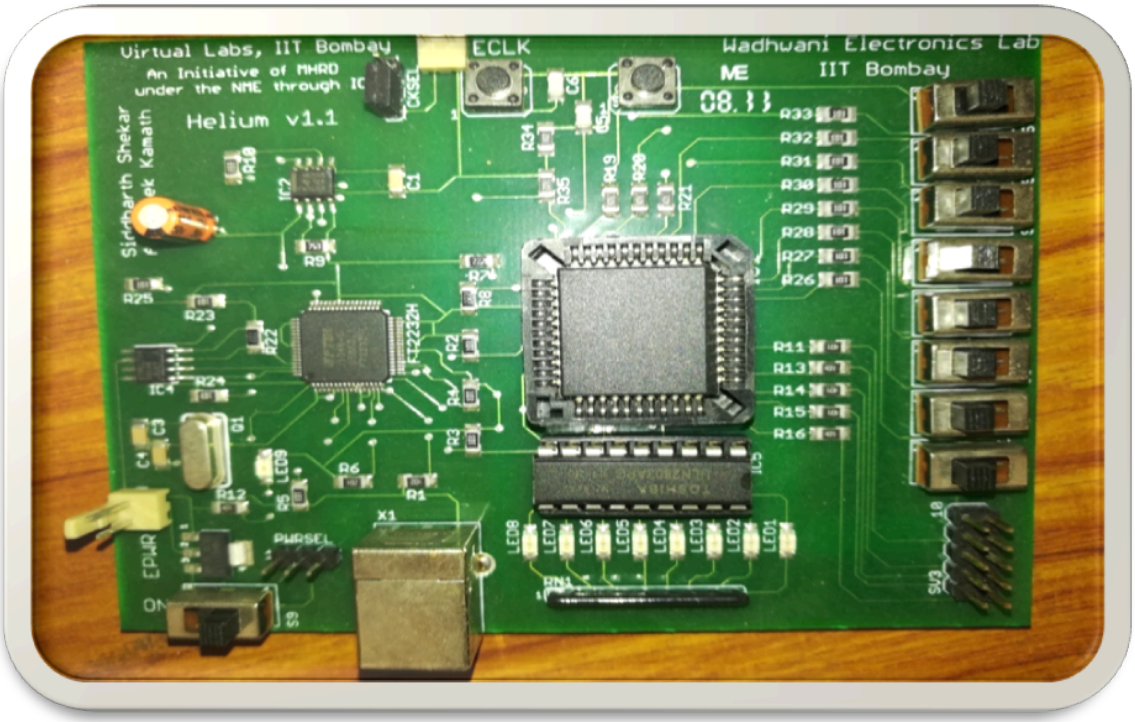


Figure 7.5.2.4- Xilinx Board



Figure 7.5.2.5- Embedded system 89C51 Board

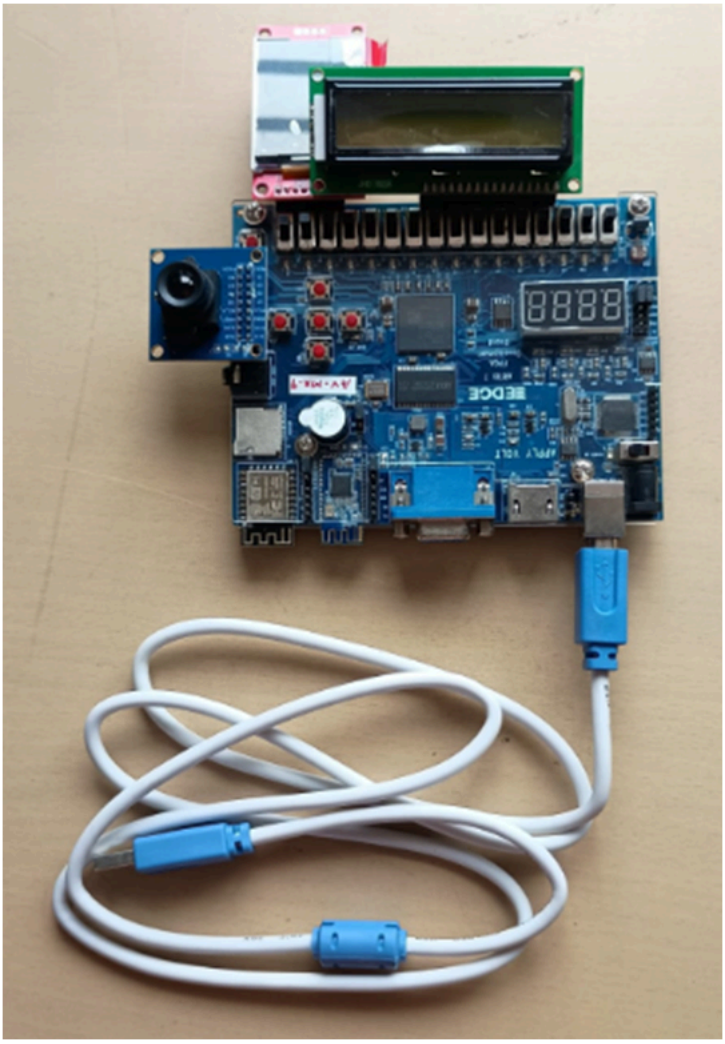


Figure 7.5.2.6- Artix Board

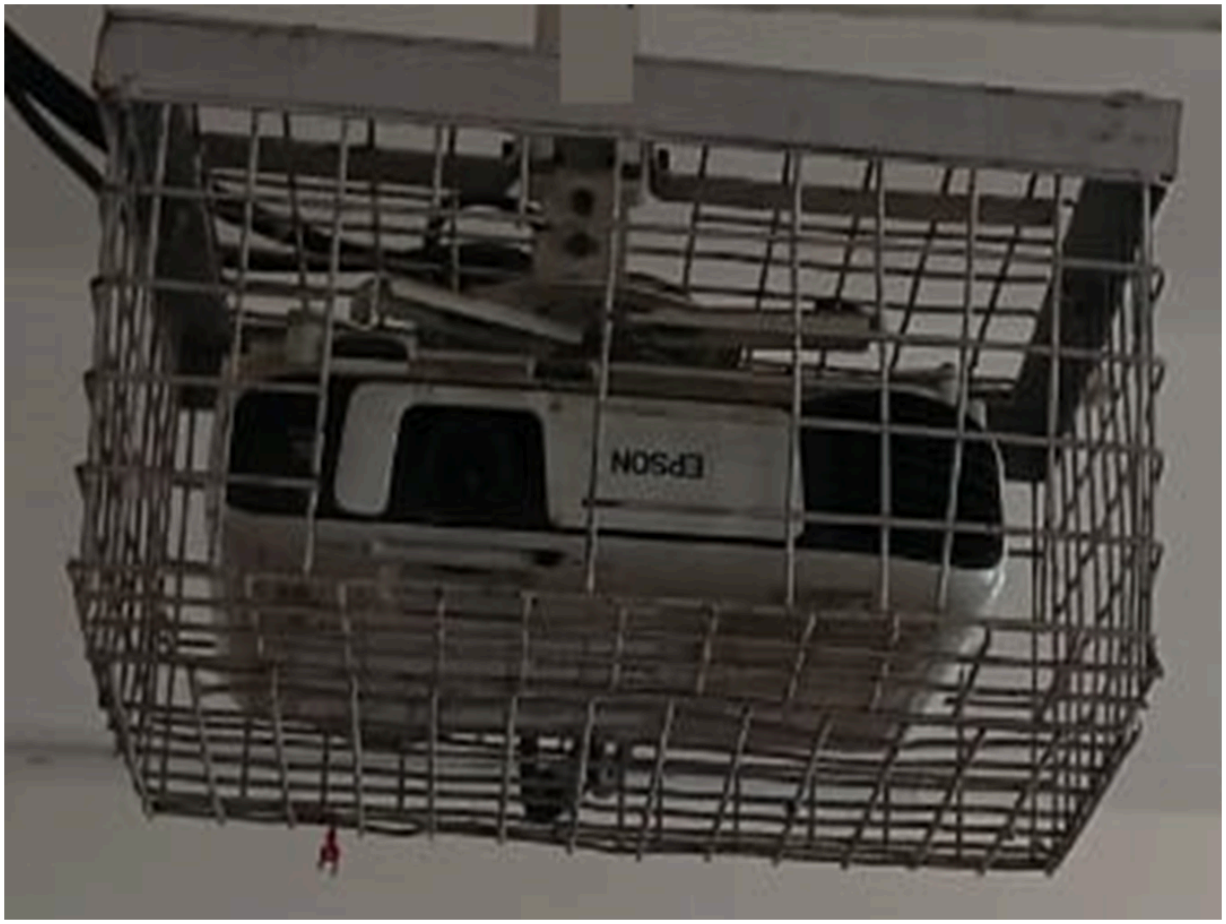


Figure 7.5.2.7 LCD Projector

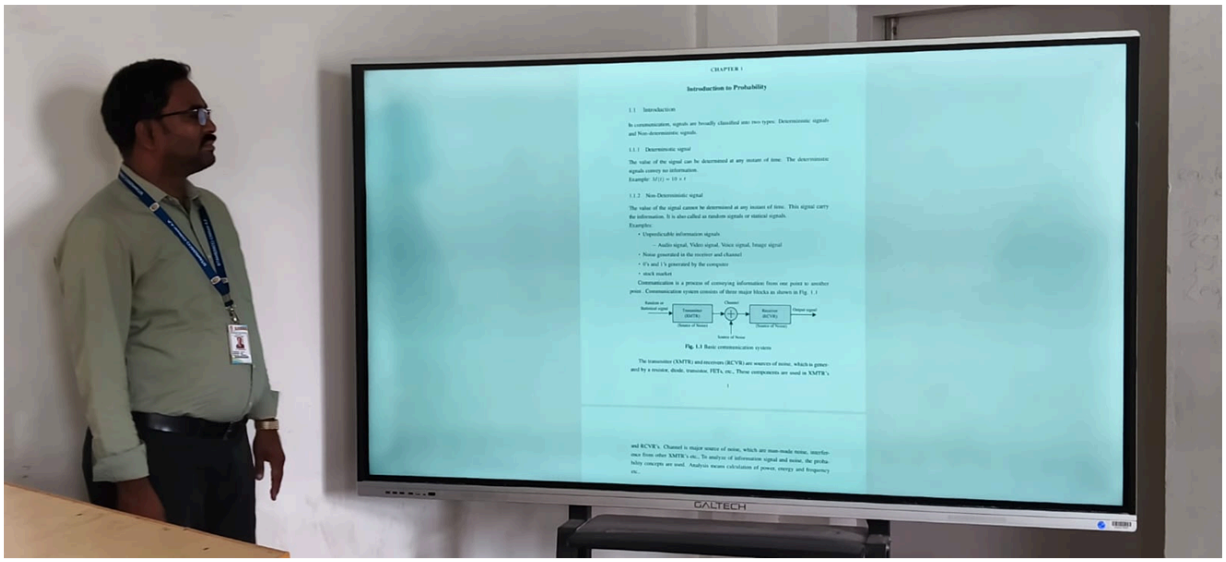


Figure 7.5.2.8 Interactive Panel Board

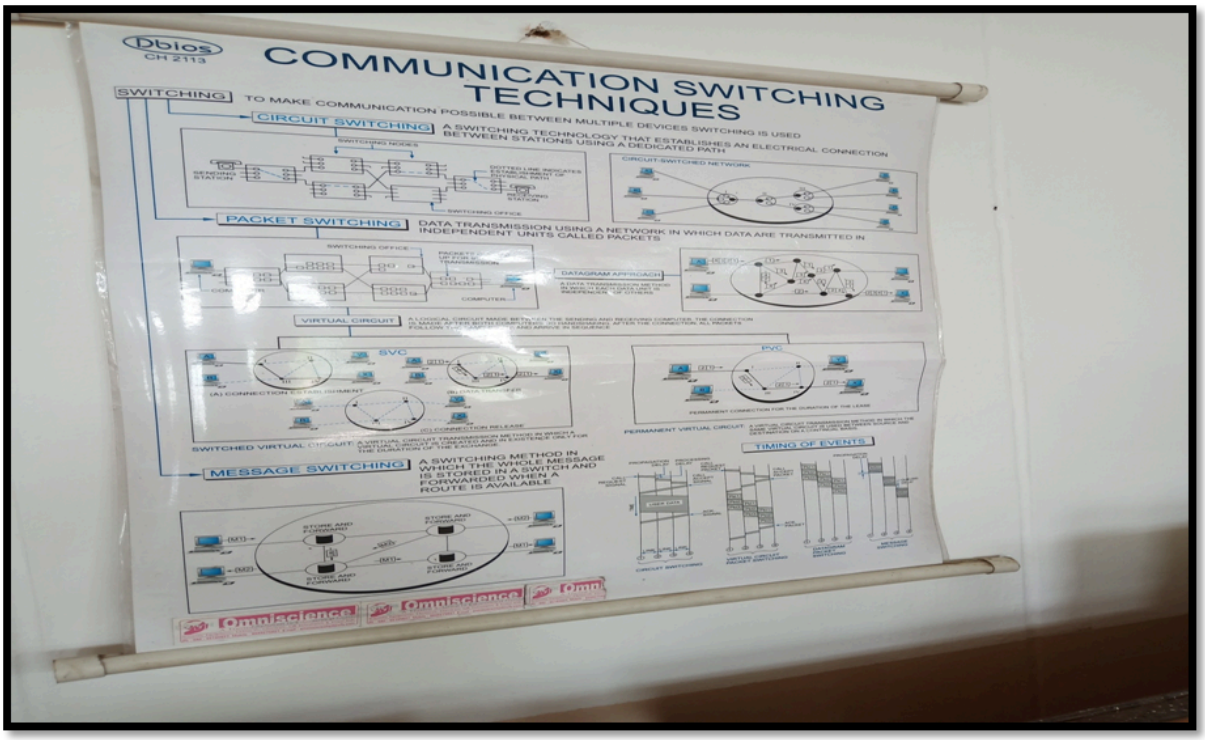


Figure 7.5.2.9 Chart Display in Communication Lab

PART E: First Year faculty and financial Resources

(Data to be filled in for the first year course faculty and budget allocation and utilization)

E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage= ((NS1*0.8) + (NS2*0.2))/RF
2023-24(CAYm2)	810	40	38	17	84
2024-25(CAYm1)	870	44	45	17	90
2025-26(CAY)	990	50	42	15	73

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 2025-26	Actual Expenses in 2025-26 till	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till
Infrastructure Built-Up	30166232.32	26934136	17969331.57	16188587	15456059	14179871	37330467.9	33936789
Library	722615.04	645192	461091.78	415398	86403.21	79269	537941.8	489038
Laboratory equipment	4886519.68	4362964	202657.14	182574	15537085.63	14254207.00	8002007.2	7274552
Teaching and non-teaching staff	114762756.6	102466747	101678387.6	91602151	90508334.21	83035169	73650908.1	66955371
Outreach Programs	85630.72	76456	50727	45700	127660.8	117120	260696.7	236997
R&D	1360800	1215000	123432	1112000	1234425	1132500	721050	655500

Training, Placement and	82957.28	74069	1096404.72	987752	1038638.11	952879	53849.4	48954
SDGs	834428	745025	462870	417000	451750.5	414450	100586.2	91442
Entrepreneurship	280459.2	250410	146874.09	132319	288907.77	265053	411338.4	373944
Others, specify	10340723.68	9232789	14003195.33	12615491	41283970.18	37875202	40042039.4	36401854
Total	**163523122.52**	**146002788**	**136194971.23**	**123698972**	**166013234.41**	**152305720.00**	**161110885.1**	**146464441**

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 2025-26**	**Actual Expenses in 2025-26 till**	**Budgeted in 2024-25**	**Actual Expenses in 2024-25 till**	**Budgeted in 2023-24**	**Actual Expenses in 2023-24 till**	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**
Laboratory equipment	952000	863700	2071600	1945800	3015000	2912900	1900000	1840500
Software	165000	137000	0	0	0	0	89000	64500
SDGs	182000	147500	92500	77700	102500	84700	265000	23200
Support for faculty development	125700	108500	105000	98400	100000	91800	130000	124600
R & D	265000	240500	232000	207300	255600	231500	189000	165900
Industrial Training, Industry expert,	159500	146500	205000	184200	223500	194700	52500	38500
Miscellaneous Expenses*	135000	121600	126800	112500	90000	64700	89000	78300
Total	**1984200**	**1765300**	**2832900**	**2625900**	**3786600**	**3580300**	**2714500**	**2335500**