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**: 2
Application No: 11178	**Date of Submission**: 16-11-2025

PART A- Profile of the Institute

A1.Name of the Institute: Kathir College of Engineering	
Year of Establishment : 2008	Location of the Institute: 11068028645299037 770839140571454
A2. Institute Address:"Wisdom Tree", Avinashi Road, Neelambur, Coimbatore.	
City:Coimbotore	State:Tamil Nadu
Pin Code:641062	Website:www.kathir.ac.in
Email:principal@kathir.ac.in	Phone No(with STD Code):0422-2203778
A3. Name and Address of the Affiliating University (if any):	
Name of the University : Anna University Chennai	City: Chennai
State : Tamil Nadu	Pin Code: 600025
A4. Type of the Institution: Self-Supported Institute	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **7**
- No. of PG programs: **6**

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

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	PG	Applied Electronics	2013	2024	Electronics and Communication Engineering
2	Engineering & Technology	UG	Artificial Intelligence and Data Science	2020	--	Artificial Intelligence and Data Science
3	Engineering & Technology	UG	Computer & Communication Engineering	2023	--	Computer and Communication Engineering
4	Engineering & Technology	PG	Computer Science and Engineering	2012	--	Computer Science and Engineering
5	Engineering & Technology	UG	Computer Science and Engineering	2008	--	Computer Science and Engineering
6	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2024	--	Computer Science and Engineering
7	Engineering & Technology	UG	Electrical and Electronics Engineering	2008	--	Electrical and Electronics Engineering

8	Engineering & Technology	UG	Electronics & Communication Engineering	2008	--	Electronics and Communication Engineering
9	Engineering & Technology	PG	Manufacturing Engineering	2013	--	Mechanical Engineering
10	Engineering & Technology	UG	Mechanical Engineering	2009	--	Mechanical Engineering
11	Engineering & Technology	PG	Power Electronics & Drives	2013	--	Electrical and Electronics Engineering
12	Engineering & Technology	PG	VLSI Design & Embedded Systems	2025	--	Electronics and Communication Engineering
13	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
Computer Science and Engineering	Yes	Computer Science and Engineering	UG
Mechanical Engineering	No	Mechanical Engineering	UG
Electrical and Electronics Engineering	No	Electrical and Electronics Engineering	UG
Electronics and Communication Engineering	No	Electronics & Communication Engineering	UG

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.

Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

No Record

PART-B: Program information

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

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRA DURATIO
1	Electronics & Communication Engineering	UG	2008 / --	60	Yes	2025	120	2025	F.No.Southern/1-44639335976/2025/EOA	Applying first time	--	--	0	4

Sanctioned Intake for Last Five Years for the VLSI Design & Embedded Systems	
Academic Year	**Sanctioned Intake**
2025-26	120
2024-25	60
2023-24	60
2022-23	60
2021-22	60
2020-21	60

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. N. K. ANUSHKANNAN
B. Nature of appointment:	Regular
C. Qualification:	M.E. and Ph.D.

B3. Program Details

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

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)	2021-22 (CAYm4)	2020-21 (CAYm5)	2019-20 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	120	60	60	60	60	60	60
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	120	60	60	59	40	2	33
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	4	4	3	1	6	1
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	6	3	0	0	0	23	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	126	67	64	62	41	31	34

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

B4. Enrolment Ratio in the First Year

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

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2025-26 (CAY)	120	120	6	105.00
2024-25 (CAYm1)	60	60	3	105.00
2023-24 (CAYm2)	60	60	0	100.00

Average [(ER1 + ER2 + ER3) / 3] = 103.33≡ 100

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

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

Item	(2021-22) LYG	(2020-21) LYGm1	(2019-20) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	61.00	66.00	61.00
B=No. of students who graduated from the program in the stipulated course duration	34.00	22.00	23.00

Success Rate (SR)= (B/A) * 100	55.74	33.33	37.70

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 42.26

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

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

Academic Performance	CAYm1(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
Mean of CGPA or mean percentage of all successful students(X)	8.02	7.39	7.45
Y=Total no. of successful students	63.00	57.00	54.00
Z=Total no. of students appeared in the examination	63.00	57.00	54.00
API [X*(Y/Z)]	8.02	7.39	7.45

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

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)	7.58	7.27	7.07
Y=Total no. of successful students	61.00	57.00	35.00
Z=Total no. of students appeared in the examination	61.00	57.00	35.00
API [X * (Y/Z)]	7.58	7.27	7.07

Average API [(AP1 + AP2 + AP3)/3] : 7.31

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)	7.49	7.65	7.57
Y=Total no. of successful students	55.00	34.00	26.00
Z=Total no. of students appeared in the examination	55.00	34.00	26.00
API [X*(Y/Z)]:	7.49	7.65	7.57

Average API [(AP1 + AP2 + AP3)/3] : 7.57

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	61.00	66.00	61.00
X=No. of students placed	30.00	18.00	17.00
Y=No. of students admitted to higher studies	1.00	0.00	2.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	50.82	27.27	31.15

Average Placement Index = (P_1 + P_2 + P_3)/3: 36.41 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. N. K. ANUSHKANNAN	XXXXXXX04H	M.E. and Ph.D.	Anna University	Mixed Signal VLSI	11/11/2021	4	Associate Professor	Associate Professor	11/11/2021	Regular	Yes		Yes
2	Dr. L. JUBAIR AHMED	XXXXXXX78K	M.E. and Ph.D.	Anna University	Soft Computing	03/08/2024	1.3	Associate Professor	Associate Professor	03/08/2024	Regular	Yes		No
3	Dr. R. UDAIYAKUMAR	XXXXXXX94N	M.E. and Ph.D.	Anna University	Low Power VLSI	07/08/2020	5.3	Professor	Professor	07/08/2020	Regular	Yes		No
4	Dr. K. BOOPATHIRAJA	XXXXXXX16M	M.E. and Ph.D.	Anna University	Wireless Communication Signal Processing, Antennas	11/03/2022	3.8	Assistant Professor	Assistant Professor		Regular	Yes		No
5	S. NITHYASAI	XXXXXXX42M	M.E.	Anna University	Computer Vision	01/06/2020	5.5	Assistant Professor	Assistant Professor		Regular	Yes		No
6	M. THAMARAISELVI	XXXXXXX15N	M.E.	Karpagam Academy of Higher Education	VLSI Design	08/11/2021	4	Assistant Professor	Assistant Professor		Regular	Yes		No
7	R. NANDHA KUMAR	XXXXXXX21F	M.E.	Anna University	Communication Systems	20/11/2020	4.11	Assistant Professor	Assistant Professor		Regular	Yes		No
8	A. ANAND	XXXXXXX72A	M.E.	Anna University	Optical Communication	29/09/2022	3.1	Assistant Professor	Assistant Professor		Regular	Yes		No
9	N. GOPI	XXXXXXX57N	M.E.	Anna University	Optical Communication	02/01/2023	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No
10	S. SANJULA	XXXXXXX81F	M.E.	Anna University	Applied Electronics	02/01/2023	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No
11	J. BRINDHA DEVI	XXXXXXX37B	M.E.	Anna University	VLSI Design	08/01/2024	1.10	Assistant Professor	Assistant Professor		Regular	Yes		No

12	Dr.C. KALAYANA SUNDARAM	XXXXXXX65Q	M.E. and Ph.D.	Anna University	Biomedical Signal Processing	20/06/2025	0.4	Associate Professor	Associate Professor		Regular	Yes		No
13	S.RAJKUMAR	XXXXXXX23A	M.E.	Karpagam Academy of Higher Education	Power Electronics and Drives	01/11/2012	10.5	Assistant Professor	Assistant Professor		Regular	No	11/04/2023	No
14	K. DHIVYA	XXXXXXX39Q	M.E.	Anna University	Communication Systems	18/08/2022	1.4	Assistant Professor	Assistant Professor		Regular	No	22/12/2023	No
15	N. VANI	XXXXXXX82G	M.E.	Anna University	VLSI Design	11/07/2018	2.8	Assistant Professor	Assistant Professor		Regular	No	25/03/2021	No
16	Dr. D. VIGNESWARAN	XXXXXXX16M	M.E. and Ph.D.	Anna University	Optical Communication	15/12/2021	2.3	Associate Professor	Associate Professor	15/12/2021	Regular	No	30/03/2024	No
17	V. PREMALATHA	XXXXXXX49K	M.E.	Anna University	VLSI Design	03/05/2021	4.6	Assistant Professor	Assistant Professor		Regular	Yes		No

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

C2. Student-Faculty Ratio (SFR)

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

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

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

Description	**CAY(2025-26)**	**CAYm1 (2024-25)**	**CAYm2 (2023-24)**
UG1.B	66	64	63
UG1.C	64	63	61
UG1.D	63	61	66
UG1: Electronics & Communication Engineering	**193**	**188**	**190**
PG1.A	6	0	0
PG1.B	0	0	0

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
PG1: VLSI Design & Embedded Systems	**6**	**0**	**0**
DS=Total no. of students in all UG and PG programs in the Department	199	188	190
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=** 199	**S2=** 188	**S3=** 190
DF=Total no. of faculty members in the Department	13	12	10
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=** 13	**F2=** 12	**F3=** 10
FF=The faculty members in F who have a 100% teaching load in the first-year courses	1	1	1
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 16.58**	**SFR2= 17.09**	**SFR3= 21.11**
Average SFR for 3 years	**SFR= 18.26**		

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)	5	8	9.00	22.78
2024-25(CAYm1)	4	8	9.00	20.00
2023-24(CAYm2)	2	8	9.00	14.44

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	1.00	1.00	2.00	3.00	6.00	9.00
2024-25	1.00	1.00	2.00	2.00	6.00	9.00
2023-24	1.00	1.00	2.00	1.00	6.00	8.00

Average	RF1=1.00	AF1=1.00	RF2=2.00	AF2=2.00	RF2=6.00	AF2=8.67

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

(CAYm2)

(CAYm3)

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of peer reviewed journal papers published	13	12	10
2	No. of peer reviewed conference papers published	5	4	2
3	No. of books/book chapters published	0	2	2

C7. Sponsored Research Project

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

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.R. Udaiyakumar		Department of ECE	Students skill development	National Skill Development Corporation	1 Year	7.32
						Amount received (Rs.):7.32

(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
NA	NA	NA	NA	NA	NA	0.00
						Amount received (Rs.):0.00

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 7.32

Note*:

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

C8. Consultancy Work

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

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.N.K Anushkannan	Dr.L.Jubair Ahmed	Electronics and Communication Engineering	DEMAND MANAGEMENT CONTROLLER	CAD opt Technologies	1 year	1.80
						Amount received (Rs.):1.80

(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.N.K Anushkannan	Dr.K. BoopathiRaja	Electronics and Communication	RELAY / CONTACTOR / SWITCHGEAR TESTER WITH FEEDBACK	CAD opt Technologies	1 year	1.72
						Amount received (Rs.):1.72

(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. N.K Anushkannan	Dr.D.Vigneswaran	Electronics and Communication	ENERGY EFFICIENT RADIO TOWER WITH POWER MANAGEMENT	CAD opt Technologies	1 year	1.90
						Amount received (Rs.):1.90

Total amount (Lacs) received for the past 3 years: 5.42

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.Nithyasai	OpenCV Based computer vision	3 Months	1.85	1.35	Project visualization
Dr.L.Jubair Ahmed	5G Enabled Agri Rover System	5 Months	3.85	2.46	Experiential Learning
			Amount received (Rs.): 5.70		

(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.K.Boopathi Raja	Embedded Rover for Automative Industry	5 Months	3.80	3.35	Embedded Hardware
			Amount received (Rs.): 3.80		

(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
S.Nithyasai	Robotic Arm for Industrialization	3 Months	2.40	2.21	Student Supportive project
			Amount received (Rs.): 2.40		

Total amount (Lacs) received for the past 3 years : 11.90

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 and Circuits	3	1. 100 MHz Digital storage Oscilloscope with 25 MHz Arbitrary wave generator. 2. 3 MHz Function	i) EC 3361- Ele	Mr.Ramesh Krishnan	Lab Technician	DECE
2	VLSI	1	1. Xilinx ISE/Altera Quartus / equivalent EDA Tools 2. Xilinx/Altera/equivalent FPGA Boards 3.	I) EC 3462- Lir	Mr Karthik	Lab Technician	DECE
3	Embedded Systems & IoT	3	1. Embedded trainer kits with ARM board 2. Embedded trainer kits suitable for wireless	i) ET 3491- Em	Ms. Vinitha	Lab Technician	B.E ECE
4	Communication Systemss Lab	3	1. Kits for Signal Sampling, TDM, AM, FM, PCM, DM and Line Coding Schemes, Error control code 2.	V) EC 3462- Li	Mr. Ramesh Krishnan	Lab Technician	DECE
5	Digital Electronics and IC	3	1. Digital trainer kit 2. Encoder and Decoder kit. 3. Code converters kit 4. Half adder and full	i)EC 3352 - Dig	Mr Karthik	Lab Technician	DECE
6	Engineering Practices	3	1. 30 MHz Cathode Ray Oscilloscope 2. 3 MHz Function Generator 3. Power Supply(0-30V) 4.	i) 24EP315- Er	Ms. Vinitha	Lab Technician	B.E ECE

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 and Circuits	• Proper insulation of electric power lines is ensured. • Specific safety rules for students are displayed prominently. • First aid boxes and fire extinguishers are available in the lab. • Laboratory is provided with Anti –static mats. • A gateway antivirus is installed in the firewall to filter unnecessary activities.

2	Digital Electronics and IC	• Cell phone usage is prohibited in the laboratory. • Laboratory is provided with Anti –static mats. • Proper insulation of electric power lines is ensured. • Specific safety rules for students are displayed prominently. • First aid boxes and fire extinguishers are available in the lab. • Laboratory is maintained in an organized way.
3	VLSI	• A gateway antivirus is installed in the firewall to filter unnecessary activities. • Cell phone usage is prohibited in the laboratory. • Proper insulation of electric power lines is ensured. • Specific safety rules for students are displayed prominently. • First aid boxes and fire extinguishers are available in the lab. • Laboratory is maintained in an organized way. • A gateway antivirus is installed in the firewall to filter unnecessary activities. • Cell phone usage is prohibited in the laboratory.
4	Embedded Systems & IoT	roper insulation of electric power lines is ensured. • Specific safety rules for students are displayed prominently. • First aid boxes and fire extinguishers are available in the lab. • Laboratory is maintained in an organized way. • A gateway antivirus is installed in the firewall to filter unnecessary activities. • Cell phone usage is prohibited in the laboratory.
5	Communication Systems	• Proper insulation of electric power lines is ensured. • Specific safety rules for students are displayed prominently. • First aid boxes and fire extinguishers are available in the lab. • Laboratory is maintained in an organized way. • A gateway antivirus is installed in the firewall to filter unnecessary activities. • Cell phone usage is prohibited in the laboratory.
6	Engineering Practices	• Proper insulation of electric power lines is ensured. • Specific safety rules for students are displayed prominently. • First aid boxes and fire extinguishers are available in the lab. • Laboratory is maintained in an organized way. • A gateway antivirus is installed in the firewall to filter unnecessary activities. • Cell phone usage is prohibited in the laboratory.

D3. Project Laboratory/Research Laboratory

A **project lab** is a dedicated learning environment where students apply theoretical knowledge to solve real-world problems and develop practical, transferable skills like problem-solving, teamwork, and project management. Unlike traditional labs that may follow predefined instructions, project labs emphasize open-ended, hands-on experimentation and creative design.

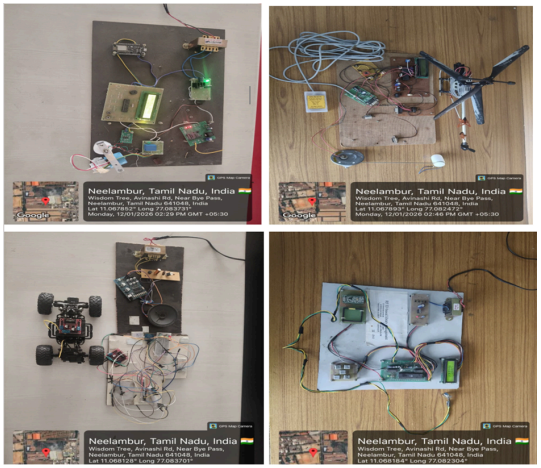
Purpose and Objectives

The primary goal of a project lab is to bridge the gap between classroom theory and practical application in professional environments. Key objectives include:

- **Practical Application:** Enabling students to apply theoretical concepts to hands-on engineering or scientific projects.
- **Skill Development:** Fostering essential skills such as critical thinking, data analysis, communication, and teamwork.
- **Innovation and Research:** Encouraging innovation, prototyping, and engagement in advanced research.
- **Real-World Experience:** Providing an environment that mirrors the constraints and conditions of real-life situations, including time limits, budgets, and equipment availability.

S.NO	NAME OF THE FACILITY	Details	Purpose for creating facility	Utilization	Relevance to POs/PSOs
1	ARM 7 LPC 2148 Development Kit	ARM Trainer Kit is proposed to smooth the progress of developing and debugging of various designs encompassing of High speed 32-bit Microcontrollers. User can easily engage in development in this platform, or use it as reference to application development	• ARM is one of the best alternatives obtainable for embedded system designers. • System-on-Chip products can be easily developed by using ARM boards	• EC 3811 – Academic project work and mini projects can be carried by utilizing the facility • Workshops and Value added Courses can be conducted using the facility	Relevant to PO1, PO2, PO3, PO4, PO5,PO6,PO8, PO9,PO10,PO11, PO12 &PSO1,PSO2
2	Arduino UNO	Arduino Uno is a microcontroller board based on the ATmega328P. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz quartz crystal, a USB connection	• Students shall have enhanced learning in the field of microcontroller based system design • The facility provides the flexibility to replace the chip	• To demonstrate the various facilities to communicate with computer, another Arduino/Genuino board, or other microcontrollers • EC 3811 – Academic project work and mini projects can be carried by utilizing the facility • Utilized for Workshops and Value added courses	PO1,PO2, PO3, PO4,PO5,PO6,PO8, PO9,PO10,PO11, PO12 & PSO1, PSO2

3	Arduino Mega	The Arduino MEGA is a microcontroller board based on the ATmega2560. The MEGA ADK is based on the Mega 2560. converter	Students shall have enhanced learning in the field of microcontroller based system design • The device has ready to use structure with inbuilt regulator, oscillator etc.,	Flexible coding due to its automatic unit conversion capability • Overcome of side or interface problems easily • EC 3811 – Academic project work and mini projects can be carried by utilizing the facility • Utilized for Workshops and Value added course	PO1,PO2, PO3, PO4,PO5,PO6,PO8, PO9,PO10,PO11, PO12 & PSO1, PSO2
4	Raspberry Pi 4	The Raspberry Pi 3 Model B is the third generation Raspberry Pi. This powerful credit-card sized single board computer can be used for many applications and supersedes the original Raspberry Pi Model B+ and Raspberry Pi 2 Model B	The facility looks compact in the form of small sized electronic board • It is economical as it is available in cheaper form	The facility is used to learn the concepts in automation • The applications of the facility can be used to achieve various software developments • EC 3811 – Academic project work and mini projects can be carried by utilizing the facility • Utilized for Workshops and Value added courses	PO1,PO2, PO3, PO4,PO5,PO6, PO8,PO9,PO10, PO11,PO12 & PSO1, PSO2
5	Sensors & Accessories	GPS Module, GSM module, Zigbee module, Bluetooth module, Voice module, Motor Driver Module (L293D), Metal sensor, Pressure sensor, Eye blink sensor, Pulse sensor	Exact measurements and tracking are needed for many applications such as medical applications, materials research in labs, studies of electronic or electrical components, biological research, and geological studies.	• EC 3811 – Academic project work and mini projects can be carried by utilizing the facility •Utilized for carrying out funded project work(if any) • Utilized to conduct various Value Added Courses and Workshops	PO1,PO2, PO3, PO5, PO6, PO8, PO9, PO10,PO11,PO12 & PSO1, PSO2



Project developed by students (Proto-type) in Project Laboratory

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)	300	15	12	4	69
2024-25(CAYm1)	360	18	13	5	63
2025-26(CAY)	480	24	21	7	76

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	0	0	10000000	10675000	0	0	0	0
Library	150000	142575	150000	121763	100000	59653	150000	195800
Laboratory equipment	4500000	4609244	7000000	6710283	4500000	5057196	500000	912285

Teaching and non-teaching staff salary	52000000	38880000	41000000	41282950	45000000	44497107	45000000	45080681
Outreach Programs	1000000	721860	1200000	1393122	1000000	834251	1000000	1167221
R&D	100000	45860	100000	62192	100000	69102	100000	80822
Training, Placement and Industry linkage	1800000	1244567	1500000	1623173	300000	303812	900000	1100750
SDGs	1200000	934520	1000000	1228064	800000	712763	600000	691263
Entrepreneurship	200000	143550	300000	576393	100000	75953	200000	275187
Others, specify	50000000	42253324	24000000	25080086	20000000	20444209	20000000	19785001
Total	**110950000**	**88975500**	**86250000**	**88753026**	**71900000**	**72054046**	**68450000**	**69289010**

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	1200000	989141	700000	565646	600000	423030	175000	112700
Software	0	0	0	0	0	0	0	0
SDGs	50000	27350	50000	26730	30000	27302	30000	23302
Support for faculty development	100000	106520	150000	136520	50000	34480	150000	126820
R & D	25000	10200	15000	7798	25000	11120	20000	8120
Industrial Training, Industry expert, Internship	300000	250000	200000	170000	60000	30812	100000	72300
Miscellaneous Expenses*	25000	13000	25000	15000	15000	10000	25000	12000
Total	**1700000**	**1396211**	**1140000**	**921694**	**780000**	**536744**	**500000**	**355242**