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: 11452	**Date of Submission**: 12-01-2026

PART A- Profile of the Institute

A1.Name of the Institute: Government College of Engineering, Bargur	
Year of Establishment : 1994	Location of the Institute: BARGUR
A2. Institute Address:Government College of Engineering, Bargur ,Madhepalli Village, Bargur - 635 104. krishnagiri District	
City:Dharmapuri	State:Tamil Nadu
Pin Code:635104	Website:www.gcebargur.ac.in
Email:principal503@gmail.com	Phone No(with STD Code):04343-292511
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: Autonomous CAY(2017-18)	
A5. Ownership Status: State Government	

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

- No. of UG programs: **5**
- 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	PG	Applied Electronics	2017	--	Electronics and Communication Engineering
2	Engineering & Technology	PG	Computer Science and Engineering	2017	--	Computer Science and Engineering
3	Engineering & Technology	UG	Computer Science and Engineering	2004	--	Computer Science and Engineering
4	Engineering & Technology	UG	Cyber Security	2025	--	Computer Science and Engineering
5	Engineering & Technology	UG	Electrical & Electronics Engineering	1994	--	Electrical and Electronics Engineering
6	Engineering & Technology	UG	Electronics & Communication Engineering	1994	--	Electronics and Communication Engineering
7	Engineering & Technology	UG	Mechanical Engineering	2009	--	Mechanical Engineering
8	Engineering & Technology	PG	Power Electronics & Drives	2017	--	Electrical and Electronics Engineering

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

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

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Computer Science and Engineering	Yes	Computer Science and 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/COM AUTHORIT DETAILS
1	Electronics & Communication Engineering	UG	1994 / --	60	No	NA	60	1994	F.No. South 446435645

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.V. Thirunavukkarasu
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)	60	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	57	56	58	58	50	51	55
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	6	6	6	6	6	6
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	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	57	62	64	64	56	57	61

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)	60	57	0	95.00
2024-25 (CAYm1)	60	56	0	93.33
2023-24 (CAYm2)	60	58	0	96.67

Average [(ER1 + ER2 + ER3) / 3] = 95.00≡ 20.00

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).	66.00	66.00	66.00
B=No. of students who graduated from the program in the stipulated course duration	56.00	54.00	54.00
Success Rate (SR)= (B/A) * 100	84.85	81.82	81.82

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 82.83

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)	7.06	7.06	6.45
Y=Total no. of successful students	56.00	58.00	56.00
Z=Total no. of students appeared in the examination	56.00	58.00	56.00
API [X*(Y/Z)]	7.06	7.06	6.45

Average API[(AP1+AP2+AP3)/3] : 6.86

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)	7.54	7.22	7.00
Y=Total no. of successful students	59.00	59.00	60.00
Z=Total no. of students appeared in the examination	64.00	62.00	54.00
API [X * (Y/Z)]	6.95	6.87	7.78

Average API [(AP1 + AP2 + AP3)/3] : 7.20

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)	7.70	7.21	6.73
Y=Total no. of successful students	58.00	56.00	54.00
Z=Total no. of students appeared in the examination	59.00	60.00	59.00
API [X*(Y/Z)]:	7.57	6.73	6.16

Average API [(AP1 + AP2 + AP3)/3] : 6.82

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	66.00	66.00	66.00
X=No. of students placed	51.00	49.00	50.00
Y=No. of students admitted to higher studies	0.00	3.00	2.00
Z= No. of students taking up entrepreneurship	1.00	1.00	1.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	78.79	80.30	80.30

Average Placement Index = (P_1 + P_2 + P_3)/3: 79.80 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	Nature of Association (Regular/ Contract/ Ad hoc)	
1	Dr.V. Thirunavukkarasu	XXXXXXX69J	Ph.D	Anna University	Information and Communication Engineering	01/03/2024	1.10	Professor	Professor		Regular	
2	Dr. M. Kavitha	XXXXXXX34K	Ph.D	Anna University	Information and Communication Engineering	05/04/2013	12.9	Assistant Professor	Associate Professor	19/04/2023	Regular	
3	Dr. M. Manimegalai	XXXXXXX07R	Ph.D	Anna University	Information and Communication Engineering	12/06/2025	0.6	Associate Professor	Associate Professor		Regular	
4	Dr. M. Arulkumar	XXXXXXX02H	Ph.D	Anna University	Information and Communication Engineering	08/04/2013	12.9	Assistant Professor	Assistant Professor		Regular	
5	Prof. J.Nargis	XXXXXXX18R	M.E.	Anna University	VLSI Design	28/07/2017	8.5	Assistant Professor	Assistant Professor		Regular	
6	Dr. T. Mohandoss	XXXXXXX77H	Ph.D	Annamalai University	Video Image Processing	16/05/2017	8.7	Assistant Professor	Assistant Professor		Regular	
7	Prof. V. Rajeshkannan	XXXXXXX84L	M.E.	Annamalai University	MANET	25/02/2019	6.10	Assistant Professor	Assistant Professor		Regular	
8	Dr. A. Charles	XXXXXXX97D	Ph.D	Annamalai University	Mobile Adhoc Network	01/03/2019	6.10	Assistant Professor	Assistant Professor		Regular	
9	Dr. R. Manikumar	XXXXXXX94R	Ph.D	Annamalai University	Process control and Instrumentation	27/02/2019	6.10	Assistant Professor	Assistant Professor		Regular	
10	Mrs.K.Kaviyarasi	XXXXXXX28A	M.E.	Anna University	Applied Electronics	13/02/2024	1.10	Assistant Professor	Assistant Professor		Contractual Fulltime	
11	Mrs.P.Anupriya	XXXXXXX88L	M.E.	Anna University	Applied Electronics	18/07/2022	3.5	Assistant Professor	Assistant Professor		Contractual Fulltime	
12	Dr.R.Ranjith	XXXXXXX59C	Ph.D	Anna University	Information & Communication Engineering	22/05/2017	7.6	Assistant Professor	Assistant Professor		Regular	
13	Dr.S.Letitia	XXXXXXX77L	Ph.D	Anna University	Image Processing	21/08/2018	5.1	Professor	Professor		Regular	
14	Prof.K.Manogaran	XXXXXXX15B	M.E.	Anna University	Embedded Systems, RF Communication	25/04/2013	10	Assistant Professor	Assistant Professor		Regular	
15	Ms.G.Thennarasi	XXXXXXX89N	M.E.	Anna University	Applied Electronics	18/07/2023	1.4	Assistant Professor	Assistant Professor		Contractual Fulltime	

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	64	64	64
UG1.C	63	64	66
UG1.D	64	66	66
UG1: Electronics & Communication Engineering	**191**	**194**	**196**
PG1.A	9	9	9
PG1.B	9	9	18
PG1: Applied Electronics	**18**	**18**	**27**
DS=Total no. of students in all UG and PG programs in the Department	209	212	223
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=** 209	**S2=** 212	**S3=** 223
DF=Total no. of faculty members in the Department	11	10	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=** 11	**F2=** 10	**F3=** 10
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= 19.00**	**SFR2= 21.20**	**SFR3= 22.30**
Average SFR for 3 years	**SFR= 20.83**		

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)	6	5	10.00	20.00
2024-25(CAYm1)	4	6	10.00	16.00
2023-24(CAYm2)	3	7	11.00	13.18

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	2.00	6.00	6.00
2024-25	1.00	1.00	2.00	1.00	7.00	6.00
2023-24	1.00	0.00	2.00	1.00	7.00	7.00
Average	RF1=1.00	AF1=0.67	RF2=2.00	AF2=1.33	RF2=6.67	AF2=6.33

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.J.Sundaravannan	Associate Professor	TPGIT, Vellore	MANET	35.00
2	Sundaramoorthy S	CEO	Sunshive Electronic Solutions, Coimbatore	PCB Design	30.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	M.Manimegalai	Assistant Professor	TPGIT, Vellore	4G/5G Wireless networks	30.00
2	MALAIYAPPAN M	Director - Operations	Pantech e Learning, Chennai	Embedded C Programming	30.00
3	SENTHIL KUMAR M R	Director - Technical	Pantech e Learning, Chennai	Embedded C Programming	30.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	M.Janani	Assistant Professor	TPGIT, Vellore	Analog IC Design	30.00
2	V.Rajasekar	Service Engineer	Frontline Electronics	DSP Processor and Its Applications	30.00
3	M.Tamilmaran	CEO	MM Microsystem	Microprocessor and Microcontroller	30.00

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	2	8	15
2	No. of peer reviewed conference papers published	1	4	0
3	No. of books/book chapters published	0	0	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
Prof.R.Ranjith	Prof. R.Manikumar	ECE	Conducted Emission test	Versa drives Pvt ltd, Coimbatore	2	0.21
Prof.R.Ranjith	Prof. R.Manikumar	ECE	Conducted Emission test	Versa drives Pvt ltd, Coimbatore	2	0.21
						Amount received (Rs.):0.42

(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
Prof.R.Ranjith	Prof. R.Manikumar	ECE	Conducted Emission test	Versa drives Pvt ltd, Coimbatore	2	0.20
Prof. R.Manikumar	Prof.R.Ranjith	ECE	Conducted Radiated Emission test	Versa drives Pvt ltd, Coimbatore	1	0.12
Prof.R.Ranjith	Prof. R.Manikumar	ECE	Conducted Radiated Emission test	Versa drives Pvt ltd, Coimbatore	2	0.21
Prof.R.Ranjith	Prof. R.Manikumar	ECE	Conducted Radiated Emission test	Versa drives Pvt ltd, Coimbatore	1	0.11
						Amount received (Rs.):0.64

(CAYm3)

Total amount (Lacs) received for the past 3 years: 1.06

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)

(CAYm3)

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

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 LAB	3	FUNCTION GENERATOR,DSO,REGULATED POWER SUPPLY	Odd semester	Mr.P.MANIKA	SKILLED ASS	DECE
2	COMMUNICATION LAB	3	SOFTWARE DEFINE RADIO, ANALOG AND DIGITAL COMMUNICATION KITS, 2	Odd semester	Mr.S.ANAND	SKILLED ASS	B.E
3	DSP LAB	1	i3 AND i5 DESKTOP COMPUTER, MATLAB OPEN SOURCE SOFTWARE	Odd semester	Mr.G.SAKTH	SKILLED ASS	B.E
4	VLSI LAB	1	I7 AND I9 DESKTOP COMPUTER ARTIX 7 FPGA DEVELOPMENT BOARD, SPARTAN 3E FPGA KITS	Odd semester	Mr.G.SAKTH	SKILLED ASS	B.E
5	NETWORKS LAB	1	i3 AND i5 DESKTOP COMPUTER, NETSIM SOFTWARE	Odd semester	Mr.G.SAKTH	SKILLED ASS	B.E
6	MICROPROCESSOR LAB	3	8086 MICROPROCESSOR, 8051 MICROCONTROLLER AND INTERFACING BOARDS	Odd semester	Mr.ADAVASE	SKILLED ASS	DECE
7	MICROWAVE LAB	3	MICROWAVE BENCH SETUP, FIBER OPTIC TEST BENCH SETUP, OPTICAL FIBER	Odd semester	Mr.J.RAMESI	SKILLED ASS	B.E
8	EC II LAB	3	BENCH SETUP WITH BUILT IN FG, DUAL POWER SUPPLY AND CRO	Odd semester	Mr.ADAVASE	SKILLED ASS	B.E

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 LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Switching of power supply before altering connections 5. Careful handling of components avoiding short circuit and overloading 6. Avoidance of loose connections and exposed wires
2	COMMUNICATION LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Switching of power supply before altering connections 5. Careful handling of components 6. Avoidance of loose connections and exposed wires
3	DSP LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Proper Log out and shut down procedure for systems 5. Careful handling of Equipments 6. No unauthorized software installations
4	VLSI LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Proper Log out and shut down procedure for systems 5. Careful handling of Equipments 6. No unauthorized software installations
5	NETWORKS LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Proper Log out and shut down procedure for systems 5. Careful handling of Equipments 6. No unauthorized software installations
6	MICROPROCESSOR LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Switching of power supply before altering connections 5. Careful handling of components 6. Avoidance of loose connections and exposed wires
7	MICROWAVE LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Switching of power supply before altering connections 5. Careful handling of components 6. Avoidance of loose connections and exposed wires
8	EC II LAB	1. Do's and Dont's displayed 2. Regular Hardware Check 3. UPS Backup for uninterrupted power supply 4. Switching of power supply before altering connections 5. Careful handling of components avoiding short circuit and overloading 6. Avoidance of loose connections and exposed wires

D3. Project Laboratory/Research Laboratory

Centre of Excellence in PLC and Robotics

To bridge the gap between academic learning and industry requirements, a Centre of Excellence (CoE) in PLC & Robotics has been established at Government College of Engineering, Bargur. This initiative was implemented as part of the Corporate Social Responsibility (CSR) program of Delta Electronics, with an investment of ₹1.5 crores, in collaboration with the Tamil Nadu Skill Development Corporation (TNSDC) and TNAutoSkills.

Objectives and Vision

The CoE is designed to foster industry-ready competencies among students, particularly in the domains of industrial automation, robotics, and programmable logic control (PLC). Its objectives are to:

- Provide hands-on training using industry-grade equipment and software.
- Enhance employability by aligning technical education with current industrial practices.
- Promote interdisciplinary learning and innovation through real-world applications.

Infrastructure

The CoE is equipped with advanced automation and robotics systems, including:

- One PLC and HMI Trainer Kit
- One SCARA Robot (4-axis) for pick-and-place applications
- One DRV Robot (6-axis) for applications such as palletizing, bearing assembly, vice loading/unloading, chuck assembly, and vision-based systems
- One Smart Screwdriver Cell

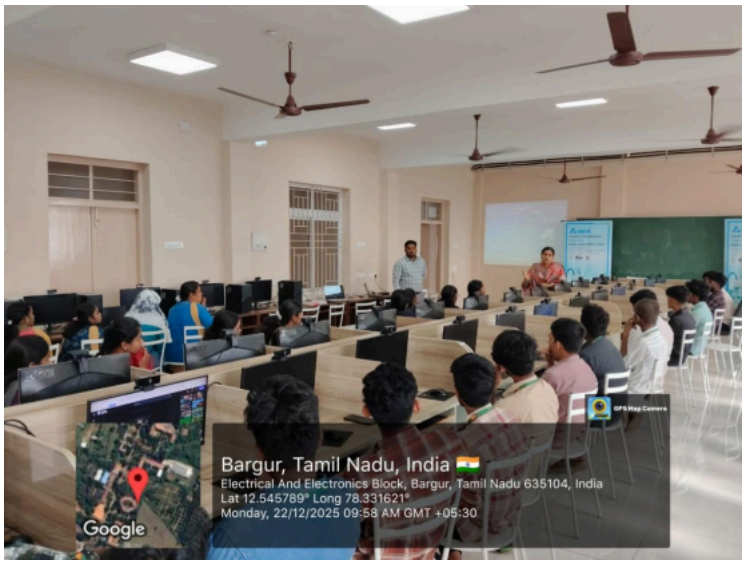
The lab environment supports both instructor-led training and self-paced exploration, encouraging experiential learning and innovation.

Training Programs and Impact

Since its inception, the CoE has hosted multiple workshops and value-added courses. Notable programs include:

- **Industrial Automation using Delta PLC**: Conducted for ECE and Mechanical students, focusing on sequential logic circuits, memory addressing, timers, counters, and analog input simulation.
- **Smart Start: Building Real-World IoT Systems** and **Bits to Automation**: Programs integrating microcontroller programming, Node-RED dashboards, and Proteus simulations.
- **Circuit Craft: Hands on Exploration of Electronic Circuits:**Conducted to prepare students for real world circuit building and problem solving in electronics.

These initiatives have significantly enhanced students practical skills, preparing them for careers in automation, robotics, and related industries.



Pre-Compliance EMI/EMC Setup

To strengthen research, training, and consultancy in the field of Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC), Pre-Compliance EMI/EMC Testing Lab has been established in the Department of Electronics and Communication Engineering, Government College of Engineering, Bargur. This facility provides a platform for students, faculty, and industry partners to engage in advanced testing and compliance-oriented projects.

Objectives and Vision

The lab is designed to:

- Provide practical training in EMI/EMC testing methodologies.
- Enhance employability by equipping students with skills relevant to product design, validation, and regulatory compliance.
- Strengthen consultancy work by offering pre-compliance testing services to industry.

Infrastructure

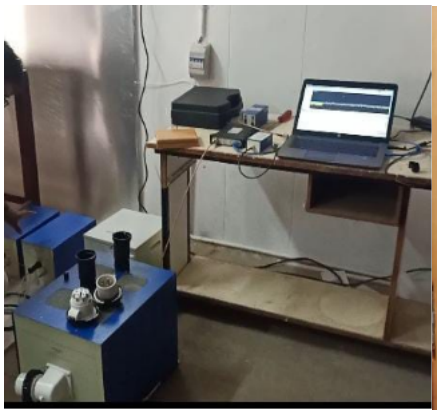
The lab is equipped with specialized setups for EMI/EMC pre-compliance testing, including:

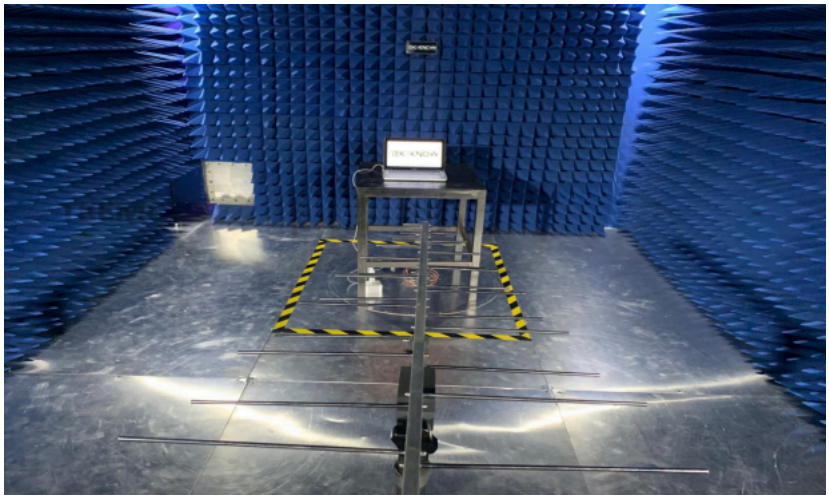
- **Transient Immunity Test Setup** – for evaluating system resilience against electrical disturbances.
- **Pre-Compliance Radiated Emission Test Setup** – for measuring emissions from electronic devices prior to certification.
- **Anechoic Chamber** – providing a controlled environment for radiated emission and immunity testing.

This infrastructure enables both instructional training and consultancy services, bridging academic knowledge with industrial requirements.

Utilization and Impact

- A **two-day workshop** on *Electromagnetic Interference and Electromagnetic Compatibility in System Design* was conducted, providing students with hands-on exposure to compliance testing.
- **Consultancy work** has been carried out in collaboration with industry in supporting product validation and pre-certification processes.





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)	240	12	10	31	118
2024-25(CAYm1)	240	12	11	33	128
2025-26(CAY)	240	12	13	32	140

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	0	0	84000000	84000000	40000000	40000000	80000000	80000000
Library	100000	100000	0	0	0	0	80000	78939
Laboratory equipment	1500000	1492787	2300000	2286211	3900000	3825701	3000000	2961888
Teaching and non-teaching staff	132000000	131225587	125000000	124279992	12000000	11900000	85710000	85710000
Outreach Programs	0	0	0	0	0	0	0	0

R&D	6200000	6197370	6100000	5709370	5400000	5397935	831000	830939
Training, Placement and	0	0	0	0	0	0	0	0
SDGs	0	0	0	0	0	0	0	0
Entrepreneurship	0	0	0	0	0	0	0	0
Others, specify	0	0	0	0	0	0	0	0
Total	**139800000**	**139015744**	**217400000**	**216275573**	**61300000**	**61123636**	**169621000**	**169581766**

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	2500000	2475472	3200000	3182693	3500000	3436933	2500000	2452432
Software	0	0	0	0	0	0	0	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty development	0	0	0	0	0	0	0	0
R & D	0	0	0	0	0	0	0	0
Industrial Training, Industry expert,	0	0	0	0	0	0	0	0
Miscellaneous Expenses*	0	0	0	0	0	0	0	0
Total	**2500000**	**2475472**	**3200000**	**3182693**	**3500000**	**3436933**	**2500000**	**2452432**