NATIONAL BOARD OF ACCREDITATION

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

Program Name : Electronics and Telecommunication Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10804	**Date of Submission**: 16-06-2025

PART A- Profile of the Institute

A1.Name of the Institute: Pillai College of Engineering	
Year of Establishment : 2000/1999	Location of the Institute: New Panvel
A2. Institute Address:DR.K.M.VASUDEVAN PILLAI CAMPUS,SECTOR-16,NEW PANVEL	
City:--Select--	State:Maharashtra
Pin Code:410206	Website:WWW.MES.AC.IN
Email:pillai@mes.ac.in	Phone No(with STD Code):022-27456100
A3. Name and Address of the Affiliating University (if any):	
Name of the University :	City: Navi Mumbai
State : Maharashtra	Pin Code: 410206
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: **6**
- No. of PG programs: **4**

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

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Automobile Engineering	2009	--	Automobile Engineering
2	Engineering & Technology	UG	Computer Engineering	2000	--	Computer Engineering
3	Engineering & Technology	PG	Computer Engineering	2009	--	Computer Engineering
4	Engineering & Technology	UG	Electronics and Computer Science	2020	--	Electronics and Computer Science
5	Engineering & Technology	UG	Electronics and Telecommunication Engineering	2007	--	Electronics and Telecommunication Engineering
6	Engineering & Technology	PG	Electronics Engineering	2009	--	Electronics and Computer Science
7	Engineering & Technology	PG	Information Technology	2008	--	Information Technology
8	Engineering & Technology	UG	Information Technology	2000	--	Information Technology
9	Engineering & Technology	PG	Mechanical Engineering	2008	--	Mechanical Engineering
10	Engineering & Technology	UG	Mechanical Engineering	2002	--	Mechanical 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
Electronics and Telecommunication Engineering	No	Electronics and Telecommunication Engineering	UG
Mechanical Engineering	No	Mechanical Engineering	UG
Computer Engineering	No	Computer Engineering	UG
Automobile Engineering	No	Automobile 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	PROG DURA
1	Electronics and Telecommunication Engineering	UG	2007 / --	120	Yes	2023	120	2023	F.No. Western/1-36502674832/2023/EOA Dated: 16-Jun-2023	Applying first time	--	--	0	4

Sanctioned Intake for Last Five Years for the Electronics and Telecommunication Engineering	
Academic Year	**Sanctioned Intake**
2024-25	120
2023-24	120
2022-23	90
2021-22	90
2020-21	120
2019-20	120

List of the Allied Departments/Cluster and Programs:

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

A. Name of the HoD :	Dr Avinash Ramnath Vaidya
B. Nature of appointment:	Regular
C. Qualification:	Ph.D

B3. Program Details

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

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	120	120	90	90	120	120	120
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	118	98	85	82	59	83	74
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	25	10	17	52	21	45
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	5	5	5	6	6	6
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	124	128	100	104	117	110	125

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

B4. Enrolment Ratio in the First Year

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

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	120	118	6	103.33
2023-24 (CAYm1)	120	98	5	85.83
2022-23 (CAYm2)	90	85	5	100.00

Average [(ER1 + ER2 + ER3) / 3] = 96.39≡ 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	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	172.00	141.00	165.00
B=No. of students who graduated from the program in the stipulated course duration	99.00	102.00	107.00
Success Rate (SR)= (B/A) * 100	57.56	72.34	64.85

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 64.92

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

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

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
Mean of CGPA or mean percentage of all successful students(X)	6.82	6.58	6.49
Y=Total no. of successful students	89.00	80.00	87.00
Z=Total no. of students appeared in the examination	103.00	90.00	87.00

API [X*(Y/Z)]	5.89	5.85	6.49

Average API[(AP1+AP2+AP3)/3] : 6.08

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

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.08	6.77	7.69
Y=Total no. of successful students	87.00	89.00	114.00
Z=Total no. of students appeared in the examination	90.00	104.00	117.00
API [X * (Y/Z)]	6.84	5.79	7.49

Average API [(AP1 + AP2 + AP3)/3] : 6.71

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

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.85	7.31	8.23
Y=Total no. of successful students	89.00	104.00	108.00
Z=Total no. of students appeared in the examination	89.00	114.00	109.00
API [X*(Y/Z)]:	7.85	6.67	8.15

Average API [(AP1 + AP2 + AP3)/3] : 7.56

B9. Placement, Higher Studies, and Entrepreneurship

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

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	172.00	141.00	165.00
X=No. of students placed	65.00	48.00	78.00
Y=No. of students admitted to higher studies	16.00	13.00	7.00
Z= No. of students taking up entrepreneurship	1.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	47.67	43.26	51.52

Average Placement Index = (P_1 + P_2 + P_3)/3: 47.48 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 Avinash Ramnath Vaidya	XXXXXXX16N	Ph.D	IIT Bombay	Electrical Engineering	09/09/2015	9.9	Associate Professor	Professor	04/07/2017	Regular	Yes		Yes
2	Dr. Suman Prashant Wadkar	XXXXXXX71Q	Ph.D	University of Mumbai	Electronics and Telecommunication Engineering	16/08/2011	13.10	Assistant Professor	Professor	01/07/2023	Regular	Yes		No
3	Dr. Tusharika Sinha Banerjee	XXXXXXX59N	Ph.D	University of Mumbai	Electronics and Telecommunication Engineering	31/07/2010	14.10	Assistant Professor	Associate Professor	01/07/2015	Regular	Yes		No
4	Dr. Pragnesh Narendra Shah	XXXXXXX56L	Ph.D	Sarvepalli Radhakrishnan University	Electronics and Communication	01/07/2000	24.11	Lecturer	Associate Professor	01/07/2011	Regular	Yes		No
5	Dr. Sanjeev Kumar Srivastava	XXXXXXX00P	Ph.D	Nagpur University	Wireless Networks	01/03/2008	17.3	Assistant Professor	Associate Professor	30/06/2011	Regular	Yes		No
6	Mrs. Jayashri Dilip Bhosale	XXXXXXX46K	M.E.	Shivaji University	Electronics and Telecommunication Engineering	23/07/2007	17.10	Lecturer	Associate Professor	01/07/2017	Regular	Yes		No
7	Ms. Sonali Kailas Kathare	XXXXXXX91P	M.E.	University of Mumbai	Electronics Engineering	23/07/2007	17.10	Lecturer	Assistant Professor		Regular	Yes		No
8	Ms. Suchitra Arun Patil	XXXXXXX84F	M.Tech	PDA, Gulbarga	Communication Systems	27/12/2010	14.5	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Dr. Ameet Mukund Mehta	XXXXXXX66E	Ph.D	Dr. Babasaheb Ambedkar Technological University	Electronics and Telecommunication Engineering	11/01/2017	8.5	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Ms. Sweta Pankaj Waghmare	XXXXXXX74A	M.E.	Sant Gadge Baba,Amravati University	Electronics and Telecommunication Engineering	23/08/2008	16.9	Lecturer	Assistant Professor		Regular	Yes		No
11	Ms. Harsha Ganeshlal Sharma	XXXXXXX36P	M.E.	University of Mumbai	Electronics Engineering	01/08/2013	11.10	Lecturer	Assistant Professor		Regular	Yes		No
12	Ms. Liril George Chiramel	XXXXXXX77H	M.E.	University of Mumbai	Electronics Engineering	15/09/2011	13.9	Lecturer	Assistant Professor		Regular	Yes		No
13	Mr. Swapnil Subhashrao Gourkar	XXXXXXX81N	M.E.	University of Mumbai	Electronics Engineering	14/10/2010	14.8	Lecturer	Assistant Professor		Regular	Yes		No

14	Mr. Yogesh Vitthal Kene	XXXXXXX22K	M.E.	University of Mumbai	Electronics Engineering	02/07/2012	12.11	Lecturer	Assistant Professor		Regular	Yes		No
15	Ms. Ruchira Chandrakant Patole	XXXXXXX22N	M.E.	University of Mumbai	Electronics Engineering	08/08/2013	11.10	Lecturer	Assistant Professor		Regular	Yes		No
16	Mr. Ishmeet Singh Riar	XXXXXXX53A	M.E.	University of Mumbai	Electronics Engineering	18/08/2014	10.9	Lecturer	Assistant Professor		Regular	Yes		No
17	Ms. Aboli Audumbar Khedkar	XXXXXXX17Q	M.E.	University of Mumbai	Electronics Engineering	01/08/2016	8.10	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Ms. Manisha Vijaybahadur Singh	XXXXXXX50M	M.E.	University of Mumbai	Electronics Engineering	10/08/2015	9.10	Lecturer	Assistant Professor		Regular	Yes		No
19	Ms. Priya Rani	XXXXXXX19Q	M.Tech	University of Mumbai	Electronics Engineering	01/08/2022	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No
20	Mr. Shubham Sunil Thakur	XXXXXXX98E	M.E.	University of Mumbai	Electronics and Telecommunication Engineering	02/08/2023	1.10	Assistant Professor	Assistant Professor		Regular	Yes		No
21	Dr. G Sita	XXXXXXX12P	Ph.D	IISc Banglore	Electronics	19/08/2014	8.10	Professor	Professor		Regular	No	30/06/2023	No

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

C2. Student-Faculty Ratio (SFR)

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

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

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

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1.B	132	99	99
UG1.C	99	99	132
UG1.D	99	132	132

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1: Electronics and Telecommunication Engineering	**330**	**330**	**363**
DS=Total no. of students in all UG and PG programs in the Department	330	330	363
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=** 330	**S2=** 330	**S3=** 363
DF=Total no. of faculty members in the Department	20	20	20
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 20	**F2=** 20	**F3=** 20
FF=The faculty members in F who have a 100% teaching load in the first-year courses	2	2	2
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 18.33**	**SFR2= 18.33**	**SFR3= 20.17**
Average SFR for 3 years	**SFR= 18.94**		

C3. Faculty Qualification

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

Table No.C3.1: Faculty qualification.

Year	X	Y	RF	FQ = 2.5 x [(10X + 4Y) / RF)]
2024-25(CAY)	5	15	16.00	17.19
2023-24(CAYm1)	5	15	16.00	17.19
2022-23(CAYm2)	5	15	18.00	15.28

C4. Faculty Cadre Proportion

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

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

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3
2024-25	1.00	2.00	3.00	3.00	11.00	15.00
2023-24	1.00	2.00	3.00	3.00	11.00	15.00
2022-23	2.00	2.00	4.00	3.00	12.00	15.00

Average	RF1=1.33	AF1=2.00	RF2=3.33	AF2=3.00	RF2=11.33	AF2=15.00

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	Prof. Shardul Buva	Assistant Professor	Pillai College of Arts Commerce & Science	Finance & Wealth Management	52.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. Syed Mohd Baqer	Senior Data Engineer	Larson & Toubro Infotech	Augmented and virtual reality	50.00
2	Prof. Shardul Buva	Assistant Professor	Pillai College of Arts Commerce & Science	Finance & Wealth Management	52.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Prof. Abida Khan	Assistant Professor	Pillai College of Arts Commerce & Science	Finance & Wealth Management	52.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	6	4	1
2	No. of peer reviewed conference papers published	5	0	5
3	No. of books/book chapters published	0	1	1

C7. Sponsored Research Project

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

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Ms. Ruchira Chandrakant Patole	NA	Electronics & Telecommunication Engineering	STEM Research	Society of Women Engineers (SWE), Headquarted USA	One Year	0.59
						Amount received (Rs.):0.59

(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
Ms. Ruchira Chandrakant Patole	Dr Avinash Ramnath Vaidya	Electronics & Telecommunication Engineering	Robotics Program Devlopment Grant	Society of Women Engineers (SWE), Headquarted USA	Six Months	4.09
						Amount received (Rs.):4.09

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 4.68

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)

(CAYm2)

(CAYm3)

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

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
Ms. Ruchira Chandrakant Patole	Advanced robotic equipments purchase.	22-23	2.10	1.82	Patent Published
			Amount received (Rs.): 2.10		

(CAYm3)

Total amount (Lacs) received for the past 3 years : 2.10

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	Microprocessor Microcontroller Laboratory	22	Universal Trainer kit with daughter boards for 89V51RD2, ARM LPC2148 & PIC 18F4520, ARM 7 Embedded kits , XILINX 32400 Spartan 3 , XILINX	Odd Sem-18Hı	Mr. Mahesh Sawant	Tech. Assistant I	B.Sc.
2	Communication Laboratory	22	Computers, Rigol 40 MHZ Digital Storage Oscilloscope, GW-INSTEK Logic Analyser, Mobile Communication Trainer Kit , Analog Communication Trainer kits , CRO	Odd Sem-8Hrs	Mrs.Yogeshwari Thakur	Lab Assistant	Diploma
3	Internet of Things and Application Development Laboratory	22	Smart LED Television , Raspberry Pi-4 (4 GB), Atmega 328 Uno Boards, Mobile phones, Computers	Odd Sem-20Hı	Mrs.Vilasini Mhatre	Lab Assistant	B.Sc.
4	Digital Communication Laboratory	22	Cisco Network Devices and tools, Computers, Trainer kits, Power supply, Function generator, CRO	Odd sem-16Hr	Mr. Kedar Vanage	Tech. Assistant II	Diploma
5	System Design Laboratory	22	Computers, STM Development Boards	Odd Sem-22Hı	Mrs. Rutika Shinde	Lab Assistant	B.Sc.
6	Industry 4.0 Laboratory	22	Robot Arm- Magician Education, Conveyer Belt kit, Kinect and similar sensors, Sliding Rail kit, Smart Mobile Robots, Robot Magician Lite Arm , NVIDIA	Odd Sem-20Hı	Mr. Mahesh Sawant	Tech. Assistant I	B.Sc.
7	Programming Laboratory	22	Computers	Odd Sem-24Hı	Mrs.Saroja Chaudhari	Lab Assistant	B.A.

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Microprocessor Microcontroller Laboratory	1)Safety measure charts are displayed in the laboratories. 2)All power supply lines are properly insulated and covered. 3)Lab Assistants switch off all the equipment and ensured that all the cupboards, doors, windows and gates are properly closed while leaving the laboratory. 4)First aid kit is available in the Laboratory. 5)Fire Extinguishers are available on all floors of buildings and laboratory . 6)Lab technician periodically maintain all the equipment and keep them in safe operating condition 7)All the required equipment are provided with fuses to safeguard the equipment from power fluctuations 8)Students are instructed to a)Avoid contacting circuits with wet hands or wet materials. b)Disconnect power source before making any adjustments. c)Handle delicate components with care to avoid damage. d)Report any safety concerns immediately.
2	Communication Laboratory	1)Safety measure charts are displayed in the laboratories 2)All power supply lines are properly insulated and covered. 3)Lab Assistants switch off all the equipment and ensured that all the cupboards, doors, windows and gates are properly closed while leaving the laboratory 4)Fire Extinguishers are available on all floors of buildings and laboratory . 5)Lab technician periodically maintain all the equipment and keep them in safe operating condition 6)All the required equipment are provided with fuses to safeguard the equipment from power fluctuations 7)Students are instructed to a)Avoid contacting circuits with wet hands or wet materials. b)Disconnect power source before making any adjustments. c)Handle delicate components with care to avoid damage. d)Report any safety concerns immediately.

3	IoT and Application Development Laboratory	1)Safety measure charts are displayed in the laboratories 2)All power supply lines are properly insulated and covered. 3)Lab Assistants switch off all the equipments and ensured that all the cupboards, doors, windows and gates are properly closed while leaving the laboratory 4)Fire Extinguishers are available on all floors of buildings and laboratory. 5)Lab technician periodically maintain all the equipments and keep them in safe operating condition 6)All the required equipments are provided with fuses to safeguard the equipment from power fluctuations 7)Students are instructed to a)Avoid contacting circuits with wet hands or wet materials. b)Disconnect power source before making any adjustments. c)Handle delicate components with care to avoid damage. d)Report any safety concerns immediately.
4	Digital Communication Laboratory	1)Safety measure charts are displayed in the laboratories 2)All power supply lines are properly insulated and covered. 3)Lab Assistants switch off all the equipment and ensured that all the cupboards, doors, windows and gates are properly closed while leaving the laboratory 4)First aid kit is available in the Laboratory. 5)Fire Extinguishers are available on all floors of buildings and laboratory . 6)Lab technician periodically maintain all the equipments and keep them in safe operating condition 7)All the required equipments are provided with fuses to safeguard the equipment from power fluctuations 8)Students are instructed to a)Avoid contacting circuits with wet hands or wet materials. b)Disconnect power source before making any adjustments. c)Handle delicate components with care to avoid damage. d)Report any safety concerns immediately.
5	System Design Laboratory	1)Safety measure charts are displayed in the laboratories 2)All power supply lines are properly insulated and covered. 3)Lab Assistants switch off all the equipment and ensured that all the cupboards, doors, windows and gates are properly closed while leaving the laboratory 4)Fire Extinguishers are available on all floors of buildings and laboratory . 5)Lab technicians periodically maintain all the equipment and keep them in safe operating condition 6)All the required equipments are provided with fuses to safeguard the equipment from power fluctuations 7)Students are instructed to a)Avoid contacting circuits with wet hands or wet materials. b)Disconnect power source before making any adjustments. c)Handle delicate components with care to avoid damage. d)Report any safety concerns immediately.
6	Industry 4.0 Laboratory	)Safety measure charts are displayed in the laboratories 2)All power supply lines are properly insulated and covered. 3)Lab Assistants switch off all equipments and ensured that all the cupboards, doors, windows and gates are properly closed while leaving the laboratory 4)Fire Extinguishers are available on all floors of buildings and laboratory . 5)Lab technicians periodically maintain all the equipments and keep them in safe operating condition 6)All the required equipments are provided with fuses to safeguard the equipment from power fluctuations 7)Students are instructed to a)Avoid contacting circuits with wet hands or wet materials. b)Disconnect power source before making any adjustments. c)Handle delicate components with care to avoid damage. d)Report any safety concerns immediately.
7	Programming Laboratory	1)Safety measure charts are displayed in the laboratories 2)All power supply lines are properly insulated and covered. 3)Lab Assistants switch off all equipments and ensured that all the cupboards, doors, windows and gates are properly closed while leaving the laboratory. 4)First aid kit is available in Laboratory. 5)Fire Extinguishers are available on all floors of buildings and laboratory . 6)Lab technician periodically maintain all the equipments and keep them in safe operating condition 7)All the required equipment are provided with fuses to safeguard the equipment from power fluctuations

D3. Project Laboratory/Research Laboratory

Project Laboratory

We have a full fledged well equipped Project laboratory which provides students with hands-on and real time practical knowledge of the project.It serves as a dynamic platform where students apply theoretical knowledge to practical projects, fostering innovation, technical proficiency, and research-oriented thinking.

The Lab is equipped with advanced infrastructure, the laboratory plays a pivotal role in enhancing students technical skills, creativity, practical application abilities, and academic writing competencies. It is exclusively designated for final-year project development and also serves as the venue for project presentations and examinations.

The lab supports a culture of innovation, encouraging students to design and implement real-world engineering solutions. Over the years, our students have undertaken numerous notable projects and have actively participated in university-level and intercollegiate technical competitions, conferences, and paper presentations.The Project Laboratory is instrumental in shaping industry-ready graduates by bridging the gap between academic concepts and practical implementation.

Key Features:

- Dedicated workspace for final-year project development
- 24/7 high-speed Wi-Fi connectivity
- Uninterrupted power supply for seamless work
- Computer systems and printing facilities
- Environment conducive to research, collaboration, and innovation

Advanced software packages are available in the department, few of which are mentioned below:

- CST Microwave Studio
- MATLAB
- SciLab
- Turbo C++3.2
- Keilv4
- Anaconda
- TINA
- LT-Spice
- STM32CubeIDE

Lab Incharge : Suchitra Patil

Centre of Excellence :- 1)AICTE IDEA Lab 2)Research Laboratory

1)AICTE IDEA Lab

The AICTE sponsored (self finance mode) IDEA lab was established at Pillai College of Engineering in February 2023. The Coordinators and Tech Gurus attended the training and FDPs as prescribed in the scheme document and a significant amount of investments were done to build infrastructure and facilities at the PCE IDEA Lab. Students and faculty members of Pillai College of Engineering as well as the colleges in nearby vicinity are significantly benefited due to establishment of the PCE IDEA Lab. A good number of projects and prototypes with potential to convert into startups were nurtured and implemented at the PCE IDEA Lab during the year 2023.

Some important List of Events Conducted under PCE IDEA lab

Sr. No	Name of the event	Dates	No of Days	Event Type	No. of Participants
1	Unlock Engineering	12-6-2023 to 16-06-2023	05	Ideation Workshops	34
2	Skill Program on Product Design and 3D printing	28-08-2023 to 02-09-2023	06	Skilling Programme	24
3	Open day for school students	04-09-2023 to 05-09-2023	02	Open Day for school students	10

4	Conference on Technologies for future cities 2023	06-10-2023 to 07-10-2023	02	Annual Conference	200+
5	Skill Program on Project Building	16-10-2023 to 21-10-2023	06	Skilling Programme	10

Some important Projects and Prototypes Developed at PCE Idea Lab

Sr.No.	Name of Project	Idea Lab Facility Used
1	Design of a 64 bit Mathematical Vedic Processor" for Radiant Engineers	Components, FPGA board
2	Development of the 6 axis robotic arm for agricultural applications	3D printing, Laser cutting and CNC wood Cutting, Component Library
3	Development of an autonomous robotic solution for ultra low power vision sensing applications	3D printing, Laser cutting and CNC wood Cutting, Component Library
4	Smart water body cleaner	3D printing, Laser cutting and CNC wood Cutting, Component Library
5	Design and Development of Organic waste decomposer	3D printing, Laser cutting and CNC wood Cutting, Component Library

2)Research Laboratory

The Research Laboratory has been extensively utilized to support multidisciplinary research and development activities across electronics, computer science, mechanical, and automobile engineering domains. The lab has facilitated Ph.D. research projects in robotics, biomedical systems, machine design, and advanced materials. Students and interns actively engaged in projects involving drone assistance, embedded systems, and automation technologies. The lab also supported consultancy assignments focused on technical innovation and product development for industry partners. A key feature of the lab's infrastructure is its advanced 3D printing capabilities, which have been instrumental in rapid prototyping for both academic and industrial projects. Website and software development, drone-based surveillance systems, and customized design solutions were carried out using state-of-the-art tools and interdisciplinary collaboration. The integration of 3D printing, simulation tools, and computing resources has enhanced the lab's role as a dynamic center for innovation, providing hands-on experience and bridging the gap between theoretical research and real-world applications.

PART E: First Year faculty and financial Resources

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

E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage= ((NS1*0.8) +(NS2*0.2))/RF
2022-23(CAYm2)	630	32	23	9	63
2023-24(CAYm1)	630	32	26	10	71

2024-25(CAY)	630	32	26	11	72

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 2024-25	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	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Infrastructure Built-Up	40000000.00	15000000.00	40000000.00	29049141.00	67000000.00	50000000.00	50000000.00	49500000.00
Library	650000.00	364944.51	750000.00	608062.72	545000.00	475613.00	620000.00	526636.00
Laboratory equipment	2500000.00	1907694.00	3700000.00	2000894.00	3300000.00	11575192.00	3300000.00	3223712.00
Teaching and non-teaching staff salary	201657000.00	204267211.00	190700000.00	188330143.00	174000000.00	177487789.00	164550000.00	164064279.00
Outreach Programs	1800000.00	1269247.00	1000000.00	1681468.00	750000.00	2403612.00	500000.00	468520.00
R&D	6000000.00	149340.00	2000000.00	88988.00	2200000.00	101006.00	1800000.00	1721137.00
Training, Placement and Industry linkage	600000.00	489570.00	500000.00	402900.00	425000.00	556790.00	400000.00	387800.00
SDGs	1070000.00	608974.00	3500000.00	2391764.00	875000.00	2855881.00	500000.00	405416.00
Entrepreneurship	0	0	0	0	200000.00	184935.00	0	0
Others, specify	43930000.00	68533393.38	47095000.00	101315287.59	24099000.00	64753416.00	22647000.00	52217151.00
Total	**298207000.00**	**292590373.89**	**289245000.00**	**325868648.31**	**273394000.00**	**310394234.00**	**244317000.00**	**272514651.00**

E3. Budget Allocation, Utilization, and Public Accounting at Program Specific Level

Table No. E3.1: Budget and actual expenditure incurred at program level.

Items	Budgeted in 2024-25	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	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Laboratory equipment	820000	747638	500000	445141	1210000	1037992	175000	180000
Software	0	0	0	0	0	0	0	0
SDGs	10000	10000	2500	2235	0	0	0	0
Support for faculty development	0	69827	0	23993	0	40024	0	0

R & D	54500	41500	0	0	0	0	0	0
Industrial Training, Industry expert, Internship	0	42881	0	0	0	0	0	0
IETE SF and Satellite Club	10000	123918	0	0	0	0	0	0
Total	**894500**	**1035764**	**502500**	**471369**	**1210000**	**1078016**	**175000**	**180000**