NATIONAL BOARD OF ACCREDITATION

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

Program Name : Automobile 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	PROGRAM DURATION
1	Automobile Engineering	UG	2009 / --	60	No	NA	60	2009	F.No.740-89-347(E)/ET/99 dated June 15th 2009	Applying first time	--	--	0	4

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. Amey P. Marathe
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)	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	45	29	26	24	27	33	60

N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	28	22	41	42	36	13
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.	45	57	48	65	69	69	73

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

B4. Enrolment Ratio in the First Year

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

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	60	45	0	75.00
2023-24 (CAYm1)	60	29	0	48.33
2022-23 (CAYm2)	60	26	0	43.33

Average [(ER1 + ER2 + ER3) / 3] = 55.55≡ 8.00

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

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

Item	(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).	102.00	96.00	73.00
B=No. of students who graduated from the program in the stipulated course duration	45.00	55.00	55.00
Success Rate (SR)= (B/A) * 100	44.12	57.29	75.34

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 58.92

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)	7.38	6.92	6.63
Y=Total no. of successful students	18.00	16.00	24.00
Z=Total no. of students appeared in the examination	29.00	26.00	24.00
API [X*(Y/Z)]	4.58	4.26	6.63

Average API[(AP1+AP2+AP3)/3] : 5.16

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)	6.31	6.94	7.32
Y=Total no. of successful students	35.00	46.00	65.00
Z=Total no. of students appeared in the examination	38.00	65.00	69.00
API [X * (Y/Z)]	5.81	4.91	6.90

Average API [(AP1 + AP2 + AP3)/3] : 5.87

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)	7.01	6.64	7.33
Y=Total no. of successful students	46.00	55.00	59.00
Z=Total no. of students appeared in the examination	46.00	65.00	62.00
API [X*(Y/Z)]:	7.01	5.62	6.98

Average API [(AP1 + AP2 + AP3)/3] : 6.54

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	102.00	96.00	73.00
X=No. of students placed	17.00	16.00	23.00
Y=No. of students admitted to higher studies	7.00	8.00	4.00
Z= No. of students taking up entrepreneurship	1.00	1.00	1.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	24.51	26.04	38.36

Average Placement Index = (P_1 + P_2 + P_3)/3: 29.64 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. Amey P. Marathe	XXXXXXX48B	Ph.D	University of Mumbai	Vehicle Dynamics	12/01/2010	15.5	Lecturer	Associate Professor	01/07/2015	Regular	Yes		Yes

2	Dr. Basavraj S. Talikoti	XXXXXXX73E	Ph.D	Visvesariya Technological University,Belgaum	Design And Vibration	15/05/2006	19.1	Lecturer	Professor	01/07/2023	Regular	Yes		No
3	Mr. Ameya Nijasure	XXXXXXX37J	M.E.	University of Mumbai	CAD/CAM & Robotics	25/08/2014	10.9	Assistant Professor	Assistant Professor		Regular	Yes		No
4	Ms. Geeta Karmarkar	XXXXXXX50E	M.E.	University of Mumbai	CAD/CAM & Robotics	26/07/2018	6.10	Assistant Professor	Assistant Professor		Regular	Yes		No
5	Mr. Salim Jafri	XXXXXXX24P	M.E.	University of Mumbai	CAD/CAM & Robotics	22/11/2016	7.11	Assistant Professor	Assistant Professor		Regular	No	30/10/2024	No
6	Mrs. Komal Anup Kadam	XXXXXXX94A	M.E.	University of Mumbai	CAD/CAM & Robotics	10/10/2016	8.8	Assistant Professor	Assistant Professor		Regular	Yes		No
7	Mr. George Varghese	XXXXXXX08C	M.E.	University of Mumbai	CAD/CAM & Robotics	11/11/2017	7.7	Assistant Professor	Assistant Professor		Regular	Yes		No
8	Mrs.Komal Chilwal	XXXXXXX59A	M.E.	Uttarakhand University	Thermal Engineering	14/02/2022	2.8	Assistant Professor	Assistant Professor		Regular	No	08/11/2024	No
9	Mrs.Vaishali Kumbhar	XXXXXXX88L	M.E.	Shivaji University	Design Engineering	27/01/2012	13.4	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Shaikh Mohammed Shahid	XXXXXXX78L	M.E.	University of Mumbai	Thermal Engineering	19/08/2013	11.9	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Mrs.Jisha Sateesh	XXXXXXX18K	M.E.	University of Mumbai	Power Electronics & Drives	03/07/2023	1.11	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Dr. Divya Padmanabhan	XXXXXXX16A	Ph.D	IIT Bombay	Material Science	20/08/2010	14.9	Assistant Professor	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 Department0

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

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1.B	66	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Automobile Engineering	**198**	**198**	**198**
DS=Total no. of students in all UG and PG programs in the Department	198	198	198
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=** 198	**S2=** 198	**S3=** 198
DF=Total no. of faculty members in the Department	10	12	11
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=** 10	**F2=** 12	**F3=** 11
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= 22.00**	**SFR2= 18.00**	**SFR3= 19.80**
Average SFR for 3 years	**SFR= 19.93**		

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)	3	7	9.00	16.11
2023-24(CAYm1)	3	9	9.00	18.33
2022-23(CAYm2)	2	9	9.00	15.56

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	2.00	1.00	6.00	7.00
2023-24	1.00	2.00	2.00	1.00	6.00	9.00
2022-23	1.00	1.00	2.00	1.00	6.00	9.00
Average	RF1=1.00	AF1=1.67	RF2=2.00	AF2=1.00	RF2=6.00	AF2=8.33

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 Pushpendu Rakshit	Assistant Professor	Pillai Institute of Management Studies and Research	ILOC - E commerce & E-Business	50.00
2	Prof. Shardul Buva	Assistant Professor	Pillai college of Arts commerce and science	ILOC - Economics	50.00
3	Prof. Jayesh Patil	Assistant Professor	Pillai college of Architecture	ILOC - Visual Arts	50.00
4	Prof.Priyesh Keekan	Assistant Professor	Pillai college of Arts commerce and science	ILOC - Political Science	50.00

(CAYm2)

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 and science	ILOC - Finance Managament	50.00
2	Prof. Jayesh Patil	Assistant Professor	Pillai college of Architecture	ILOC - Visual Arts	50.00
3	Prof. Jisha Satheesh	Assistant Professor	Freelancing	DLOC - Power Electronics	50.00

(CAYm3)

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 and science	ILOC - Finance Management	50.00

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	1	0	2
2	No. of peer reviewed conference papers published	4	1	2
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)

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

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
NIL	NIL	NIL	NIL	NIL	NIL	0.00
						Amount received (Rs.):0.00

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

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

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
NIL	NIL	NIL	NIL	NIL	NIL	0.00
						Amount received (Rs.):0.00

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

Total amount (Lacs) received for the past 3 years: 0.00

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
Ameya Nijasure	Bharat Cycle Design Challenge	03 months	0.40	0.40	Designed Bicycle
			Amount received (Rs.): 0.40		

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

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

Total amount (Lacs) received for the past 3 years : 0.40

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	Engineering Mechanics	22	Beam Reactions, Bell Crank Lever,Flywheel, Friction setup	36 Hrs	Hamid Solkar	Lab. Assistant	HSC,ITI
2	Automobile Engineering	22	Marurti Esteem Car, Hydraulic Ram, Tata Idica Petrol Engine, Rear axle assembly with differential	6 Hrs	Sagar More	Lab. Assistant	ITI, Diploma

3	Automotive Design Studio	20	meta oculus quest 3, meta oculus quest 2, Quest connecting Cable, Clay modeling tools	6 Hrs	Sagar More	Lab. Assistant	ITI, Diploma
4	CAD-FEA	22	"INTEL CORE i5 CPU, ATX MOTHERBOARD, KINGSTON 16GB DDR3 MEMORY, 500 GB	48 Hrs	Ms Karina Rakesh Kagad	Lab. Assistant	BCom
5	Material Technology	22	Metallurgical microscopes, Muffle Furnace,Double disc Polishing Machine, Hot plate, Compaction die	18 Hrs	Mr.Krishna Remulkar	Lab attendant	ITI
6	Mechanical Measurements and Instrumentation	22	"LVDT Apparatus, Strain Measurement, Load Cell Indicatior, Thermocouple Calibration"	6 Hrs	Hamid Solkar	Lab. Assistant	HSC,ITI
7	Hydraulic Machinery	25	Pelton turbine, Francis turbine, Kaplan Turbine, Centrifugal pump, Reciprocating pump, Multi stage	12 Hrs	Mr. Satish Patil	Lab. Assistant	Diploma in Mechanical Er
8	IC Engine	25	"1. Study Assembly and Disassembly Of 4 Stroke Engine 2. Single Cylinder Four Stroke Diesel Engine	12 Hrs	Mr. Shivdatta Uppar	Lab. Assistant	ITI
9	Autotronics Lab	20	Electric vehicle subsystem , Lithium Battery Pack Manufacturing, Li -ion cell testing and characterization	12 Hrs	Mr. Anilkumar Pillai	Lab. Assistant	ITI,Diploma
10	Vehicle maintanance	25	Multiscan Tool, Orsat Apparatus, Computerized Wheel Balancer, Computerized Wheel Alignment, Automatic	6 Hrs	Mr. Anilkumar Pillai	Lab. Assistant	ITI,Diploma

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	ENGINEERING MECHANICS	Shoes must be worn in any lab area. No one wearing sandals will be allowed to enter any lab area Do not operate any item of test equipment unless you are familiar with its operation and have been authorized by the Lab Assistant to operate it Do not keep the tools and components anywhere in the open lab area and clean the tools while returning it. Do not wear ties, loose clothing, long sleeves, jewellery, gloves, etc. around machinery, test equipment, and tools. For girls, long hair must be tied back or covered to keep it away from machines Practice cleanliness and orderliness in the lab areas. Washing of hands after practicals are done Fire extinguisher immediately outside of Lab door
2	AUTOMOBILE ENGGINEERING	Shoes must be worn in any lab area. No one wearing sandals will be allowed to enter any lab area Do not operate any item of test equipment unless you are familiar with its operation and have been authorized by the Lab Assistant to operate it Do not keep the tools and components anywhere in the open lab area and clean the tools while returning it. Do not wear ties, loose clothing, long sleeves, jewellery, gloves, etc. around machinery, test equipment, and tools. For girls, long hair must be tied back or covered to keep it away from machines Practice cleanliness and orderliness in the lab areas. No food or drinks are allowed inside the labs.
3	AUTOMOTIVE DESIGN STUDIO	Keep wokring area neat and clean. Wear safety glasses whole opration any cutting machine. Make the use of fire extinguisher in case of fire. Eatables are not allowed within lab. Make sure all electricals connections are properly switched off after performance.
4	CAD FEA	Shoes must be worn in any lab area. No one wearing sandals will be allowed to enter any lab area Do not operate any item of test equipment unless you are familiar with its operation and have been authorized by the Lab Assistant to operate it Do not keep the tools and components anywhere in the open lab area and clean the tools while returning it. Do not wear ties, loose clothing, long sleeves, jewellery, gloves, etc. around machinery, test equipment, and tools. For girls, long hair must be tied back or covered to keep it away from machines Practice cleanliness and orderliness in the lab areas. Washing of hands after practicals are done Fire extinguisher immediately outside of Lab door

5	MATERIAL TECHNOLOGY	Fire Extinguisher available outside at the entrance Keep Windows open when the furnace is operating Stand atleast 2 feet away from the furnace Maintain Caution while using the Polishing wheel Use tongs to remove samples out of furnace Stringly recommend use of shoes and properly fitted attire while working in the lab Use Safety goggles while using furnace or polishing disc
6	MECHANICAL MEASUREMENTS & INSTRUMENTATION	1. Students should keep their bags inside the rack before entering the lab. 2. Don't touch any electrical connections unless instructed by the lab In-charge. 3. Maintain a safe distance from equipments.
7	HYDRAULIC MACHINERY	Only Authorized personnel may operate water pump/turbine. Ensure that electrical cords do not lie in water Put away tools and equipment in their proper place. Ensure all tripping and slipping hazards are removed. No food or drinks are allowed inside the labs. Always keep work areas clean and tidy. You must have permission to work alone, in isolation or after hours.
8	IC ENGINE	No one should wear loose clothing which might stuck up in rotating parts of engine. Never operate any equipment unless going through SOP and under trained supervision of faculty incharge. Use appropriate equipment to operate engine and keepit in proper place after use. Avoid leakages in cooling line of Engine to prevent slipperyness. Make the use of fire extinguisher in case of fire. Eatables are not allowed within lab. Make sure all electricals connections are properly switched off after performance.
9	AUTOTRONICS LAB	Shoes must be worn in any lab area. No one wearing sandals will be allowed to enter any lab area Do not operate any item of test equipment unless you are familiar with its operation and have been authorized by the Lab Assistant to operate it Do not keep the tools and components anywhere in the open lab area and clean the tools while returning it. Do not wear ties, loose clothing, long sleeves, jewellery, gloves, etc. around machinery, test equipment, and tools. For girls, long hair must be tied back or covered to keep it away from machines Practice cleanliness and orderliness in the lab areas. Washing of hands after practicals are done Fire extinguisher immediately outside of Lab door
10	VEHICLE MAINTENANCE	Shoes must be worn in any lab area. No one wearing sandals will be allowed to enter any lab area Do not operate any item of test equipment unless you are familiar with its operation and have been authorized by the Lab Assistant to operate it Do not keep the tools and components anywhere in the open lab area and clean the tools while returning it. Do not wear ties, loose clothing, long sleeves, jewellery, gloves, etc. around machinery, test equipment, and tools. For girls, long hair must be tied back or covered to keep it away from machines Practice cleanliness and orderliness in the lab areas. No food or drinks are allowed inside the labs.

D3. Project Laboratory/Research Laboratory

SrNo	Name	Details of Equipments/Machines	Utilisation	Relevance to POs/PSOs
1	Electric Vehicles (Centre of excellence)	1. Electric vehicle subsystem 2. Battery pack manufacturing system 3. LITHIUM ION cell testing and characterisation kit	It facilitates research and development in areas like battery technology, charging infrastructure,Retrofitting and vehicle design. Facility for the study, design, testing, and development of electric vehicles and their subsystems. Facilitates interdisciplinary learning across electrical, mechanical, and computer science domains, fostering holistic engineering skills in line with AICTEs focus on emerging technologies in Electric Vehicles.	PO1, PO2, PO3, PO4, PO5, PO8, PO11, PSO1, PSO2

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	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	200000	134488	900000	795000	31000	14337	1231400	14337
Software	750000	730643	0	0	1200000	1049121	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, Internship	0	0	0	0	0	0	0	0
Miscellaneous Expenses*	50000	9995	50000	17148	50000	36111	100000	77783
Total	**1000000**	**875126**	**950000**	**812148**	**1281000**	**1099569**	**1331400**	**92120**