NATIONAL BOARD OF ACCREDITATION

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

Program Name : Mechanical Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 11700	**Date of Submission**: 13-03-2026

PART A- Profile of the Institute

A1.Name of the Institute: P. A. COLLEGE OF ENGINEERING AND TECHNOLOGY	
Year of Establishment : 2008	Location of the Institute: Pollachi
A2. Institute Address:PALLADAM ROAD, POLLACHI - 642 002.	
City:Coimbotore	State:Tamil Nadu
Pin Code:642002	Website:www.pacolleges.org
Email:pacollege@yahoo.com	Phone No(with STD Code):04259-221386
A3. Name and Address of the Affiliating University (if any):	
Name of the University : ANNA UNIVERSITY	City: Chennai
State : Tamil Nadu	Pin Code: 600025
A4. Type of the Institution: Autonomous CAY(2019-20)	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **6**
- No. of PG programs: **2**

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	Artificial Intelligence and Data Science	2022	--	Computer Science and Engineering
2	Engineering & Technology	PG	Computer Science and Engineering	2011	--	Computer Science and Engineering
3	Engineering & Technology	UG	Computer Science and Engineering	2008	--	Computer Science and Engineering
4	Engineering & Technology	UG	Electrical and Electronics Engineering	2008	--	Electrical and Electronics Engineering
5	Engineering & Technology	UG	ELECTRONICS AND COMMUNICATION ENGINEERING	2008	--	Electronics and Communication Engineering
6	Engineering & Technology	UG	Information Technology	2022	--	Computer Science and Engineering
7	Engineering & Technology	UG	Mechanical Engineering	2009	--	Mechanical Engineering

8	Engineering & Technology	PG	Power Electronics & Drives	2012	--	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 AND COMMUNICATION ENGINEERING	UG
Electrical and Electronics Engineering	No	Electrical and Electronics Engineering	UG
Mechanical Engineering	No	Mechanical 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	Mechanical Engineering	UG	2009 / --	60	Yes	2025	30	2025	F.No. Southern/1-44643084712/2025/EOA	Granted accreditation for 3 years for the period (specify period)	2023	2026	3	4

Sanctioned Intake for Last Five Years for the Mechanical Engineering	
Academic Year	**Sanctioned Intake**
2025-26	30
2024-25	60
2023-24	60
2022-23	60
2021-22	60
2020-21	60

List of the Allied Departments/Cluster and Programs:

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

A. Name of the HoD :	Dr. T. Varunkumar
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)	30	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	30	31	24	32	39	13	31
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	35	9	10	20	53	15
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	1	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.	31	66	33	42	59	66	46

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)	30	30	1	103.33
2024-25 (CAYm1)	60	31	0	51.67
2023-24 (CAYm2)	60	24	0	40.00

Average [(ER1 + ER2 + ER3) / 3] = 65.00≡ 11.00

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).	80.00	113.00	75.00
B=No. of students who graduated from the program in the stipulated course duration	45.00	58.00	40.00
Success Rate (SR)= (B/A) * 100	56.25	51.33	53.33

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 53.64

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)	7.94	7.79	7.76
Y=Total no. of successful students	30.00	22.00	31.00
Z=Total no. of students appeared in the examination	31.00	24.00	32.00
API [X*(Y/Z)]	7.68	7.14	7.52

Average API[(AP1+AP2+AP3)/3] : 7.45

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

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

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.70	7.59	7.64
Y=Total no. of successful students	28.00	39.00	54.00
Z=Total no. of students appeared in the examination	31.00	41.00	56.00
API [X * (Y/Z)]	6.95	7.22	7.37

Average API [(AP1 + AP2 + AP3)/3] : 7.18

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)	7.62	7.68	8.06
Y=Total no. of successful students	39.00	53.00	62.00
Z=Total no. of students appeared in the examination	39.00	54.00	63.00
API [X*(Y/Z)]:	7.62	7.54	7.93

Average API [(AP1 + AP2 + AP3)/3] : 7.70

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	80.00	113.00	75.00
X=No. of students placed	46.00	55.00	43.00
Y=No. of students admitted to higher studies	0.00	0.00	0.00
Z= No. of students taking up entrepreneurship	4.00	5.00	4.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	62.50	53.10	62.67

Average Placement Index = (P_1 + P_2 + P_3)/3: 59.42 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. D. Senthil Kumar	XXXXXXX67E	Ph.D	Anna University	Refrigeration and Airconditioning, Material Science	01/06/2013	12.9	Associate Professor	Professor	01/04/2014	Regular	Yes		No
2	Dr. A. Baskaran	XXXXXXX60C	Ph.D	Anna University	Refrigeration	14/07/2008	17.8	Assistant Professor	Professor	02/12/2019	Regular	Yes		No
3	Dr. T. Varunkumar	XXXXXXX74K	Ph.D	Anna University	Agile Manufacturing	01/06/2010	15.9	Assistant Professor	Associate Professor	01/07/2017	Regular	Yes		Yes
4	Dr. V. P. Suresh Kumar	XXXXXXX29B	Ph.D	Anna University	Engineering Design	02/09/2011	14.6	Assistant Professor	Assistant Professor		Regular	Yes		No
5	Dr. N. Manikandan	XXXXXXX81B	Ph.D	Anna University	Engineering Design	01/07/2009	16.8	Lecturer	Associate Professor	02/01/2023	Regular	Yes		No
6	Mr. R. Mohammed Farooq	XXXXXXX20R	M.E.	Anna University	Manufacturing	02/05/2012	13.10	Assistant Professor	Assistant Professor		Regular	Yes		No
7	Mr. K. Gobi	XXXXXXX34L	M.E.	Anna University	Engineering Design	03/06/2014	11.9	Assistant Professor	Assistant Professor		Regular	Yes		No
8	Dr. N. Gnanasekar	XXXXXXX78M	Ph.D	Anna University	CAD/CAM	07/06/2012	13.9	Assistant Professor	Associate Professor	02/01/2023	Regular	Yes		No
9	Mr. M. Vigneshprabhu	XXXXXXX64A	M.E.	Anna University	Lean Manufacturing	07/06/2012	13.9	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Mr. K. Manikandan	XXXXXXX64E	M.E.	Anna University	Manufacturing	01/06/2012	13.9	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Mr. M. Parthasarathy	XXXXXXX24N	M.E.	Anna University	Engineering Design	09/05/2012	13.10	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Mr. D. Loganathan	XXXXXXX67B	M.E.	Anna University	Engineering Design	26/06/2012	13.8	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Dr. C. R. Kamalakannan	XXXXXXX39M	Ph.D	Anna University	Heat Transfer	15/02/2017	7.4	Professor	Professor		Regular	No	28/06/2024	No
14	Mr. G. Konguraja	XXXXXXX65M	M.E.	Anna University	Manufacturing	01/06/2012	12	Assistant Professor	Assistant Professor		Regular	No	28/06/2024	No
15	Mr. I. Akilan	XXXXXXX39Q	M.E.	Anna University	CAD/CAM	09/06/2014	10	Assistant Professor	Assistant Professor		Regular	No	28/06/2024	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(2025-26)**	**CAYm1 (2024-25)**	**CAYm2 (2023-24)**
UG1.B	66	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Mechanical 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	12	12	15
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=** 12	**F2=** 12	**F3=** 15
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= 18.00**	**SFR2= 18.00**	**SFR3= 14.14**
Average SFR for 3 years	**SFR= 16.71**		

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	6	9.00	23.33

2024-25(CAYm1)	6	6	9.00	23.33
2023-24(CAYm2)	7	8	9.00	28.33

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	2.00	2.00	3.00	6.00	7.00
2024-25	1.00	2.00	2.00	3.00	6.00	7.00
2023-24	1.00	3.00	2.00	3.00	6.00	9.00
Average	RF1=1.00	AF1=2.33	RF2=2.00	AF2=3.00	RF2=6.00	AF2=7.67

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. V. Ganesh	Managing Director	MaxCAD, Coimbatore - 641018.	22MEPC503 Computer Aided Design and Manufacturing	50.00
2	Mr.K.ROBERT	Rtd Executive Engineer	PWD (Govt. TN)	22MEPC303 Fluid Mechanics and Machinery	18.00
3	Mr.K.ROBERT	Rtd Executive Engineer	PWD (Govt. TN)	22CAHS604 Professional Ethics in Engineering	18.00
4	Mr.ARULPRAKASAM	Rtd Executive Engineer	PWD (Govt. TN)	22MEOE05 Maintenance Engineering	18.00
5	Mr.ARULPRAKASAM	Rtd Executive Engineer	PWD (Govt. TN)	22MEPC702 Industrial Robotics	18.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. V. Ganesh	Managing Director	MaxCAD, Coimbatore - 641018.	19MEPC307 — Computer Aided Machine Drawing Laboratory	45.00
2	Mr.K.ROBERT	Rtd Executive Engineer	PWD (Govt. TN)	Engineering Graphics	50.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. V. Ganesh	Managing Director	MaxCAD, Coimbatore - 641018.	3D Modelling with rapid prototyping (Production & Quality Engineering)	50.00

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	8	7	9
2	No. of peer reviewed conference papers published	5	1	11
3	No. of books/book chapters published	5	4	3

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
-	-	-	-	-	-	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
-	-	-	-	-	-	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
-	-	-	-	-	-	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
Dr. T. Varunkumar	1. Dr. N. Gnanasekar 2. D.Loganathan	Mechanical Engineering	FEA-Based Structural Analysis of Bicycle Crank Arm	FEMLOGIC TTECHNOLOGIES	3 Months	0.30
						Amount received (Rs.):0.30

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. T. Varunkumar	Dr. N. Gnanasekar	Mechanical Engineering	Static Structural and crack	MaxCADD, Coimbatore	3 Months	0.38
						Amount received (Rs.):0.38

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. T. Varunkumar	Dr. N. Gnanasekar	Mechanical Engineering	Design and Development of Fixture for Composite material plate	MaxCADD, Coimbatore	3 Months	0.40
						Amount received (Rs.):0.40

Total amount (Lacs) received for the past 3 years: 1.08

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
Dr. D. Senthilkumar	Seed Money for Research and Publication	1 Year	0.30	0.30	Journal Published
Dr. N. Gnanasekar	Seed Money for Research and Publication	1 Year	0.20	0.20	Journal Published
Dr. V. P. Sureshkumar	Seed Money for Research and Publication	1 Year	0.60	0.60	Journal Published
			Amount received (Rs.): 1.10		

(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
Mr. R. Mohammed Farooq	Seed Money for Research and Publication	1 Year	1.50	1.50	Journal Published
Dr. N. Gnanasekar	Seed Money for Research and Publication	1 Year	0.20	0.20	Journal Published
Dr. N. Manikandan	Seed Money for Research and Publication	1 Year	0.20	0.20	Journal Published
Dr. T.Varunkumar	Seed Money for Research and Publication	1 Year	0.60	0.60	Journal Published
Mr. M. Parthasarathy	To attend FDP & Seed Money for Research and Publication	1 Year	0.20	0.20	FDP Program Attended
Dr. V.P.Sureshkumar	Seed Money for Research and Publication	1 Year	0.60	0.60	Journal Published
Mr. D. Loganathan	To attend FDP & Seed Money for Research and Publication	1 Year	0.10	0.10	FDP Program Attended
Mr. K. Manikandan	Seed Money for Research and Publication	1 Year	0.30	0.30	FDP Program Attended
			Amount received (Rs.): 3.70		

(CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr. N. Manikandan	Seed Money for Research and Publication	1 Year	0.70	0.70	Journal Published
Dr. A. Baskaran	Seed Money for Research and Publication	1 Year	0.40	0.40	Journal Published
Dr. N. Gnanasekar	Seed Money for Research and Publication	1 Year	0.20	0.20	Journal Published
			Amount received (Rs.): 1.30		

Total amount (Lacs) received for the past 3 years : 6.10

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	Manufacturing Technology Laboratory I	33	□ Light duty lathe machine, □ Capstan lathe, □ All Geared Lathe Machine, □ "REX" Bench grinder 0.5HP, □ Surface Plate	6 Hours/ week	P.Sekar	Lab Assistant	ITI
2	Manufacturing Technology Laboratory II	33	□ Slotting Machine, □ Shaping Machine, □ Capstan lathe, □ Horizontal& Vertical Milling Machine, □ Surface Grinding Machine, □	6 Hours/ week	P.Sekar	Lab Assistant	ITI
3	Strength of Materials Laboratory	33	□ Universal Testing Machine □ Brinell hardness testing setup □ Rockwell hardness testing setup	6 Hours/ week	S.Sriram	Lab Assistant	DME

4	Fluid Mechanic and Machinery Laboratory	33	□ Apparatus to calibrate of venturi meter, orifice meter and Rotameter, □ Apparatus to determining	6 Hours/ week	K.Santhumoh amed	Lab Assistant	DME
5	Metrology And Measurement Laboratory	33	□ Tool Makers Microscope, □ Mechanical Comparator, □ Slip Gauges, □ Micrometer, □	6 Hours/ week	K.Santhumoh amed	Lab Assistant	DME
6	Dynamics Laboratory	33	□ Gyroscopic couple □ Whirling shaft, □ Balancing of reciprocating masses, □ Balancing of	6 Hours/ week	S.Sriram	Lab Assistant	DME
7	Thermal Engineering laboratory I	33	□ Cut section model of single cylinder 2 Stroke petrol Engine, □ Cut section model of single	6 Hours/ week	S. Karthikeyan	Lab Assistant	DME
8	Thermal Engineering laboratory II	33	□ Guarded hot plate apparatus, □ Lagged pipe apparatus, Natural convection apparatus, □ Forced	6 Hours/ week	S. Karthikeyan	Lab Assistant	DME
9	CAD/CAM laboratory	33	□ Solid Edge V20 Permanent License, □ Master Cam Version X6 Software (Educational Network), □	6 Hours/ week	M Siva	Lab Assistant	DME
10	Mechatronics laboratory	33	□ Basic Pneumatic Trainer Kit with manual and electrical controls/ PLC Control each □ Basic	6 Hours/ week	K.Prabakaran	Lab Assistant	CLIS
11	Engineering Practices laboratory	33	□ Arc Welding Transformer Single Phase 150 Amps, □ Gas Welding Regulator (Acetylene) □ Gas	12 Hours/ week	K.Prabakaran	Lab Assistant	CLIS

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Manufacturing Technology laboratory	• Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory • Laboratory is equipped with First aid kits and fire extinguishers. Do's and dont's are displayed in every laboratory. • Intercom facilities are made available in all laboratories. • Special gloves are providing for students toprotect hands. • In case of a fire or imminently dangerous situation, notify everyone who may be affected immediately; be sure the lab instructor is also notified. • If metal chips splash into someone's eyes act quickly and get them into the eye wash station, do not wait for the instructor. • Be sure that all machines have effective and properly working guards that are always in place where machines are operating. • Always remember that HOT metal or ceramic pieces look exactly the same as COLD pieces are careful what you touch. • Keep the floor clean of metal chips or curls and waste pieces; put them in container provided for such things. • Always remove gloves before turning on or operating a machine. If material is rough and sharp then gloves must be work place or handle material with machine turned off. • Keeping floor free of oil, grease or any other liquid. Clean up spilled liquid immediately they are sleeping hazards. •Keep the tools in tool box always when not in use.
2	Fluid Mechanic and Machinery laboratory	• Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory. • Laboratory is equipped with First aid kits and fire extinguishers. Do's and dont's are displayed in every laboratory. • Intercom facilities are made available in all laboratories.
3	Strength of Materials laboratory	• Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory • Laboratory is equipped with First aid kits and fire extinguishers. Do's and don'ts are displayed in every laboratory. • Intercom facilities are made available in all laboratories. • Special gloves are providing for students to protect hands. • If metal chips splash into someone's eyes act quickly and get them into the eye wash station, do not wait for the instructor. • Keep the floor clean of metal chips or curls and waste pieces; put them in container provided for such things.

4	Metrology and Measurement laboratory	• Laboratory is equipped with First aid kits and fire extinguishers. Do's and dont's are displayed in every laboratory. • Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory. • Intercom facilities are made available in all laboratories.
5	Dynamics Laboratory	• Laboratory is equipped with First aid kits and fire extinguishers. Do's and Dont's are displayed in every laboratory. • Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory. • Intercom facilities are made available in all laboratories.
6	CAD/CAM laboratory	•Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory • Laboratory is equipped with First aid kits and fire extinguishers. Do's and Dont's are displayed in every laboratory • The Laboratories system tables are equipped with fuse to prevent computers from spikes. • Intercom facilities are made available in all laboratories. • Before logging in to a particular terminal, if there is something wrong in the terminal, the student should report the same immediately to the concerned staff. • Students can get the required manual or disks from the staff after signing in the appropriate register. • MCBs are installed to prevent overload condition. • Active Antivirus is installed in all PC's. • Individual User id is given to secure data access. • UPS is provided to prevent from brown out.
7	Thermal Engineering Laboratory	• Laboratory is equipped with First aid kits and fire extinguishers. Do's and Dont's are displayed in every laboratory. • Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory. • Intercom facilities are made available in all laboratories. • In case of a fire or imminently dangerous situation, notify everyone who may be affected immediately; be sure the lab instructor is also notified. • When using compressed air, use only approved nozzles and never directs the air towards any person.
8	Mechatronics laboratory	• Laboratory is equipped with First aid kits and fire extinguishers. Do's and Dont's are displayed in every laboratory. • Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory. • The Laboratories system tables are equipped with fuse to prevent computers from spikes. • Intercom facilities are made available in all laboratories. • When using compressed air, use only approved nozzles and never directs the air towards any person. • MCBs are installed to prevent overload condition.
9	Engineering Practices laboratory	• Safety is ensured through laboratory coat, uniform, shoes are compulsory in the laboratory • Laboratory is equipped with First aid kits and fire extinguishers. Do's and Dont's are displayed in every laboratory. • Intercom facilities are made available in all laboratories. • Special gloves are providing for students to protect hands. • In case of a fire or imminently dangerous situation, notify everyone who may be affected immediately; be sure the lab instructor is also notified. • If metal chips splash into someone's eyes act quickly and get them into the eye wash station, do not wait for the instructor. • Be sure that all machines have effective and properly working guards that are always in place where machines are operating. • Always remember that HOT metal or ceramic pieces look exactly the same as COLD pieces are careful what you touch. • Keep the floor clean of metal chips or curls and waste pieces; put them in container provided for such things. • Always wear safety glasses, or face shields designed for the type of the work operating any machine

D3. Project Laboratory/Research Laboratory

A. **Availability of project laboratories/research laboratories**

- The department has developed a dedicated project lab with internet facilities for mechanical project work
- All laboratories are accessible to students for carrying out their mechanical engineering projects
- 100 Mbps internet connectivity is available in all laboratories, with Wi-Fi across the campus
- Software such as Solid edgeV20, SolidWorks, ANSYS, CATIA V5R21, and Master CAM X6 is available for student project use

S.N.	Name of the Laboratory	
1.	Project Laboratory	Students can utilize the lab for data collection and interpretation
2.	Research Laboratory /Centre of Excellence	Wire cut EDM,3D Printer ARVR Kits

Table No. 7.5.1: List of project laboratory/research laboratory /Centre of Excellence.

B. Utilization of project laboratories/research laboratory /Centre of excellence

The institution ensures that these laboratories are effectively utilized for academic and research purposes through:

1. **Project-Based Learning:**

a. Students use these labs for final-year projects, mini-projects, and innovative mechanical systems and product design.

b. Participation in national and international technical competitions such as design contests and fabrication challenges.

2. **Industry-Oriented Training & Certifications:**

Hands-on training in CAD/CAM, CNC machining ,3D printing, and industrial automation.

Certification programs in collaboration with industry partners.

3. **Research & Innovation Support:**

Research projects in thermal engineering, fluid mechanics, advanced manufacturing, materials engineering, and robotics.

4. **Skill Development & Employability Enhancement:**

a. Students gain practical exposure through lab-based learning, machine handling, and industry-oriented projects.

b.Enhances job opportunities in core mechanical industries, manufacturing, automotive, and design sectors.

5. **Research Publications & Patents:**

a. Projects undertaken in these labs contribute to research publications and patents.

b. Faculty members apply for AICTE - MODROB (Modernization and Removal of Obsolescence) grants to upgrade laboratory facilities.

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)	540	27	19	14	67
2024-25(CAYm1)	570	28	23	14	76
2025-26(CAY)	390	20	19	10	86

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	2000000	1500000	150000	121000	2800000	2558604	3000000	2788366
Library	900000	859398	450000	424463	850000	778529	100000	913985
Laboratory equipment	3400000	3180000	15000000	13678000	16000000	14286790	3200000	2934513
Teaching and non-teaching staff salary	53000000	50292452	54000000	52233128	42000000	40915087	38000000	35103475
Outreach Programs	600000	564000	870000	830000	1100000	725000	120000	105000
R&D	1000000	860000	1000000	935000	2000000	1180000	120000	107290
Training, Placement and Industry linkage	1000000	953158	2000000	2568559	1700000	1440197	400000	388100
SDGs	600000	578000	370000	341000	800000	1180000	0	0
Entrepreneurship	200000	100000	150000	100000	150000	100000	200000	100000
Others, specify	28000000	22149633	22000000	19339735	25000000	22840149	25000000	20451537
Total	**90700000**	**81036641**	**95990000**	**90570885**	**92400000**	**86004356**	**70140000**	**62892266**

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	300000	150000	800000	600000	700000	630000	200000	170000
Software	0	0	450000	380000	300000	245000	0	0
SDGs	150000	110000	150000	112000	100000	50000	0	0
Support for faculty development	100000	55000	180000	120000	150000	115000	100000	65000
R & D	150000	80000	200000	130000	300000	250000	50000	20000
Industrial Training, Industry expert, Internship	180000	95000	320000	170000	300000	210000	80000	74535
Miscellaneous Expenses*	180000	120000	180000	142000	170000	80000	200000	153450
Total	**1060000**	**610000**	**2280000**	**1654000**	**2020000**	**1580000**	**630000**	**482985**