Program Name : Mechanical Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 11362	**Date of Submission**: 07-01-2026

PART A- Profile of the Institute

A1.Name of the Institute: Parul Institute of Engineering and Technology	
Year of Establishment : 2003	Location of the Institute: PO LIMDA TA WAGHODIA DIST VADODARA
A2. Institute Address:P.O. : LIMDA,TA. WAGHODIA.	
City:Vadodara	State:Gujarat
Pin Code:391760	Website:www.paruluniversity.ac.in
Email:piet@paruluniversity.ac.in	Phone No(with STD Code):02668-260204
A3. Name and Address of the Affiliating University (if any):	
Name of the University :	City: Vadodara
State : Gujarat	Pin Code: 391760
A4. Type of the Institution: University	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **9**
- No. of PG programs: **8**

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	Computer Application	PG	Master of Computer Application	2015	--	Computer Application
2	Engineering & Technology	UG	Aeronautical Engineering	2015	--	Aeronautical Engineering
3	Engineering & Technology	UG	Aerospace Engineering	2025	--	Aeronautical Engineering
4	Engineering & Technology	PG	CAD/CAM	2023	--	Mechanical Engineering
5	Engineering & Technology	UG	Civil Engineering	2015	--	Civil Engineering
6	Engineering & Technology	PG	Computer Engineering	2015	--	Computer Science and Engineering
7	Engineering & Technology	UG	Computer Science and Engineering	2015	--	Computer Science and Engineering
8	Engineering & Technology	PG	Construction Project Management	2023	--	Civil Engineering
9	Engineering & Technology	UG	Electrical Engineering	2015	--	Electrical Engineering
10	Engineering & Technology	UG	Electronics & Communication Engineering	2015	--	Electronics and Communication Engineering
11	Engineering & Technology	UG	Information Technology	2015	--	Information Technology
12	Engineering & Technology	PG	Information Technology	2015	--	Information Technology
13	Engineering & Technology	UG	Mathematics & Computing	2024	--	Applied Sciences and Humanities
14	Engineering & Technology	UG	Mechanical Engineering	2015	--	Mechanical Engineering

15	Engineering & Technology	PG	Structural Engineering	2015	--	Civil Engineering
16	Engineering & Technology	PG	Transportation Engineering	2015	--	Civil Engineering
17	Management	PG	Master of Business Administration	2015	--	Management

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

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

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Civil Engineering	No	Civil Engineering	UG
Computer Science and Engineering	No	Computer Science and Engineering	UG
Electrical Engineering	No	Electrical Engineering	UG
Electronics and Communication Engineering	No	Electronics & Communication 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
1	Mechanical Engineering	UG	2015 / --	480	Yes	2016	150	2016	BoG

Sanctioned Intake for Last Five Years for the Mechanical Engineering	
Academic Year	Sanctioned Intake
2025-26	150
2024-25	150
2023-24	180
2022-23	150
2021-22	150
2020-21	180

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 :	Trivedi Snehal Viranchibhai
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)	150	150	180	150	150	180	180

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	95	71	55	37	79	66	92
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	70	143	108	86	132	106
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.	95	141	198	145	165	198	198

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)	150	95	0	63.33
2024-25 (CAYm1)	150	71	0	47.33
2023-24 (CAYm2)	180	55	0	30.56

Average [(ER1 + ER2 + ER3) / 3] = 47.07≡ 5.00

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).	236.00	312.00	286.00
B=No. of students who graduated from the program in the stipulated course duration	139.00	175.00	185.00

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 59.89

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)	5.67	5.46	5.86
Y=Total no. of successful students	67.00	53.00	36.00
Z=Total no. of students appeared in the examination	71.00	55.00	37.00
API [X*(Y/Z)]	5.35	5.26	5.70

Average API[(AP1+AP2+AP3)/3] : 5.44

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)	5.20	6.86	7.02
Y=Total no. of successful students	183.00	132.00	160.00
Z=Total no. of students appeared in the examination	196.00	144.00	165.00
API [X * (Y/Z)]	4.86	6.29	6.81

Average API [(AP1 + AP2 + AP3)/3] : 5.99

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)	5.88	5.97	5.66
Y=Total no. of successful students	129.00	143.00	178.00
Z=Total no. of students appeared in the examination	132.00	160.00	192.00
API [X*(Y/Z)]:	5.75	5.34	5.25

Average API [(AP1 + AP2 + AP3)/3] : 5.45

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	236.00	312.00	286.00
X=No. of students placed	117.00	150.00	130.00
Y=No. of students admitted to higher studies	9.00	12.00	16.00
Z= No. of students taking up entrepreneurship	0.00	2.00	1.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	53.39	52.56	51.40

Average Placement Index = (P_1 + P_2 + P_3)/3: 52.45 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)	Curr Ass (Y/N
1	Imran Mohammedamin Molvi	XXXXXXX04Q	M.E.	Gujarat University	Mechanical Engineering	16/06/2008	17.5	Lecturer	Assistant Professor		Regular	Yes
2	Nirav Hasmukhbhai Gandhi	XXXXXXX75G	MS	Sheffield Hallam University	Engineering	16/06/2008	17.6	Lecturer	Assistant Professor		Regular	Yes
3	Jalpa Chintan Zalawadia	XXXXXXX63R	M.E.	The Maharaja Sayajirao University of Baroda	Material Technology	14/10/2008	17.2	Lecturer	Assistant Professor		Regular	Yes
4	Swati Vinodchandra Prajapati	XXXXXXX06J	M.E.	Gujarat Technological University	Thermal Engineering	26/06/2007	18.5	Lecturer	Assistant Professor		Regular	Yes
5	Patel Purveshkumar Ambalal	XXXXXXX60D	M.E.	The Maharaja Sayajirao University of Baroda	Jet Propulsion and Gas Turbine	22/08/2009	16.3	Lecturer	Assistant Professor		Regular	Yes
6	Manan Sanjaykumar Shah	XXXXXXX04F	M.Tech	Gujarat Technological University	Machine Design	03/08/2019	6.4	Assistant Professor	Assistant Professor		Regular	Yes
7	Vishal Rajkumar Jain	XXXXXXX90H	M.E.	The Maharaja Sayajirao University of Baroda	Thermal Science	14/09/2009	16.2	Lecturer	Assistant Professor		Regular	Yes

8	Mohammed Noman Mohammed Hanif Kasmani	XXXXXXX38R	M.Tech	Parul University	Thermal Engineering	26/06/2018	7.5	Assistant Professor	Assistant Professor		Regular	Yes
9	Yogeshkumar Subhashcharan Sahu	XXXXXXX80A	M.Tech	Maulana Azad National Institute of Technology, Bhopal	Industrial Design	15/07/2013	12.4	Assistant Professor	Assistant Professor		Regular	Yes
10	Akash Ameet Shukla	XXXXXXX41H	M.E.	Gujarat Technological University	Mechanical (CAD/CAM)	01/07/2022	3.5	Assistant Professor	Assistant Professor		Regular	Yes
11	Hiteshkumar Naginbhai Dave	XXXXXXX63N	M.E.	The Maharaja Sayajirao University of Baroda	Thermal Science	04/08/2010	15.4	Lecturer	Assistant Professor		Regular	Yes
12	Pradeep kumar Karsh	XXXXXXX17L	Ph.D	National Institute of Technology Silchar	Mechanical Engineering	01/07/2019	6.5	Assistant Professor	Assistant Professor		Regular	Yes
13	Payel Deb	XXXXXXX06C	Ph.D	National Institute of Technology Silchar	Mechanical Engineering	28/08/2023	2.3	Assistant Professor	Assistant Professor		Regular	Yes
14	Parmar Kamleshkumar Ranchhodbhai	XXXXXXX45P	M.E.	Gujarat Technological University	Mechanical Engineering	02/07/2012	13.5	Assistant Professor	Assistant Professor		Regular	Yes
15	Nikhil Mangesh Kulkarni	XXXXXXX36Q	M.E.	Sardar Vallabhbhai National Institute of Technology	Mechanical Engineering	10/08/2015	10.4	Assistant Professor	Assistant Professor		Regular	Yes
16	Anupkumar Hasmukhlal Chaudhari	XXXXXXX86E	M.E.	Gujarat Technological University	Mechanical (Thermal Engineering)	06/08/2012	13.4	Lecturer	Assistant Professor		Regular	Yes
17	Rajput NIshant Ashokkumar	XXXXXXX04D	M.E.	Gujarat Technological University	Mechanical (Thermal Engineering)	23/11/2020	5	Assistant Professor	Assistant Professor		Regular	Yes
18	Parth Kamlesh Gaud	XXXXXXX58G	M.E.	Jai Narayan Vyas, Jodhpur	Mechanical (Thermal Engineering)	05/08/2019	6.4	Assistant Professor	Assistant Professor		Regular	Yes
19	Bharti Omprakash Setooram	XXXXXXX59D	Ph.D	Indian Institute of Technology Kanpur	Fluid and Thermal Science	02/04/2024	1.8	Assistant Professor	Assistant Professor		Regular	Yes
20	Sumit Das Lala	XXXXXXX84L	Ph.D	National Institute of Technology, Silchar	Mechanical Engineering	08/08/2019	6.4	Assistant Professor	Assistant Professor		Regular	Yes
21	Niteshkumar Ramanbhai Patel	XXXXXXX80B	Ph.D	Parul University	Mechanical Engineering	04/08/2014	11.4	Assistant Professor	Assistant Professor		Regular	Yes
22	Vipul Dave	XXXXXXX90M	Ph.D	Pandit Deendayal Energy University, Gandhinagar	Mechanical Engineering	20/12/2019	5.11	Assistant Professor	Assistant Professor		Regular	Yes
23	Krishnamraju Putta	XXXXXXX05G	M.Tech	National Institute of Technology Tiruchirappalli	Indudtrial Metallurgy	02/07/2014	11.5	Assistant Professor	Assistant Professor		Regular	Yes

24	Mehulkumar Mahendrabhai Gor	XXXXXXX59N	Ph.D	Indian Institute Of Technology Roorkee	Mechanical Engineering	01/01/2022	3.11	Associate Professor	Professor	28/06/2024	Regular	Yes
25	Mohsin J Dadi	XXXXXXX39J	Ph.D	Gujarat Technological University	Mechanical Engineering	01/06/2018	7.4	Assistant Professor	Associate Professor	17/08/2023	Regular	No
26	Sudani Jay Arvindbhai	XXXXXXX04F	M.Tech	Indian Institute Of Technology Gandhinagar	Mechanical Engineering	01/06/2015	10.6	Assistant Professor	Assistant Professor		Regular	Yes
27	Vimal Bharatbhai Kanpariya	XXXXXXX34B	M.E.	The Maharaja Sayajirao University of Baroda	Thermal Science	01/07/2022	3.5	Assistant Professor	Assistant Professor		Regular	Yes
28	Bhaveshkumar Ganpatlal Mewada	XXXXXXX68N	Ph.D	Sardar Vallabhbhai National Institute of Technology, Surat	Mechanical Engineering	04/06/2011	14.6	Assistant Professor	Professor	06/10/2022	Regular	Yes
29	Manoj Ashok Nehe	XXXXXXX84L	M.Tech	Sardar Vallabhbhai National Institute of Technology, Surat	Mechanical Engineering	22/06/2013	12.3	Assistant Professor	Assistant Professor		Regular	No
30	Mukund Pandya	XXXXXXX93J	M.Tech	Nirma University, Ahmedabad	Thermal Engineering	05/08/2024	1.4	Assistant Professor	Assistant Professor		Regular	Yes
31	Unnati Anand Joshi	XXXXXXX04R	Ph.D	Indian Institute Of Technology Roorkee	Mechanical Engineering	04/09/2017	8.3	Associate Professor	Professor	16/08/2019	Regular	Yes
32	Vyomesh Raseshkumar Buch	XXXXXXX17G	Ph.D	Charotar University of Science and Technology (CHARUSAT), Changa	Mechanical Engineering	13/03/2020	5.9	Associate Professor	Associate Professor		Regular	Yes
33	Anand Yagneshbhai Joshi	XXXXXXX88A	Ph.D	Indian Institute Of Technology Roorkee	Mechanical Engineering	02/04/2022	3.8	Professor	Professor		Regular	Yes
34	Jagdish Bhagvanbhai Pampania	XXXXXXX51H	M.E.	The Maharaja Sayajirao University of Baroda	INDUSTRIAL METALLURY	01/06/2018	7.7	Assistant Professor	Assistant Professor		Regular	Yes
35	Manjeet Khare	XXXXXXX03M	M.Tech	Ram Krishna Dharmarth Foundation University, Bhopal	Thermal Engineering	01/06/2018	7.7	Assistant Professor	Assistant Professor		Regular	Yes
36	Trivedi Snehal Viranchibhai	XXXXXXX02L	Ph.D	Gujarat Technological University	Mechanical Engineering	01/06/2018	7.6	Assistant Professor	Professor	29/05/2025	Regular	Yes
37	Bindi Saurabh Thakkar	XXXXXXX62Q	Ph.D	Parul University	Mechanical Engineering	02/07/2008	17.5	Assistant Professor	Assistant Professor		Regular	Yes
38	Bhakti Narayan Patel	XXXXXXX91F	Ph.D	Indian Institute Of Technology– Madras	Mechanical Engineering	07/01/2019	6.1	Assistant Professor	Assistant Professor		Regular	No

39	Dipeshkumar Prahladbhai Patel	XXXXXXX75H	M.Tech	Ganpat University	Mechanical (CAD/CAM)	25/10/2004	21	Assistant Professor	Assistant Professor		Regular	No
40	Hareshkumar Maheshkumar Devjani	XXXXXXX76P	M.E.	Gujarat Technological University	Mechanical (CAD/CAM)	26/06/2018	5.6	Assistant Professor	Assistant Professor		Regular	No
41	Jitendrakumar Prabhunath Chauhan	XXXXXXX63M	M.Tech	National Institute of Technology, Hamirpur	Thermal Engineering	02/06/2014	9.6	Assistant Professor	Assistant Professor		Regular	No
42	Demanlal Makhanram Sahu	XXXXXXX75M	M.Tech	Indian Institute of Technology Bombay	Energy Systems Engineering	30/07/2013	10.2	Assistant Professor	Assistant Professor		Regular	No
43	Harsh Kumar Dixit	XXXXXXX32N	Ph.D	Malaviya National Institute of Technology Jaipur	Design Engineering	01/06/2023	2.7	Assistant Professor	Assistant Professor		Regular	Yes

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

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):

UG1=1st UG program

UGn=nth UG program

B= No. of Students in UG 2nd year (ST)

C= No. of Students in UG 3rd year (ST)

D= No. of Students in UG 4th year (ST)

No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):

PG1=1st PG program.

PGm=mth PG program

A= No. of Students in PG 1st year

B= No. of Students in PG 2nd year

Student Faculty Ratio **(SFR)** = S/F

S= No. of students of all programs in the Department including all students of allied departments/clusters.

No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)

Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.

F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

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

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

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	165	198	165
UG1.C	198	165	165
UG1.D	165	165	198
UG1: Mechanical Engineering	**528**	**528**	**528**
PG1.A	15	15	15
PG1.B	15	15	0
PG1: CAD/CAM	**30**	**30**	**15**
DS=Total no. of students in all UG and PG programs in the Department	558	558	543
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=** 558	**S2=** 558	**S3=** 543
DF=Total no. of faculty members in the Department	36	39	38
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=** 36	**F2=** 39	**F3=** 38
FF=The faculty members in F who have a 100% teaching load in the first-year courses	5	7	6
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 18.00**	**SFR2= 17.44**	**SFR3= 16.97**
Average SFR for 3 years	**SFR= 17.47**		

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)	13	23	27.00	20.56
2024-25(CAYm1)	13	26	27.00	21.67
2023-24(CAYm2)	13	25	27.00	21.30

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	3.00	5.00	6.00	1.00	18.00	30.00
2024-25	3.00	4.00	6.00	3.00	18.00	32.00
2023-24	3.00	3.00	6.00	4.00	18.00	31.00
Average	RF1=3.00	AF1=4.00	RF2=6.00	AF2=2.67	RF2=18.00	AF2=31.00

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	Ashok Loiwal	Visiting Faculty	MSU BARODA	Advanced Thermodynamics	60.00
2	Ashok Loiwal	Visiting Faculty	MSU BARODA	Renewable Energy Engineering	60.00
3	Kulbushan Lamba	Visiting Faculty	SVIT VASAD	Manufacturing Processes	60.00
4	Kulbushan Lamba	Visiting Faculty	SVIT VASAD	Manufacturing Technology	60.00
5	P.D. Solanki	Visiting Faculty	LD COLLEGE OF ENGINEERING	Computer Aided Manufacturing	30.00
6	P.D. Solanki	Visiting Faculty	LD COLLEGE OF ENGINEERING	Dynamics of Machines	30.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Ashok Loiwal	Visiting Faculty	MSU BARODA	Advanced Thermodynamics	60.00
2	Ashok Loiwal	Visiting Faculty	MSU BARODA	Renewable Energy Engineering	60.00
3	Kulbushan Lamba	Visiting Faculty	SVIT VASAD	Manufacturing Processes	60.00
4	Kulbushan Lamba	Visiting Faculty	SVIT VASAD	Manufacturing Technology	60.00
5	P.D. Solanki	Visiting Faculty	LD COLLEGE OF ENGINEERING	Computer Aided Manufacturing	30.00
6	P.D. Solanki	Visiting Faculty	LD COLLEGE OF ENGINEERING	Dynamics of Machines	30.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Ashok Loiwal	Visiting Faculty	MSU BARODA	Advanced Thermodynamics	60.00
2	Ashok Loiwal	Visiting Faculty	MSU BARODA	Renewable Energy Engineering	60.00
3	Kulbushan Lamba	Visiting Faculty	SVIT VASAD	Manufacturing Processes	60.00
4	Kulbushan Lamba	Visiting Faculty	SVIT VASAD	Manufacturing Technology	60.00
5	P.D. Solanki	Visiting Faculty	LD COLLEGE OF ENGINEERING	Computer Aided Manufacturing	30.00
6	P.D. Solanki	Visiting Faculty	LD COLLEGE OF ENGINEERING	Dynamics of Machines	30.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of peer reviewed journal papers published	60	22	23
2	No. of peer reviewed conference papers published	4	16	6
3	No. of books/book chapters published	0	0	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
Dr. Vishal Sandhwar	Unnati A Joshi & Sumit Das Lala	Mechanical Engineering	Advancing Green Hydrogen Production through Electrolysis: Optimization and Renewable Energy Integration	Royal Academy of Engineering, United Kingdom	14 MONTHS	68.00
Anand Y Joshi		Mechanical Engineering	Development and characterization of processed shape memory alloy (SMA) components for space applications	Indian Space Research Organization (ISRO)	24 MONTHS	22.51
						Amount received (Rs.):90.51

(CAYm2)

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 90.51
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
Niteshkumar Ramanbhai Patel	Akash Ameet Shukla	Mechanical Engineering	Development of Travel Sensing Device	Setco Automotive Pvt. Ltd.	6 Months	0.23
Niteshkumar Ramanbhai Patel	Akash Ameet Shukla	Mechanical Engineering	Aluminum Block Job Work	Igneous Technology	6 Months	0.28
Niteshkumar Ramanbhai Patel	Akash Ameet Shukla	Mechanical Engineering	Aluminium Block with 96 Holes	Igneous Technology	6 Months	0.21
Bhavesh Ganpatlal Mewada	Jalpa Chintan Zalawadia, Manoj Nehe, Pradeep kumar karsh	Mechanical Engineering	Time and Motion Study	TOTO India Industries	3 Months	2.25
Anand Y Joshi		Mechanical Engineering	XRD samples for Testing	BDR Pharmaceuticals Internationals Pvt. Ltd.	6 Months	6.78
Bhavesh Ganpatlal Mewada		Mechanical Engineering	New Product Development	AVACON MULTICORP INDIA PVT LTD	6 Months	1.95
Bhavesh Ganpatlal Mewada		Mechanical Engineering	SHORT-TERM TRAINING PROGRAMME ON AVIATION MANAGEMENT FOR DESIGNATED FACULTIES FROM GOVT OF MADHYA PRADESH	THE COIMIVISSIONER, OFFICE OF COIVITMISSIONER, DEPARTTMENT OF HIGHER EDUCATION, 5th FLOOR SATPUDA BHAWAN. BHOPAL, MADHYA PRADESH	6 Months	4.72
						Amount received (Rs.):16.42

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Niteshkumar Ramanbhai Patel	Manan Sanjaykumar Shah Haresh Devjani	Mechanical Engineering	Design and Manufacturing of FBD 5kg with FBP provision	HSM Pharma Solutions	12 Months	1.30
						Amount received (Rs.):1.30

(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
Niteshkumar Ramanbhai Patel	Manan Sanjaykumar Shah Haresh Devjani	Mechanical Engineering	Detailed Design for Equipment, Heat Pump based Food Dryer	IDA Agro Products LLP	6 Months	0.30
						Amount received (Rs.):0.30

Total amount (Lacs) received for the past 3 years: 18.02
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
Niteshkumar Ramanbhai Patel	Design and optimization of solar hot air generator	12 Months	4.50	1.17	1 M.Tech Project Ongoing, Project completed
Akash Ameet Shukla	Design & Development of Magnetic Coupling	12 Months	4.40	1.60	Experimental Test rig Developed, Project Completed
Yogeshkumar Shubhascharan Sahu	Enhansing Machinery Fault Dignosis	12 Months	1.70	1.30	1 M.Tech Thesis Completed, Project Completed
			Amount received (Rs.): 10.60		

(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
Unnati A Joshi	Enhancing the Wear Resistance and Friction Behaviour	24 Months	3.50	3.50	2 publications 1 M.Tech graduated
Pradeep Kumar Karsh	Developement and characterization of functionally graded material	12 Months	1.90	1.90	1 Ph.D ongoing, Project is Ongoing
Manan Sanjaykumar Shah	Designing a Marble Slurry Sepration system	12 Months	0.85	0.85	1 B.Tech Major Project, Project Completed
Nishant Ashokkumar Rajput	Design and Development of Prosopis Juliflora Cutting Machine	12 Months	1.15	1.15	1 B.Tech Major Project, Project Completed
Parth Kamlesh Gaud	Innovative Solar Air heater optimization:	12 Months	1.25	1.25	1 B.Tech Major Project, Project Completed
Mohammed Noman M Kasmani	Design and Optimisation of a Compact Furnace	12 Months	1.40	1.40	Model Developed & Patent Filled, Project Completed
Payal Deb	Green Innovation: Developing Sustainable Composite Material	12 Months	0.60	0.60	Patent Filled, Project Completed
Akash Ameet Shukla	Refill friction stir spot welding process of disimilar metal	12 Months	0.75	0.75	1model Developed, Project Completed
Manoj Ashok Nehe	Investigations on the creep behaviour of P91 cladded material	24 Months	3.00	3.00	Project ongoing. One paper Expected
Kamleshkumar Ranchhodbhai Parmar	Machine Learning Approach for Thermal Parameters Prediction	12 Months	1.75	1.75	1 publication, Project Completed
Niteshkumar Ramanbhai Patel	Hybrid Vacuum Glass Tube based photovoltaic thermal (PV-T) Solar System	12 Months	2.70	2.70	1 model produced 1 Ph.D ongoing 1 M.Tech ongoing, Project Completed
			Amount received (Rs.): 18.85		

(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
Anand Y Joshi	Green Synthesis of a Hybrid nanocomposite	24 Months	3.00	3.00	1 Ph.D ongoing 2 Publication
Jalpa Chintan Zalawadia	Experimental Investigation on Effect of Welding Effulents of Fusion welding	12 Months	1.00	1.00	2 Publication
Imran Mohammedamin Molvi	Extraction of alternative fuels from different plastic waste	12 Months	0.65	0.65	2 Publication
			Amount received (Rs.): 4.65		

Total amount (Lacs) received for the past 3 years : 34.10

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	Machine Design and Tribology Lab	25	▯ Spring Testing Machine ▯ Belt Tensioning Set-up ▯ Spring deflection Set-up ▯ Models of	5th Sem – 08 h	Mr. Kilpan Pat	Lab Technicial	Diploma in Me

2	Refrigeration and Air Conditioning Lab	25	☐ Cascade Refrigeration Trainer ☐ Vapor Compression ☐ Refrigeration Trainer Kit ☐ Air Conditioning Test	7th Sem – 24 h	Mr. Yogesh Pa	Lab Technicial	Diploma in Me
3	Heat Transfer Lab	25	☐ Plate type Heat Exchanger Regenerative Heat ☐ Exchanger Pin Fin Apparatus ☐ Heat Transfer in	5th Sem – 24 h	Mr. Jay Patel	Lab Technicial	Diploma in Me
4	Control Engineering Lab	25	☐ Hydraulic Trainer Kit ☐ Pneumatics Trainer Kit ☐ IoT Kit (Arduino Kit)	5th Sem – 24 h	Mr. Kilpan Pate	Lab Technicial	Diploma in Me
5	Kinematics and Dynamics of Machines Lab	25	☐ Universal Vibration Test Rig ☐ Balancing of Reciprocating Masses ☐ Gyroscope Test Rig ☐ Universal	3rd Sem – 24 h	Mr. Yogesh Pa	Lab Technicial	Diploma in Me
6	Metrology and Instrumentation Lab	25	☐ Tool Maker's Microscope ☐ Profile Projector ☐ Vernier Calipers ☐ Depth and Height Gauges ☐	4th Sem – 24 h	Mr. Jayesh Ba	Lab Technicial	ITI
7	Material Science and Metallurgy Lab	25	☐ Magnetic Particle Detector ☐ Muffle Furnace ☐ Inverted Metallurgical Micro Scope ☐	3rd Sem – 24 h	Mr. Jayesh Ba	Lab Technicial	ITI
8	Fluid Mechanics and Fluid Power Engineering Lab	25	☐ Pelton Wheel Turbine Test Rig ☐ Francis Turbine Test Rig ☐ Centrifugal Pump Test Rig ☐ Air	4th Sem – 24 h	Mr. Jay Patel	Lab Technicial	Diploma in Me
9	Computer Aided Design Lab	25	☐ Computers ☐ Solid Works and 3D Experience Software ☐ CREO Software	1st Sem – 24 h	Mr. Sandeep F	Lab Technicial	Diploma in Me
10	Elements of Mechanical Engineering Lab	25	☐ Model of Flanged Coupling, Oldham Coupling, Universal Coupling ☐ Models of Belt pulley	1st Sem – 12 h	Mr. Jay Patel	Lab Technicial	Diploma in Me
11	Engineering Graphics Lab	25	☐ Models of Square Prism, Square Pyramid,Pentagonal Prism, Pentagonal Pyramid, Hexagonal	1st Sem – 24 h	Mr. Jayesh Ba	Lab Technicial	ITI
12	Computation Fluid Dynamics Lab	25	☐ ANSYS Software ☐ Computers of required specifications	7th Sem – 24 h	Mr. Sandeep F	Lab Technicial	Diploma in Me
13	Solar Engineering Lab	25	☐ Solar Photovoltaic Training & Research Kit ☐ Solar Resource Assessment	7th Sem – 12 h	Mr. Yogesh Pa	Lab Technicial	Diploma in Me
14	Manufacturin g Process and Technology Lab	25	☐ Vertical Milling Cutter ☐ 3D Printer ☐ EDM Machine ☐ CNC Lather Trainer Kit ☐ Power Press ☐ Lathe	3rd Sem – 24 h	Mr. Dahyabhai	Instructor	ITI
15	Workshop and Manufacturing Practices	25	☐ Fitting Tools ☐ Carpentry Tools ☐ Plumbing Tools ☐ Tin Smithy Tools ☐ Soldering Tools	2nd Sem – 12 h	Mr. Kanubhai I	Instructor	ITI

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Machine Design and Tribology Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
2	Refrigeration and Air Conditioning	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.

#	Lab	Safety Measures
3	Heat Transfer	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
4	Control Engineering	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
5	Kinematics and Dynamics of Machines	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
6	Metrology and Instrumentation	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
7	Material Science and Metallurgy	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
8	Fluid Mechanics and Fluid Power Engineering	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
9	Computer Aided Design Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.

10	Elements of Mechanical Engineering Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
11	Engineering Graphics Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
12	Computation Fluid Dynamics Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
13	Solar Engineering Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
14	Manufacturing Process and Technology Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.
15	Workshop and Manufacturing Practices Lab	☐ First-aid box is facilitated for emergency situations. ☐ Fire-extinguishers are placed in nearby premises. ☐ CCTV Camera are installed in nearby premises. ☐ Ergonomically placed work stations. ☐ All the experiments are performed in presence of Lab Technician/Staff. ☐ Regular Inspection and Maintenance Inspection of all instruments are carried out. ☐ Proper instructions and manuals are placed in laboratories for smooth operation and equipment use. ☐ Safety instruments like apron, gloves, helmets and glasses are used in Workshop. ☐ Proper Lighting and Ventilation arrangement are made. ☐ Safety chart is provided near the critical equipment ☐ Washing facility is available at nearby places.

D3. Project Laboratory/Research Laboratory

A. Availability of project laboratories/research laboratories

The department provides well-equipped and accessible project/research laboratories that effectively support student projects, faculty research, and innovation activities. Dedicated labs are available for core domains of Mechanical Engineering.

Key highlights:

- **Dedicated Project Labs:** Separate spaces for final-year projects and research work.
- **Modern Equipment & Software:** High-performance systems, licensed software (e.g., Solid works, ANSYS), and domain-specific toolkits.
- **Research Support:** Specialized Laboratories support interdisciplinary research and innovation.
- **Extended Lab Hours:** Flexible access beyond class hours for project work.
- **Safety & Compliance:** Proper safety guidelines, supervision, and maintenance protocols

Project and Research Laboratories at Mechanical Engineering.

Sr. No	Lab Type	Laboratory Name	Details
1.	Project Lab	- Workshop - FAB Lab - IDEA Lab	Project Laboratories are specifically used to support Project Work. It contains equipments like TIG Welding Machine, Spot Welding Machine Arc Welding Machine, Hand Grinder, Bench Grinder Lathe Machine, Vertical Drilling Machine, Hand Drill, Bench Vice Prototype Making, Model Making, PCB Designing 3D Printing Design Soldering and Brazing Arduino Kit, Sensors, Relays
2.	Innovation Lab	Founder's Studio	A dedicated space to support student's startup and incubation help.
3.	Research Lab	HPC Lab	Utilized for advanced simulation, modelling, and analysis to support student projects, faculty research, industry collaboration,
		IC Engine Research Lab	Multi Fuel VCR Engine used for research related to alternative fuels and emission.

Fig. 7.5.1: Workshop Facility

Fig 7.5.2: FAB Lab

Fig. 7.5.3: Idea Lab

Fig. 7.5.4: IC Engine Research Lab

Fig 7.5.5: Founder's Studio

B. Availability of Centre of Excellence

The department has established **Centres of Excellence (CoE)** to promote advanced learning, research, innovation, and industry collaboration in emerging and core technology domains. These centres function as hubs for specialized training, funded research projects, certifications, and internships.

Centre of Excellence at Mechanical Engineering

1. Advanced Manufacturing
2. Micro Nano R & D Centre
3. Mahindra and Mahindra (M-Shiksha) Automotive Training Centre
4. MG Motors Electric Vehicles Centre under MG nurture program
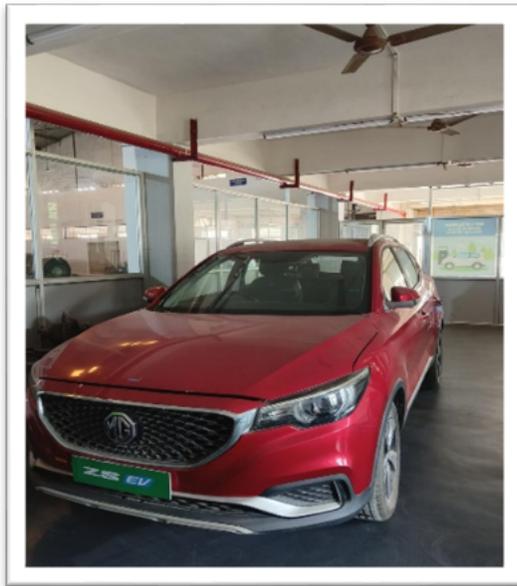
Fig 7.5.6 : MG Motors CoE

Fig. 7.5.7: Advanced Manufacturing Facility
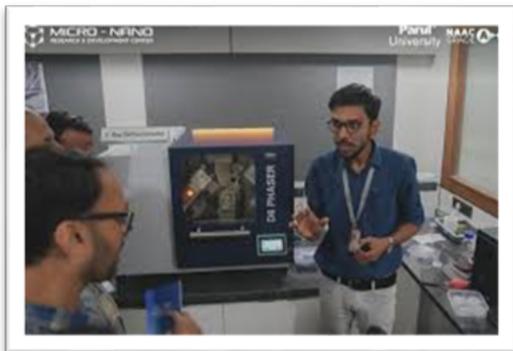
Fig. 7.5.8: Micro Nano Research and Development Centre

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

The project laboratories, research laboratories, and Centres of Excellence (CoEs) are **optimally utilized** throughout the academic year for student projects, faculty research, industry collaboration, training programs, and innovation activities. Utilization is structured, monitored, and outcome-oriented.

Modes of Utilization:

- **Student Projects:** Final-year major projects, mini-projects, interdisciplinary projects, and hackathons conducted using CoE facilities
- **Faculty Research:** Funded research projects, consultancy work, prototypes, and publications executed in research labs
- **Certifications & Training:** Regular skill-development programs and certification courses in collaboration with industry partners such as IBM, Infosys, and Microsoft
- **Internships & Live Projects:** Students work on real-world problem statements provided by industry mentors
- **Innovation & Startups:** Ideation, prototyping, and product development through incubation and entrepreneurship cells
- **Research Outputs:** Publications in indexed journals, patents, prototypes, and technology transfers
- **Community & Outreach:** FDPs, workshops, school outreach programs, and societal problem-solving initiatives

Following is details of **Consultancy work** carried out at **Advanced Manufacturing CoE** to create Aluminium Blocks for **Igneous Technologies Pvt. Ltd.** for **heating and cooling purpose in Pharmaceutical Industries.**

Fig. 7.5.9: Samples Developed for Consultancy Work

D. Relevance to POs/PSOs

The utilization of Project Laboratories, Research Laboratories, and Centres of Excellence (CoEs) is **strongly aligned with the Program Outcomes (POs) and Program Specific Outcomes (PSOs)** of the curriculum. All activities conducted in these facilities are mapped to clearly defined learning outcomes and competencies required by the program.

Activity Carried out in (Project Lab / Research Lab / CoE)	Mapped PO & PSO
Final-Year Major Projects (Problem-based, Industry-linked)	PO8, PO9
Mini Projects / Interdisciplinary Projects	PO1, PO2, PO9
Funded Research Projects	PO2
Prototype Development	PO3, PO5, PSO1
Industry Mentored Live Projects	PO3, PO9, PO10, PSO2
Certifications & Skill Training	PO5, PO12, PSO2
Hackathons / Innovation Challenges	PO2, PO3, PO9
Research Publications & Patents	PO4, PO12, PSO1
Startup / Incubation Activities	PO3, PO11, PSO2
Socially Relevant / Sustainable Projects	PO6, PO7, PO8

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)	1920	96	53	86	62
2024-25(CAYm1)	1680	84	57	99	78
2025-26(CAY)	1650	82	54	100	77

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	1395625	600000	1522500	3000000	558280	3020000	2953672
Library	11500000	10239783	400000	11170672	2800000	286496	2810000	2713622
Laboratory equipment	10000000	17939979	4100000	19570886	700000	373983	750000	683869
Teaching and non-teaching staff	710065000	442789454	336550000	512102034	324700000	317815471	335840000	310137171
Outreach Programs	21500000	4705204	4120000	5132950	10430000	3807709	10380000	10295112
R&D	1500000	6266250	5599000	6835909	9310000	5345256	10000000	9205092
Training, Placement and	11000000	14563908	59750000	15887900	17790000	59445096	17461000	17646077
SDGs	13000000	11719368	17040000	12784765	13820000	16420222	13538000	13109520
Entrepreneurship	150000000	124853350	73500000	136203654	76870000	71172416	77110000	75285035
Others, specify								
Total	930565000	634472921	501659000	721211270	459420000	475224929	470909000	442029170

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	652224.55	1170089.47	33267.57	1362160.66	60859.73	32515.01	72210.59	65843.45
Software	0	0	0	0	0	0	0	0
SDGs	847891.92	764365.95	1180998.63	863255.53	930284.42	1188663.7	1001320.24	961923.10
Support for faculty development	1402282.79	306884.97	291091.21	358122.87	704234.00	278645.57	775060.38	774358.68
R & D	97833.68	408700.20	415844.59	494228.55	652068.52	418893.51	770246.34	714383.36
Industrial Training, Industry expert,	717447.01	949893.86	4158445.89	1081860.45	1338914.03	4330786.63	1448063.11	1477532.45
Miscellaneous Expenses*	0	0	0	0	0	0	0	0

| Total | 3717679.95 | 3599934.45 | 6079647.89 | 4159628.06 | 3686360.70 | 6249504.42 | 4066900.66 | 3994041.04 |