

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 : 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 APPROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Mechanical Engineering	UG	2002 / --	30	Yes	2023	60	2023	western/1-36502674832/2023/EOA (16/06/2023)	Applying first time	--	--	0	4

Sanctioned Intake for Last Five Years for the Mechanical Engineering	
Academic Year	Sanctioned Intake
2024-25	60
2023-24	60
2022-23	90
2021-22	90
2020-21	120
2019-20	120

List of the Allied Departments/Cluster and Programs:

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

A. Name of the HoD :	Dr.Divya MV Padmanabhan
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	90	90	120	120	120
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	63	49	59	44	66	102	116
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	21	32	60	73	44	27
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.	63	70	91	104	139	146	143

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	63	0	105.00
2023-24 (CAYm1)	60	49	0	81.67
2022-23 (CAYm2)	90	59	0	65.56

Average $[(ER1 + ER2 + ER3) / 3] = 84.08 \approx 17.00$

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).	193.00	164.00	147.00
B=No. of students who graduated from the program in the stipulated course duration	91.00	122.00	114.00
Success Rate (SR)= (B/A) * 100	47.15	74.39	77.55

Average SR of three batches $((SR_1 + SR_2 + SR_3)/3)$: 66.36

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

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

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
Mean of CGPA or mean percentage of all successful students(X)	6.87	6.96	6.79
Y=Total no. of successful students	38.00	36.00	41.00
Z=Total no. of students appeared in the examination	49.00	59.00	44.00

API [X*(Y/Z)]	5.33	4.25	6.33
---------------	------	------	------

Average API [(AP1+AP2+AP3)/3] : 5.30

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

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.10	6.96	7.92
Y=Total no. of successful students	58.00	66.00	138.00
Z=Total no. of students appeared in the examination	68.00	101.00	138.00
API [X * (Y/Z)]	6.06	4.55	7.92

Average API [(AP1 + AP2 + AP3)/3] : 6.18

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 (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)	7.08	6.79	7.81
Y=Total no. of successful students	61.00	112.00	139.00
Z=Total no. of students appeared in the examination	66.00	138.00	140.00
API [X*(Y/Z)]:	6.54	5.51	7.75

Average API [(AP1 + AP2 + AP3)/3] : 6.60

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	193.00	164.00	147.00
X=No. of students placed	48.00	74.00	55.00
Y=No. of students admitted to higher studies	8.00	8.00	7.00
Z= No. of students taking up entrepreneurship	0.00	0.00	1.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	29.02	50.00	42.86

Average Placement Index = (P_1 + P_2 + P_3)/3: 40.63 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. Sandeep M. Joshi	XXXXXXXX50N	Ph.D	IIT Bombay	Mechanical	10/03/2006	19.3	Lecturer	Professor	01/07/2017	Regular	Yes		No
2	Dr Priam Pillai	XXXXXXXX08K	Ph.D	MIT-USA	Mechanical	21/09/2011	13.8	Assistant Professor	Professor	01/07/2016	Regular	Yes		No
3	Dr.Divya MV Padmanabhan	XXXXXXXX16A	Ph.D	IIT Bombay	Materials and Metallurgy	20/08/2010	14.9	Assistant Professor	Professor	01/07/2017	Regular	Yes		Yes
4	Dr.Dhanraj Tambuskar	XXXXXXXX80A	Ph.D	VJTI Mumbai	Production	28/01/2010	13.5	Assistant Professor	Professor	01/07/2015	Regular	No	30/06/2023	No
5	Dr. Richa S. Agrawal	XXXXXXXX76L	Ph.D	VNIT Nagpur	Mechanical	18/07/2013	11.10	Assistant Professor	Associate Professor	01/07/2014	Regular	Yes		No
6	Dr. Rashed Ali	XXXXXXXX31R	Ph.D	VJTI Mumbai	Mechanical	01/07/2010	14.11	Assistant Professor	Associate Professor	01/07/2015	Regular	Yes		No
7	Dr. Gajanan N. Thokal	XXXXXXXX14G	Ph.D	Amravati University	Mechanical	14/01/2012	13.5	Assistant Professor	Associate Professor	01/07/2014	Regular	Yes		No
8	Miriyala Durga N. K. P. Rao	XXXXXXXX62E	M.E.	Swami Ramanand Tirth Marathwada University, Nanded	Mechanical-Design	01/09/2005	19.9	Lecturer	Associate Professor	01/07/2013	Regular	Yes		No
9	Pruthviraj P. Rahane	XXXXXXXX62M	M.E.	Mumbai University	Mechanical-Thermal	09/07/2010	14.11	Lecturer	Associate Professor	01/07/2015	Regular	Yes		No
10	Shilpa M. Mondkar	XXXXXXXX87A	M.E.	Mumbai University	Mechanical-Thermal	12/07/2010	14.11	Lecturer	Assistant Professor		Regular	Yes		No
11	Meeta S. Vedpathak	XXXXXXXX65G	M.E.	Mumbai University	Mechanical-Thermal	09/07/2012	12.11	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Bhagwan S. More	XXXXXXXX12H	M.E.	Mumbai University	Mechanical-Design	14/09/2009	15.9	Lecturer	Assistant Professor		Regular	Yes		No
13	Binsu Babu	XXXXXXXX99F	M.E.	Mumbai University	Mechanical-Design	10/08/2015	9.10	Lecturer	Assistant Professor		Regular	Yes		No
14	Lalit Mohan Mehta	XXXXXXXX82E	M.E.	Mumbai University	Mechanical-Thermal	01/08/2013	11.10	Lecturer	Assistant Professor		Regular	Yes		No
15	Tikaram Ganpat Verma	XXXXXXXX41L	M.E.	Mumbai University	Mechanical-Thermal	19/08/2014	10.9	Lecturer	Assistant Professor		Regular	Yes		No
16	Shivapradeep Muthupandi	XXXXXXXX81K	M.E.	Mumbai University	Mechanical-Design	12/08/2013	11.10	Lecturer	Assistant Professor		Regular	Yes		No

17	Jagdish Kelkar	XXXXXXXX28P	M.E.	Mumbai University	Mechanical-Design	21/07/2007	16.10	Lecturer	Assistant Professor		Regular	No	31/05/2024	No
18	M. K. Verma	XXXXXXXX01D	M.E.	Madras University	Mechanical-Plant Engineering	19/07/2018	5.10	Assistant Professor	Assistant Professor		Regular	No	31/05/2024	No
19	V. P. Suryavanshi	XXXXXXXX06K	M.E.	Mumbai University	Mechanical	01/02/2021	4.4	Assistant Professor	Assistant Professor		Regular	Yes		No
20	Surabhi Nikale	XXXXXXXX02C	M.E.	Pune University	Mechanical-Design	02/02/2021	3	Assistant Professor	Assistant Professor		Regular	No	12/02/2024	No
21	Dr. Jeet Patil	XXXXXXXX43K	Ph.D	Swami Ramanand Tirth Marathwada University Nanded	Mechanical	02/03/2022	1.6	Assistant Professor	Assistant Professor		Regular	No	30/09/2023	No
22	Namita Dhundre	XXXXXXXX97R	M.E.	Mumbai University	Mechanical-SC & Logistics	11/02/2022	1.11	Assistant Professor	Assistant Professor		Regular	No	15/01/2024	No
23	Pranita Thakur	XXXXXXXX16E	M.E.	Mumbai University	Mechanical-Thermal	11/07/2022	2.11	Assistant Professor	Assistant Professor		Regular	Yes		No
24	Dr Debashish Panda	XXXXXXXX70R	Ph.D	IIT Kharagpur	Mechanical-Acoustic and Noise Control	05/08/2022	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No
25	Nitin More	XXXXXXXX61M	M.E.	Mumbai University	Mechanical	05/09/2022	2.9	Assistant Professor	Assistant Professor		Regular	Yes		No
26	Akshata Gondhalekar	XXXXXXXX50E	B.E.	Mumbai University	Mechanical	02/01/2023	0.7	Lecturer	Assistant Professor		Regular	No	03/08/2023	No

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

C2. Student-Faculty Ratio (SFR)

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

UG1=1st UG program

UGn=nth UG program

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

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

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

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

PG1=1st PG program.

PGm=mth PG program

A= No. of Students in PG 1st year

B= No. of Students in PG 2nd year

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

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

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

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

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

No. of UG Programs in the Department1 No. of PG Programs in the Department1
Table No.C2.1: Student-faculty ratio.

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1.B	66	99	99
UG1.C	99	99	132
UG1.D	99	132	132
UG1: Mechanical Engineering	264	330	363
PG1.A	36	36	36
PG1.B	36	36	36
PG1: Mechanical Engineering	72	72	72
DS=Total no. of students in all UG and PG programs in the Department	336	402	435
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= 336	S2= 402	S3= 435
DF=Total no. of faculty members in the Department	19	21	24
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= 19	F2= 21	F3= 24
FF=The faculty members in F who have a 100% teaching load in the first-year courses	2	2	2
Student Faculty Ratio (SFR)=S/(F-FF)	SFR1= 19.76	SFR2= 21.16	SFR3= 19.77
Average SFR for 3 years	SFR= 20.23		

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 = $2.5 \times [(10X + 4Y) / RF]$
2024-25(CAY)	7	12	16.00	18.44
2023-24(CAYm1)	7	14	20.00	15.75
2022-23(CAYm2)	8	16	21.00	17.14

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = $1/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents:}$.
- RF2= No. of Associate Professors required = $2/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:}$.
- RF3= No. of Assistant Professors required = $6/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:}$.
- 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	3.00	3.00	3.00	11.00	13.00
2023-24	2.00	3.00	4.00	3.00	13.00	15.00
2022-23	2.00	4.00	4.00	3.00	14.00	17.00
Average	RF1=1.67	AF1=3.33	RF2=3.67	AF2=3.00	RF2=12.67	AF2=15.00

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr Shardul Buwa	Assistant Professor	PCACS,New Panvel	Economics	50.00
2	Prof. Jayesh Patil	Assistant Professor	PICA,New Panvel	Visual Arts	50.00
3	Prof. Priyesh Keekan	Assistant Professor	PHCACS, Rasayani	Political Science	50.00
4	Dr Pushpendu Rakshit	Assistant Professor	PIMSR, New Panvel	E Commerce	50.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr Shardul Buwa	Assistant Professor	PCACS,New Panvel	Finance Management	50.00
2	Prof. Jayesh Patil	Assistant Professor	PICA,New Panvel	Visual Arts	50.00
3	Prof Jisha Sathesh	Assistant Professor	Free Lancer Professional	Power Electronics	50.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr Shardul Buwa	Assistant Professor	PCACS,New Panvel	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	18	7	7
2	No. of peer reviewed conference papers published	0	1	0
3	No. of books/book chapters published	1	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
Dr. Priam Vasudevan Pillai	Dr. Divya Padmanabhan	Mechanical Engineering	Development of an In Vitro Instrument for Occlusal as well as Chewing Force Analysis and Testing of Dental Implants	Anusandhan National Research Foundation (ANRF)	36 Months	41.65
						Amount received (Rs.):41.65

(CAYm2)

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 41.65**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
Richa Agrawal	None	Mechanical Engineering	"Comparative Evaluation of Stability of Rigid and Non-Rigid Fixation in Bifocal Fractures Involving Unilateral Mandibular Condyle with Associated Contralateral Mandibular Fractures: A Finite Element Analysis"	Oral & Maxillofacial Surgery MGM Dental College and Hospital	One year	0.60
						Amount received (Rs.):0.60

(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. Richa Agrawal	None	Mechanical Engineering	Effect of Recurrent Trauma on AHealed Fracture of the mandible WithInternal In Situ : A Finite ElementAnalysis	MGM Dental college and hospital, Sector 1, Kamothe, Navi Mumbai-410209	One year	0.40
Dr. Richa Agrawal	None	Mechanical Engineering	Evaluation of Stability of foxation using conventional miniplate Osteosynthesis in Comminuted and Non-comminuted Lefort I, II, III Fracture- A dynamic Finite analysis	MGM Dental college and hospital, Sector 1, Kamothe, Navi Mumbai-410209	One year	0.50
Dr. Richa Agrawal	None	Mechanical Engineering	Comparative Evaluation of Monoplanar and Biplanar Plating Techniques Using Titanium Miniplates with Monocortical Fixation for the Treatment of Unfavorable Mandibular Angle Fractures using Finite Element Analysis - An In-Vitro Study	YMT Dental College and Hospital, Kharghar, Navi Mumbai - 410209	One year	0.30
						Amount received (Rs.):1.20

(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. Priam Pillai	None	Mechanical Engineering	Towards the 'Mumbai Salon Data	Infinite Anaytics India Pvt. Ltd, A 909 The Capital ,BKC, Bandra East,0Mumbai 400051	Six months	0.30
Dr. Richa Agrawal	None	Mechanical Engineering	Design and Development of surgical guide plates for dental Fracture	MGM Dental college and hospital, Sector 1, Kamothe, Navi Mumbai-410209	One year	0.17
						Amount received (Rs.):0.47

Total amount (Lacs) received for the past 3 years: 2.27

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
Mr. M Durgarao	Stabilization and control on an inverted pendulum using LABVIEW and NI Harware	1 year	2.00	1.75	
			Amount received (Rs.): 2.00		

(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.Binsu Babu	LABview Integration with Data Acquisition System	1 year	2.67	2.67	Poster presentation at Conference CTFC 2. Student Internship was offered.
			Amount received (Rs.): 2.67		

(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
Mr.Binsu Babu	Development of 1 degreee of freedom dental occlusal system	1 year	2.13	2.13	1.Resulted in development of prototype
			Amount received (Rs.): 2.13		

Total amount (Lacs) received for the past 3 years : 6.80

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	Advanced Manufacturing	20	CNC Router Engraving Machine, Laser Cutting Machine EV-II, Crealit K1 Max 3D Printer, CNC Turning	20	Mr. Deepak Bane	Lab Assistant	BA, ITI
2	Fluid Mechanics	20	Venturimeter and Orificemeter Expt setup, Piot tube expt setup, Major and Minor Loss expt setup,	18	Mr. Krushna Remulkar	Lab Assistant	HSC, ITI
3	Heat Transfer	20	1. Thermalconductivity of insulating powder/metal rod, 2. heat exchanger, 3. unsteady state heat transfer,4.	12	Mr. Vinit N. Khambekar	Lab. Assistant	Diploma, ITI
4	Strength of Materials	20	Universal Testing Machine (UTM).Impact Testing Machine, Tensile Testing Machine, Torsion Testing	18	Mr. Saitsh Patil	Lab Assistant	Diploma
5	Theory of Machinery	20	Governor,Gyroscope,Mechanical Vibration Machine	18	Mr. Saitsh Patil	Lab Assistant	Diploma
6	Machine Shop	20	One Precision lathe m/c, Small lathe machines (Cone pulley type; 600 ABC,1HP).20 No.s.Milling & Shaping	36	Devdas Patil & Arun Ped	Lab Assistant	ITI
7	Workshop	20	Vertical Drilling Machine,Bench Grinder,Power Hacksaw, Spot Welding Machine, Arc Welding Machine	36	" Mr. Jayakumar K. N. , M	Lab Assistant	ITI

8	Mechatronics Lab	20	Vertical Drilling Machine, Bench Grinder, Power Hacksaw, Spot Welding Machine, Arc Welding Machine	20	Mr. Krishna Remulkar	Lab Assistant	HSC, ITI
9	CAD/FEA	20	55 PC with Intel(R) Core(TM) i5 & i7, 16 GB RAM, 64-bit OS, SSD 256GB, 2 Laser Printer, 1 Projector, 1	34	Mr. Hemant S. Warang	Lab Assistant	HSC, MSCIT, MCVV Vocæ
10	Refrigeration and Airconditioning	20	1. Air Condition Cycle Test Rig, 2. Cooling Tower, 3. Ice Plant, 4. Water Cooler Test Rig, 5. Cut section of	12	"Mr. Shivadatta Uppar"	Lab Assistant	ITI

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Advanced Manufacturing Lab	1. CNC machines are operated with machine covershield 2. Emergency stop buttons are available on both CNC Milling and CNC Turning Trainers. 3. Earthing and power supply are frequently checked. 4. Simulation of the part program and dry run is done before actual cutting of the workpiece. 5. Students are allowed in the lab only in the presence of faculty or lab assistant. 6. Maintenance of the equipment is done on a regular basis.
2	FLUID MECHANICS	General Instructions 1. Always enter in lab with closed footwear. 2. Do not touch anything without the permission of instructor/ lab assistant 3. Tools, apparatus etc are to be returned before leaving the laboratory. Safety rules: 1. Read carefully the lab manual before performing experiments. 2. Do not open the casing or try to dismantle the equipment 3. Do not leave the lab with experiments running unattended. 4. Make sure the tabs of water supply are closed after completing the particular experiment. 5. Any injuries should be reported immediately for proper care. 6. Power supply for machine should be switched off immediately as soon as the practicals are completed
3	Refrigeration and Air Conditioning	1. Don't enter the lab without lab incharge permission 2. Read carefully the lab manual before performing experiments. 3 Students should keep their bags inside the rack before entering the lab. 4. Don't touch any electrical connections unless instructed by the lab In-charge. 5. Maintain a safe distance from equipments.
4	Heat and Mass Transfer	General Instructions 1. Always enter in lab with closed footwear. 2. Do not touch anything without the permission of instructor/ lab assistant 3. Tools, apparatus ect are to be returned before leaving the laboratory. Safety rules: 1. Read carefully the lab manual before performing experiments. 2. Do not open the casing or try to dismantle the equipment 3. Do not leave the lab with experiments running unattended. 4. Make sure the tabs of water supply are closed after completing the particular experiment. 5. Any injuries should be reported immediately for proper care. 6. Power supply to your test table should be obtained only through the lab technician/ instructor 7. Switch off the power supply to the experimental setup on completion of the experiment.
5	Strength of Materials	1. Presence of First Aid Kit for untoward incident, if any. 2. Chart displayed on a wall to cultivate safety culture. 3. Yellow radium strips of about 2 inches thick is pasted on the ground, marking rectangular box areas around each machine so that students do not cross the same while machine is in operation, and maintain safe distance from the machine and the operators. 4. Red radium text titled " WARNING - Do not stand here while machine is in operation" is pasted on the floor, on the side near to the brake lever of Impact Testing Machine, to warn the students and operators. 5. Regular checking of the mains and earthing. 6. Operation of any machine by a student or in group, is always in the presence of the faculty and/or the lab.assistant/technician. 7. Provision of enough well-lit tube-lights and fans for proper vision and ventilation, also the windows and door are kept wide open during practicals. 8. Power mains for each machine are switched off immediately as soon as the practicals are conducted.
6	THEORY OF MACHINES	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. 4. Models kept in the lab are only for observation and manual handling is restricted.

7	MACHINE SHOP	The very first assignment given is on safety measures in Industry 1. Use of mobile phones not allowed. Mobiles are switched off. 2.White goggles provided to protect eyes. 3.No loose clothing,necklace, locket , rist bands,...etc. allowed while working. 4. Fire extinguishers are provided 5. All machines provided with guard cover on rotating belts, pulleys etc. 6.Apron use is must 7. Constant watch of supervisors and staff 8. Numbering is done on machines and their related electrical switches,to avoid confusion 9. Welding goggles, screen; hand gloves etc. are used while doing welding job
8	WORKSHOP	The very first assignment given is on safety practices and measures followed in Industry. 1. Use of mobile phones not allowed. Mobiles are switched off. 2.Goggles are provided to student engaged in chiseling work to protect eyes. 3.No loose clothing,necklace, locket , rist bands,...etc. allowed while working. 4. Fire extinguishers are provided in workshop. 5. Grinding Machines provided with guard cover on rotating wheel . 6.Apron use is must while on work. 7. Guide and supervise the student during work by instructor and their assistant staff . 8. Numbering is done on machines and their related electrical switches,to avoid confusion 9. Welding goggles, screen; hand gloves etc. are used while doing welding job 10. No mask No entry is followed . Safe distancing among the student is being maintained 11. Every machine in workshop is displayed with safety measures to be followed during work by student.
9	Mechatronics	1. Instructions related to safety measurres are given at the start of each lab session 2. Students are advised to operate Pneumatic & hydraulics kit only after instructor checks all connections 3. Simulation softwares are provided to students - Check connections on software first before actual implementation 4. Fire extinguishers are provided in lab in case of emergency 5. Safety valves are installed in both pneumatic & hydraulic kits to double check before starting circuits.
10	CAD/ CAE	1. Don't touch any electrical connections unless instructed by the lab In-charge. 2. Take regular Task-Breaks while working with computer. 3. Students are allowed in the lab only in the presence of faculty or lab assistants. 4. Earthing and power supply are frequently checked.

D3. Project Laboratory/Research Laboratory

SrNo	Name	Details of Equipments/Machines	Utilisation	Relevance to POs/PSOs
1	Research laboratory	Data Acquisition devices - NI USB DAQ 6001, 6221, NI Modules, NI 9234, NI 9269, NI 9205,9503,9234,9269,9401, NI cRIO 9035, NI myRIO 1900, NI PS - 15 Power Supply, Tektronix Oscilloscope and Function Generator, Single Channel DC power Supply by Multicompro, Tenma and Extech, Multi Channel DC Power Supply by Extech, Creality K2 plus 3D printer, Micro Soldering Station, Dino Lite Digital Microscope, A4988 Stepper Motor Drivers, Max 8550 3 in 1 S.M.D rework station, Arduino uno Boards, Rasberry Pi, Fluke and Kusam-Meco Digital Multimeters, Futek Compression type load cell, I7 32 GB RAM Computer System, High Torque Stepper and Servo Motors, Aplab Multi-Wave Form Generator, Senses Intelligent Panel	UG & PG students carry out projects, experiments, and research activities. Students work on problem statement given as minor and major projects. Students gain Hands-on training and skill development on 3D printing. The Lab provides opportunities for students to gain practical experience and build portfolios.	PO1, PO2, PO3, PO4, PO5, PO8, PO11, PSO1, PSO2
2	Centre of Excellence for Bioengineering	3D Printer, High Configuration Computer with Fusion360 and Ansys Software, DAC System.	For carrying out quality research for problem statements in biomedical field like maxillofacial surgery, physiotherapy etc. For fostering innovation, research, and development in Biomedical field.	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	25	10	69
2024-25(CAY)	630	32	25	11	69

E2. Budget Allocation, Utilization, and Public Accounting at Institute Level

Table No. E2.1: Budget and actual expenditure incurred at Institute level.

Items	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Infrastructure Built-Up	40000000.00	15000000.00	40000000.00	29049141.00	67000000.00	50000000.00	50000000.00	49500000.00
Library	650000.00	364944.51	750000.00	608062.72	545000.00	475613.00	620000.00	526636.00
Laboratory equipment	2500000.00	1907694.00	3700000.00	2000894.00	3300000.00	11575192.00	3300000.00	3223712.00
Teaching and non-teaching staff salary	201657000.00	204267211.00	190700000.00	188330143.00	174000000.00	177487789.00	164550000.00	164064279.00
Outreach Programs	1800000.00	1269247.00	1000000.00	1681468.00	750000.00	2403612.00	500000.00	468520.00
R&D	6000000.00	149340.00	2000000.00	88988.00	2200000.00	101006.00	1800000.00	1721137.00
Training, Placement and Industry linkage	600000.00	489570.00	500000.00	402900.00	425000.00	556790.00	400000.00	387800.00
SDGs	1070000.00	608974.00	3500000.00	2391764.00	875000.00	2855881.00	500000.00	405416.00
Entrepreneurship	0	0	0	0	200000.00	184935.00	0	0
Others, specify	43930000.00	68533393.38	47095000.00	101315287.59	24099000.00	64753416.00	22647000.00	52217151.00
Total	298207000.00	292590373.89	289245000.00	325868648.31	273394000.00	310394234.00	244317000.00	272514651.00

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

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

Items	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Laboratory equipment	100000	54527	200000	127537	165000	78500	1285000	72413

Software	850000	649000	0	0	0	0	500000	131452
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*	100000	86099	100000	64461	175000	149759	203600	44304
Total	1050000	789626	300000	191998	340000	228259	1988600	248169