

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 : 11604	Date of Submission : 19-02-2026

PART A- Profile of the Institute

A1.Name of the Institute: Thapar Institute of Engineering and Technology (Deemed to be University)	
Year of Establishment : 1956-1994	Location of the Institute: Urban - Patiala
A2. Institute Address: THAPAR TECHNOLOGY CAMPUS ,BHADSON ROAD	
City:Patiala	State:Punjab
Pin Code:147004	Website:WWW.THAPAR.EDU
Email:REGISTRAR@THAPAR.EDU	Phone No(with STD Code):0175-2393122
A3. Name and Address of the Affiliating University (if any):	
Name of the University :	City:
State :	Pin Code: 0
A4. Type of the Institution: Deemed University	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **19**
- No. of PG programs: **17**

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 in Computer Applications	1983	--	Computer Application
2	Engineering & Technology	PG	Artificial Intelligence	2025	--	Computer Science and Engineering
3	Engineering & Technology	UG	Artificial Intelligence and Data Science	2025	--	Computer Science and Engineering
4	Engineering & Technology	UG	Artificial Intelligence and Machine Learning	2024	2025	Computer Science and Engineering
5	Engineering & Technology	UG	Biomedical Engineering	2019	--	Electrical and Instrumentation Engineering
6	Engineering & Technology	UG	Biotechnology	2003	--	Biotechnology
7	Engineering & Technology	PG	Biotechnology	2012	--	Biotechnology
8	Engineering & Technology	PG	CAD/CAM	2000	2024	Mechanical Engineering
9	Engineering & Technology	UG	Chemical Engineering	1996	--	Chemical Engineering
10	Engineering & Technology	UG	Civil Engineering	1956	--	Civil Engineering
11	Engineering & Technology	UG	Civil Engineering with Computer Application	2023	--	Civil Engineering
12	Engineering & Technology	UG	Computer Engineering	1992	--	Computer Science and Engineering
13	Engineering & Technology	UG	Computer Science and Business System	2019	--	Computer Science and Engineering
14	Engineering & Technology	PG	Computer Science and Engineering	2005	--	Computer Science and Engineering

15	Engineering & Technology	UG	Computer Science and Engineering	2019	--	Computer Science and Engineering
16	Engineering & Technology	PG	Electric Vehicle Technology	2024	--	Electrical and Instrumentation Engineering
17	Engineering & Technology	UG	Electrical and Computer Engineering	2020	--	Electrical and Instrumentation Engineering
18	Engineering & Technology	UG	Electrical Engineering	1956	--	Electrical and Instrumentation Engineering
19	Engineering & Technology	UG	Electronics & Communication Engineering	1975	--	Electronics and Communication Engineering
20	Engineering & Technology	PG	Electronics & Communication Engineering	2000	2024	Electronics and Communication Engineering
21	Engineering & Technology	UG	Electronics & Computer Engineering	2015	--	Electronics and Communication Engineering
22	Engineering & Technology	UG	Electronics Engineering (VLSI Design and Technology)	2023	--	Electronics and Communication Engineering
23	Engineering & Technology	UG	Electronics Instrumentation & Control Engineering	1979	--	Electrical and Instrumentation Engineering
24	Engineering & Technology	PG	Environmental Science & Technology	2002	--	Energy and Environmental Engineering
25	Engineering & Technology	PG	Infrastructure Engineering	2011	2024	Civil Engineering
26	Engineering & Technology	PG	Mechanical Engineering	2024	--	Mechanical Engineering
27	Engineering & Technology	UG	Mechanical Engineering	1956	--	Mechanical Engineering
28	Engineering & Technology	UG	Mechatronics	2012	--	Mechanical Engineering
29	Engineering & Technology	PG	Power Systems	2006	2024	Electrical and Instrumentation Engineering
30	Engineering & Technology	UG	Robotics and Artificial Intelligence	2023	--	Mechanical Engineering
31	Engineering & Technology	PG	Software Engineering	2000	2024	Computer Science and Engineering
32	Engineering & Technology	PG	Structural Engineering	1971	--	Civil Engineering
33	Engineering & Technology	PG	Thermal Engineering	2010	2024	Mechanical Engineering
34	Engineering & Technology	PG	Transportation Engineering	2024	--	Civil Engineering
35	Engineering & Technology	PG	VLSI Design	2003	--	Electronics and Communication Engineering
36	Management	PG	Masters in Business Administration	2007	--	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
Chemical Engineering	No	Chemical Engineering	UG

Mechanical Engineering	No	Mechanical Engineering	UG
Electrical and Instrumentation Engineering	No	Electrical Engineering	UG
Computer Science and Engineering	No	Computer 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
1	Mechanical Engineering	UG	1956 / --	60	Yes	2025	120	2025	AICTE Approval

Sanctioned Intake for Last Five Years for the Mechanical Engineering	
Academic Year	Sanctioned Intake
2025-26	120
2024-25	150
2023-24	180
2022-23	240
2021-22	240
2020-21	225

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 :	J S Saini
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)	120	150	180	276	240	225	225
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	120	141	133	48	171	165	210
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	8	11	9	10	15	8
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	3	3	2	0	4	2	3
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	123	152	146	57	185	182	221

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)	120	120	3	102.50
2024-25 (CAYm1)	150	141	3	96.00
2023-24 (CAYm2)	180	133	2	75.00

Average $[(ER1 + ER2 + ER3) / 3] = 91.17 \approx 20.00$

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

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

Item	(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).	250.00	240.00	233.00
B=No. of students who graduated from the program in the stipulated course duration	172.00	174.00	216.00
Success Rate (SR)= (B/A) * 100	68.80	72.50	92.70

Average SR of three batches $((SR_1 + SR_2 + SR_3)/3)$: 78.00

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)	6.57	6.40	6.53
Y=Total no. of successful students	144.00	135.00	48.00
Z=Total no. of students appeared in the examination	144.00	135.00	48.00
API $[X*(Y/Z)]$	6.57	6.40	6.53

Average API $[(AP1 + AP2 + AP3)/3]$: 6.50

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)	6.82	7.05	7.10
Y=Total no. of successful students	146.00	57.00	181.00
Z=Total no. of students appeared in the examination	146.00	57.00	185.00
API $[X * (Y/Z)]$	6.82	7.05	6.95

Average API $[(AP1 + AP2 + AP3)/3]$: 6.94

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)	7.26	7.23	7.53
Y=Total no. of successful students	57.00	180.00	182.00
Z=Total no. of students appeared in the examination	57.00	181.00	182.00
API $[X*(Y/Z)]$:	7.26	7.19	7.53

Average API [(AP1 + AP2 + AP3)/3] : 7.33

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	250.00	240.00	233.00
X=No. of students placed	122.00	146.00	185.00
Y=No. of students admitted to higher studies	8.00	9.00	11.00
Z= No. of students taking up entrepreneurship	6.00	9.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	54.40	68.33	84.12

Average Placement Index = (P_1 + P_2 + P_3)/3: 68.95 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)	Cu As (Y
1	Saroj Kumar Mohapatra	XXXXXXXX34G	Ph.D	IIT (ISM) Dhanbad	Thermal Engineering	01/12/2004	21.2	Professor	Professor	01/12/2004	Regular	Ye
2	Ajay Batish	XXXXXXXX62F	Ph.D	TIET Patiala	Industrial Engineering	20/08/1999	26.6	Assistant Professor	Professor	25/08/2010	Regular	Ye
3	Tarun Kumar Bera	XXXXXXXX69R	Ph.D	IIT KGP	Dynamics and Control	06/06/2012	13.8	Assistant Professor	Professor	01/07/2021	Regular	Ye
4	J S Saini	XXXXXXXX33H	Ph.D	TIET Patiala	CAD, FEM	04/02/2003	23	Lecturer	Professor	07/01/2023	Regular	Ye
5	Tarun Nanda	XXXXXXXX73K	Ph.D	TIET Patiala	Industrial Engineering & Metallurgy	23/06/2000	25.7	Lecturer	Professor	01/07/2022	Regular	Ye
6	Dheeraj Gupta	XXXXXXXX63H	Ph.D	IIT Roorkee	Manufacturing	03/01/2013	13.1	Assistant Professor	Professor	01/07/2022	Regular	Ye
7	S S Mallick	XXXXXXXX02K	Ph.D	UOW, Australia	Thermal Engineering	11/08/2010	15.6	Assistant Professor	Professor	02/01/2023	Regular	Ye
8	Vivek Jain	XXXXXXXX90P	Ph.D	IIT Roorkee	Machining Science	16/08/2013	12.6	Assistant Professor	Professor	07/01/2023	Regular	Ye
9	Anant Kumar Singh	XXXXXXXX74Q	Ph.D	IIT Delhi	Production Engineering	17/06/2013	12.7	Assistant Professor	Professor	08/09/2023	Regular	Ye
10	Sandeep Sharma	XXXXXXXX18J	Ph.D	TIET Patiala	CAD CAM & Robotics	12/07/2000	25.7	Lecturer	Professor	28/10/2024	Regular	Ye
11	Ashish Singla	XXXXXXXX37Q	Ph.D	IIT Kanpur	Robotics	21/04/2011	14.9	Lecturer	Professor	02/07/2025	Regular	Ye
12	Ravinder Kumar Duvedi	XXXXXXXX13G	Ph.D	TIET Patiala	CAD CAM & Robotics	07/04/2006	19.10	Lecturer	Associate Professor	01/08/2019	Regular	Ye
13	A.S. Jawanda	XXXXXXXX42F	M.Tech	TIET PATIALA	CAD-CAM	01/07/1994	31.7	Lecturer	Associate Professor	13/10/2007	Regular	Ye
14	Sumeet Sharma	XXXXXXXX54B	M.Tech	Panjab University	Turbo Machinery	30/06/1995	30.7	Lecturer	Associate Professor	01/08/2008	Regular	Ye
15	S.S. Bhullar	XXXXXXXX80M	Ph.D	TIET Patiala	Industrial Engineering	02/04/1996	29.10	Lecturer	Associate Professor	01/08/2008	Regular	Ye
16	Vinod Kumar Singla	XXXXXXXX30E	Ph.D	TIET Patiala	Non-traditional Machining Methods	15/06/2000	25.8	Lecturer	Associate Professor	10/06/2010	Regular	Ye
17	Madhup	XXXXXXXX84N	Ph.D	IIT Roorkee	Thermal Engineering	18/05/2011	14.8	Assistant	Associate	13/03/2018	Regular	Ye

	Kumar Mittal							Professor	Professor			
18	Hiralal Bhowmick	XXXXXXX43P	Ph.D	IISc, Bengaluru	Machine Design, Tribology, Composites & Nano lubricants	11/07/2013	12.7	Assistant Professor	Associate Professor	01/08/2019	Regular	Ye
19	Vikrant Khullar	XXXXXXX60D	Ph.D	IIT Ropar	Thermal Engineering	15/07/2015	10.7	Assistant Professor	Associate Professor	01/07/2021	Regular	Ye
20	Neeraj Grover	XXXXXXX49K	Ph.D	IIT KGP	Composite Structures and F.E. Analysis	15/07/2015	10.7	Assistant Professor	Associate Professor	01/07/2022	Regular	Ye
21	Deepak Jain	XXXXXXX72L	Ph.D	TIET Patiala	Machine Design, F.E. Analysis	02/06/2016	9.8	Assistant Professor	Associate Professor	01/07/2022	Regular	Ye
22	Vineet Srivastava	XXXXXXX48L	Ph.D	IIT Delhi	Additive Manufacturing and Advanced Manufacturing Processes	15/07/2014	11.7	Assistant Professor	Associate Professor	01/07/2022	Regular	Ye
23	Ashish Purohit	XXXXXXX90Q	Ph.D	IIT Delhi	Machine Design	29/05/2015	10.8	Assistant Professor	Associate Professor	01/09/2023	Regular	Ye
24	Gagandeep Bhardwaj	XXXXXXX39E	Ph.D	IIT Roorkee	Machine Design	15/06/2016	9.7	Assistant Professor	Associate Professor	01/09/2023	Regular	Ye
25	Amandeep Singh Oberoi	XXXXXXX84A	Ph.D	RMIT, Australia	Hydrogen Fuel Cell Technologies	01/07/2017	8.7	Assistant Professor	Associate Professor	01/09/2023	Regular	Ye
26	Rajendra Kumar	XXXXXXX10L	Ph.D	IIT Roorkee	Mechanical Engg Design	01/06/2017	8.8	Assistant Professor	Associate Professor	01/09/2023	Regular	Ye
27	Ratnesh Kumar	XXXXXXX91Q	Ph.D	IIT Delhi	Manufacturing, Materials and Welding	13/11/2017	8.2	Lecturer	Associate Professor	01/09/2023	Regular	Ye
28	Daljeet Singh	XXXXXXX53N	Ph.D	TIET Patiala	CAD CAM & Robotics	29/06/2009	16.7	Lecturer	Associate Professor	01/04/2024	Regular	Ye
29	Bikramjit Sharma	XXXXXXX25C	Ph.D	TIET Patiala	CAD CAM & Robotics	29/05/2009	16.8	Lecturer	Associate Professor	01/04/2024	Regular	Ye
30	Kishore Khanna	XXXXXXX51G	Ph.D	TIET Patiala	Design	01/07/1992	33.7	Assistant Professor	Associate Professor	09/09/2024	Regular	Ye
31	Rohit Kumar Singla	XXXXXXX37G	Ph.D	IIT Ropar	Thermal Engineering	01/08/2016	9.6	Lecturer	Associate Professor	09/09/2024	Regular	Ye
32	Ravinder S Joshi	XXXXXXX74H	Ph.D	IIT Ropar	Manufacturing	13/07/2017	8.7	Assistant Professor	Associate Professor	09/09/2024	Regular	Ye
33	Kundal Lal	XXXXXXX87G	Ph.D	TIET Patiala	Thermal Engineering	29/05/2009	16.8	Lecturer	Associate Professor	29/04/2025	Regular	Ye
34	Deepa Mudgal	XXXXXXX35B	Ph.D	IIT Roorkee	Material Engineering	01/08/2016	9.6	Lecturer	Associate Professor	29/04/2025	Regular	Ye
35	Vishal Gupta	XXXXXXX83H	Ph.D	IIT Delhi	Manufacturing/ Biomedical, Rapid Prototyping	02/07/2018	7.7	Assistant Professor	Associate Professor	29/04/2025	Regular	Ye
36	Gautam Setia	XXXXXXX57D	Ph.D	TIET Patiala	Thermal Engineering	05/07/2017	8.7	Assistant Professor	Associate Professor	01/01/2026	Regular	Ye
37	Sachin Singh	XXXXXXX88P	Ph.D	IIT Guwahati	Advanced manufacturing processes	10/07/2017	8.7	Assistant Professor	Associate Professor	01/01/2026	Regular	Ye
38	Devender Kumar	XXXXXXX67C	Ph.D	TIET Patiala	Design	28/05/2009	16.8	Lecturer	Associate Professor	29/04/2025	Regular	Ye
39	Satish Kumar Sharma	XXXXXXX96B	Ph.D	NSUT Delhi	Manufacturing Processes & Automation Engineering	28/07/2017	8.6	Lecturer	Associate Professor	29/04/2025	Regular	Ye
40	Anu Mittal	XXXXXXX29E	Ph.D	TIET Patiala	Thermal Engineering	15/07/2015	10.7	Lecturer	Assistant Professor		Regular	Ye
41	Rajesh Kumar Shukla	XXXXXXX93P	Ph.D	IIT Kanpur	Computational Fluid Dynamics	16/07/2018	7.6	Assistant Professor	Assistant Professor		Regular	Ye
42	Neeraj	XXXXXXX03G	Ph.D	IIT Bombay	Fluid and Thermal	20/08/2015	10.5	Assistant	Assistant		Regular	Ye

	Kumar							Professor	Professor			
43	Jay Prakash Tripathi	XXXXXXXX98G	Ph.D	IIT (ISM) Dhanbad	Machine Design (System dynamics and control)	02/07/2018	7.7	Assistant Professor	Assistant Professor		Regular	Ye
44	Sayan Sadhu	XXXXXXXX31P	Ph.D	IIT KGP	Thermal Engineering	23/06/2017	8.7	Lecturer	Assistant Professor		Regular	Ye
45	P. Kalyan Chakravarthi	XXXXXXXX33G	Ph.D	IIT KGP	Manufacturing (Welding)	27/04/2018	7.9	Assistant Professor	Assistant Professor		Regular	Ye
46	Pankaj Kumar	XXXXXXXX32G	Ph.D	IIT KGP	Applied Mechanics	03/08/2020	5.6	Assistant Professor	Assistant Professor		Regular	Ye
47	Raja Rout	XXXXXXXX71G	Ph.D	NIT Rourkela	Autonomous Marine Vehicle	01/07/2022	3.7	Assistant Professor	Assistant Professor		Regular	Ye
48	Appaso M Gadade	XXXXXXXX79A	Ph.D	SVNIT Surat	Design	01/01/2020	6.1	Assistant Professor	Assistant Professor		Regular	Ye
49	Prabhat Chand Yadav	XXXXXXXX30M	Ph.D	IIT Kanpur	Physical & Mechanical Metallurgy	01/07/2021	4.7	Assistant Professor	Assistant Professor		Regular	Ye
50	Dharmveer Agarwal	XXXXXXXX42B	Ph.D	IIT Patna	Microrobotics	01/10/2024	1.4	Assistant Professor	Assistant Professor		Regular	Ye
51	Vivek Parmar	XXXXXXXX38M	Ph.D	IIT Roorkee	Machine Design	10/08/2024	1.6	Assistant Professor	Assistant Professor		Regular	Ye
52	Sunil Kumar	XXXXXXXX17C	Ph.D		Control Systems	11/08/2025	0.6	Assistant Professor	Assistant Professor		Regular	Ye
53	Prithvi Raj Chauhan	XXXXXXXX32J	Ph.D	IIT Delhi	Thermal Engineering	04/11/2024	1.3	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
54	Sudhir Kumar Singh	XXXXXXXX40C	Ph.D	NIT Hamirpur	Thermal Engineering	19/11/2024	1.2	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
55	Daksh Shelly	XXXXXXXX19H	Ph.D	TIET Patiala	Composites	02/12/2024	1.2	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
56	Ankit Kumar	XXXXXXXX43E	Ph.D	IIT Roorkee		07/01/2025	1.1	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
57	Sudhar Rajagopalan	XXXXXXXX13K	Ph.D	TIET Patiala	Reliability & Ind. Machinery Diagnostic & vibration Analysis.	28/02/2025	0.11	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
58	Vijay Kumar	XXXXXXXX13N	Ph.D	NIT Jalandhar	Manufacturing Technology coating and 3D printing	06/03/2025	0.11	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
59	Abhishek Ghosh	XXXXXXXX46N	Ph.D	IIST Shibpur	Physical Metallurgy	26/03/2025	0.10	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
60	Sohan Lal	XXXXXXXX79B	Ph.D	TIET Patiala	Thermal Engineering Dual Fuel IC engine.	01/05/2025	0.9	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
61	Ayush Awasthi	XXXXXXXX52D	Ph.D		Design/Computational Fracture Mechanics)	16/07/2025	0.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
62	Himanshu	XXXXXXXX83G	Ph.D	IIT Delhi	Computational Fluid Dynamics	08/10/2025	0.4	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
63	Sudhir Kumar	XXXXXXXX90R	Ph.D	TIET PATIALA	Production	28/11/2025	0.2	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
64	Surinder Kumar Tathgir	XXXXXXXX42L	Ph.D	TIET Patiala	Welding Technology	26/03/1999	26.10	Lecturer	Assistant Professor		Regular	Ye
65	Lalit Rana	XXXXXXXX72G	M.Tech	TIET Patiala	Production Engineering	31/01/1991	35	Lecturer	Assistant Professor		Regular	Ye
66	Rajnish Mallick	XXXXXXXX17N	Ph.D	IISC, Bengaluru	Smart materials and structures	01/07/2021	3.5	Assistant Professor	Assistant Professor		Regular	Nc
67	Anil Kumar Pal	XXXXXXXX62L	Ph.D	IIT (BHU) Varanasi	Control Systems	01/05/2024	1	Assistant Professor	Assistant Professor		Regular	Nc
68	Jyotindra Narayan	XXXXXXXX86C	Ph.D	IIT Guwahati	Rehabilitation Robotics and Artificial Intelligence	15/07/2024	0.5	Assistant Professor	Assistant Professor		Regular	Nc

69	Jaskaran Singh	XXXXXXXX31R	Ph.D	IIT Delhi	Condition Monitoring; Predictive Maintenance	15/11/2019	4.7	Assistant Professor	Assistant Professor		Regular	Nc
70	Hitesh Kumar	XXXXXXXX24J	Ph.D	IIT Bombay	High temp. oxidation	07/07/2021	2.10	Assistant Professor	Assistant Professor		Regular	Nc
71	Vijay Singh	XXXXXXXX44K	Ph.D	IIT(BHU) Varanasi	Robotics	01/05/2024	0.3	Assistant Professor	Assistant Professor		Contractual Fulltime	Nc
72	Himanshu	XXXXXXXX65D	M.E.	TIET Patiala	CAD/CAM	01/08/2023	2.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
73	Shubham Khatri	XXXXXXXX46E	M.Tech	RGPV, Bhopal, MP	Production Engineering	02/08/2023	2.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
74	Mayank Dhiman	XXXXXXXX79D	M.Tech	Kurukshetra University	Manufacturing	02/08/2023	2.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
75	Nitesh Kumar	XXXXXXXX90N	M.E.	Chandigarh University	Design	19/08/2024	1.5	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
76	Vidushi Sharma	XXXXXXXX57P	M.Tech	Shri Mata Vaishno Devi University, Katra	Design	28/07/2025	0.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
77	Manveer Rana	XXXXXXXX99L	M.E.	Chandigarh University	Design	22/01/2025	1	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
78	Shavinder Singh	XXXXXXXX22H	M.E.	TIET PATIALA	CAD/CAM & Robotics	22/01/2025	1	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
79	Vijay Chauhan	XXXXXXXX63L	M.Tech	RGPV, Bhopal	CAD/CAM	06/02/2025	1	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
80	Supreet Singh Somal	XXXXXXXX30H	M.Tech	I.K.G PTU Jalandhar	Mechanical Engineering	01/01/2021	5.1	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
81	Chandan Kishor	XXXXXXXX40K	M.E.	TIET Patiala	Thermal Engineering	24/02/2021	3.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Nc
82	Faheem Feroze	XXXXXXXX60E	M.Tech	MDU ROHTAK	Manufacturing	01/07/2021	4.1	Assistant Professor	Assistant Professor		Contractual Fulltime	Nc
83	Khalid Bashir Wani	XXXXXXXX23R	M.Tech	I.K.G PTU	Production Engineering	01/08/2023	2.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
84	Manu Dev Sharma	XXXXXXXX16N	M.E.	TIET Patiala	Thermal Engineering	01/08/2022	3.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
85	Ajay Berry	XXXXXXXX25M	M.Tech	Guru Jambheshwar University of Science and Technology, Hisar	Production Engineering	31/07/2023	2.6	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
86	Sneh Pragya	XXXXXXXX05P	M.E.	TIET Patiala	CAD/CAM	10/01/2024	2.1	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
87	Harsimran Jeet Singh	XXXXXXXX19M	M.Tech	I.K.G PTU	CAD/CAM	08/01/2024	2.1	Assistant Professor	Assistant Professor		Contractual Fulltime	Ye
88	Shrutika Sharma	XXXXXXXX13H	Ph.D	TIET Patiala	Production	14/02/2022	1.11	Assistant Professor	Assistant Professor		Contractual Fulltime	Nc
89	Arshpreet Singh	XXXXXXXX97Q	Ph.D	IIT Ropar	Manufacturing	13/07/2017	8.7	Assistant Professor	Assistant Professor		Regular	Ye

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 Department3 No. of PG Programs in the Department3

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

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	92	60	0
UG1.C	60	0	0
UG1.D	0	0	0
UG1: Robotics and Artificial Intelligence	152	60	0
UG2.B	63	62	65
UG2.C	62	65	63
UG2.D	65	63	62
UG2: Mechatronics	190	190	190
UG3.B	158	191	249
UG3.C	191	249	250
UG3.D	249	250	240
UG3: Mechanical Engineering	598	690	739
PG1.A	0	0	18
PG1.B	0	18	30
PG1: CAD/CAM	0	18	48
PG2.A	0	18	0
PG2.B	18	0	0
PG2: Mechanical Engineering	18	18	0
PG3.A	0	0	18
PG3.B	0	18	18
PG3: Thermal Engineering	0	18	36
DS=Total no. of students in all UG and PG programs in the Department	976	994	1013
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= 976	S2= 994	S3= 1013
DF=Total no. of faculty members in the Department	78	65	64
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= 78	F2= 65	F3= 64
FF=The faculty members in F who have a 100% teaching load in the first-year courses	8	8	7
Student Faculty Ratio (SFR)=S/(F-FF)	SFR1= 13.94	SFR2= 17.44	SFR3= 17.77
Average SFR for 3 years	SFR= 16.38		

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)	61	17	48.00	35.31

2024-25(CAYm1)	51	14	49.00	28.88
2023-24(CAYm2)	52	12	50.00	28.40

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = $1/9 \times$ 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 = $2/9 \times$ 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 = $6/9 \times$ 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	5.00	11.00	10.00	24.00	32.00	20.00
2024-25	5.00	9.00	11.00	18.00	33.00	27.00
2023-24	5.00	8.00	11.00	12.00	33.00	35.00
Average	RF1=5.00	AF1=9.33	RF2=10.67	AF2=18.00	RF2=32.67	AF2=27.33

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Prof. Sanjeev Bedi	Professor	University of Waterloo	Capstone (UME793/UMT89), Manognel, ELC, Group project (UME700/UMT699)	60.00
2	Prof. Roop Mahajan	Professor	Lewis Hester Professor, Virginia Tech	Heat Transfer (UME720), Applied Thermodynamics (UME718)	60.00
3	Prof. Noam Eliaz	Professor	Tel Aviv University	Additive Manufacturing (URA414) & Rapid Prototyping (PCD213)	50.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Prof. Sanjeev Bedi	Professor	University of Waterloo	Capstone (UME793/UMT89), Manognel, ELC, Group project (UME700/UMT699)	60.00
2	Prof. Roop Mahajan	Professor	Lewis Hester Professor, Virginia Tech	Heat Transfer (UME720), Applied Thermodynamics (UME718)	60.00
3	Prof. Noam Eliaz	Professor	Tel Aviv University	Additive Manufacturing (URA414) & Rapid Prototyping (PCD213)	50.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Prof. Sanjeev Bedi	Professor	University of Waterloo	Capstone (UME793/UMT89), Manognel, ELC, Group project (UME700/UMT699)	60.00
2	Prof. Roop Mahajan	Professor	Lewis Hester Professor, Virginia Tech	Heat Transfer (UME720), Applied Thermodynamics (UME718)	60.00
3	Prof. Noam Eliaz	Professor	Tel Aviv University	Additive Manufacturing (URA414) & Rapid Prototyping (PCD213)	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	102	92	96
2	No. of peer reviewed conference papers published	11	5	13
3	No. of books/book chapters published	2	2	8

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. Devender Kumar	NA	MED	Evaluation of High-Brightness Low Beam Vehicle Headlamp and its Effect on User Behavior	A H Electronics	2	8.15
Dr. Rajeev Mehta	Dr. Tarun Nanda Dr. Gautam Setia	MED	Upcycling Textile Waste into High Impact Strength GFRP Nanocomposite Materials	Dassault Systemes Foundation	1	8.25
Dr. Tarunpreet Bhatia	Dr. Vivek Jain, Dr. Vishal Gupta MED, Steffen Bollmann UQ	CSED	AI-Driven Dura Cut Trajectory Planning System for Safe and Precise Brain Tumor Surgery	CoDSal, TIET	2	13.20
Dr. Rohit Kumar Singla	Dr. Kishore Khanna	MED	Enhancing Energy Efficiency in Industrial Facilities through Advanced Waste Heat Recovery Strategies	Trident Group, India	1	7.20
Dr. RS Joshi	Dr. Rohit Kumar Singla and Dr. Kishore Khanna	MED	Development of A Novel Process for Fabrication of Cost-Effective CFRP/Ti/Al-Stacked Composites for Structural Aerospace Applications	ARDB, DRDO, INDIA	2	24.90
Dr. S. S. Mallick	Dr. Ashish Purohit, Dr. Kundan Lal, and Dr. Sanghamitra Barman	MED	To Optimize Coal and Agro-Wastes Mixing and Feeding for Co- Milling for Thermal Power Plants with Minimum Changes to Installed Systems and Operations	DST	2	176.18
						Amount received (Rs.):237.88

(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. Vishal Gupta	Dr. Deepa Mudgal	MED	Study of materials, technologies and equipment for 3D printing of polymeric medical devices (on the example of a bone plate) with improved mechanical and biological properties	DST International Joint proposal INDIA-BELARUS	2	15.18
Dr. Jay Prakash Tripathi	Dr. TK Bera	MED	Design and fabrication of a novel hydraulic/electric synergy system with multiple accumulators for medium and heavy hybrid electric vehicles	Dassault Systemes	1	21.60
Dr. Daljeet Singh	Dr. Vishal Gupta, Dr. Hitesh Kumar	MED	Simulation and experimental analysis for performance enhancement of 3D printed polymeric composites using metallic coatings'	Dassault Systemes	2	13.40
						Amount received (Rs.):50.18

(CAYm3)

	Co-PI names if	Name of the Dept., where	Name of	Duration	Amount(Lacs)
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PI Name	any	project is sanctioned	Project Title*	the Funding agency	of the project	i.e. 15,25,000=15.25
Prof. Ashish Singla	NA	MED	Development of Unilateral Lower-Limb Exoskeleton for Synchronous Walking Assistance during Rehabilitation	DST-CRG	3	44.29
Dr. Yi Huang	Dr. Prabhat Chand Yadav	Bournemouth University UK	Microstructural tuning for mechanical and tribological behavior of structural alloys processed by large strain extrusion machining	The Royal Society	2.5	12.70
Dr. Gagandeep Bhardwaj/Dr. Neeraj Grover	NA	MED	Modeling and Analysis of Cracked Porous FG and FG Sandwich Aircraft Panels using XIGA	DRDO-ARDB	3	19.38
Dr. Raja Rout	NA	MED	Development of Underwater Marine Robot along with Roll Compensated Adaptive Guidance Algorithm	IITG-TIDF	2	20.70
Dr. Rajendra Kumar	NA	MED	Investigation of nonlinear dynamics of electrostatically actuated bistable micro switches with applications to medical equipment	DST-CRG	3	22.40
Dr. Rajnish Mallick	NA	MED	Gaussian Process-based Probabilistic Machine Learning Method for Predictive Maintenance in Industry 4.0	DST-MATRICES	3	6.60
Dr Anshul Sharma	Dr Rajnish Mallick	MED	INVESTIGATION OF META-MATERIAL-BASED PIEZOELECTRIC ENERGYHARVESTING DEVICES	DST-SURE	3	9.90
Dr. Vishal Gupta	Dr. Jaskaran Singh, Dr. Gyanendra Singh	MED	Development of smart implants for monitoring of bone fracture healing	SERB SURE	3	25.70
Dr. Raja Rout	NA	MED	Development of an Unmanned Underwater Vehicle along with Intelligent Guidance Algorithms	SERB SURE	3	28.13
Dr. Anant Kumar Singh	NA	MED	Investigations on the magnetorheological finishing of polymer-based 3D printed free-form surfaces to enhance their functional performance	SERB-DST (Under SERB STAR Scheme)	3	38.65
Dr. Anant Kumar Singh	Dr. Vinod Mishra	MED	Magnetorheological Nano-finishing of Diamagnetic and Paramagnetic Work Parts Surface for Improved Functional Performance	CSIR	3	21.70
Dr. S. S. Mallick	Dr. Ashish Purohit	MED	On optimizing blow tank profile and weight for reliable dense-phase pneumatic conveying of ash	Rirco Industries Ltd	0.5	8.95
Dr Ravinder Singh Joshi	Dr Deepak Jain	MED	Development of a setup for the preparation of stubble waste boards to be used in civil construction work	DS Foundation	1	15.44
Dr. Ajay Batish	Dr. Ravinder Kumar Duvedi, Dr. Sandeep Kumar Sharma	MED	Development of electroactive polymer nanocomposite based thin-film flexible sensors using Direct Ink Writing (DIW) 3D printing process	DST-AMT	2	57.60
Dr. Diptiman Choudhury	Dr. Ravinder Kumar Duvedi, Dr. Vineet Srivastava, Prof. Babita Ghai	MED	Development of Cross-contamination-free portable suction assembly for airways clearance in mechanically ventilated patients.	Indian Council of Medical Research (ICMR)	2	23.91
Dr. Sachin Singh	Dr. J. S. Saini	MED	Design and Development of 3D Printed Bio-metamaterial for Bone Implants	Dassault Systems	1.8	10.55
						Amount received (Rs.):366.60

Total Amount (Lacs) Received for the Past 3 Years: 654.66

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
Prof. S. S. Mallick	NA	MED	Pneumatic Conveying of Fly Ash	Odisha Power generation Corporation Ltd. (OPGC)	0.25	15.63
Prof. S. S. Mallick	NA	MED	Characterization of powder, flow testing	Schenck Process Limited	.083	0.12
Dr. R. K. Singla	NA	MED	Technical and Structural Analysis, Calibration of Flow rate and flow channels and path	M/s Rock and Strom Bottlers Pvt. Ltd	.083	0.47
Dr. R. K. Singla	NA	MED	Technical and Structural Analysis, Calibration of Flow rate and flow channels and path	M/s Shivalik Beverages (P.V.T) Limited	.083	0.70
						Amount received (Rs.):16.92

(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
Prof. S. S. Mallick	NA	MED	Power characterization test	Rieco Industries Limited	0.5	0.15
Prof. S. S. Mallick	NA	MED	Material Testing & consultancy	Rieco Industries Limited	0.5	0.73
Dr. Raja Rout	NA	MED	Development of optimized and learning based transportation model for swarm of autonomous vehicle	DRDO-DYSL-AT	1.0	1.00
Prof. S. S. Mallick	NA	MED	DESIGN AND ENGINEERING	Rieco Industries Limited	0.5	8.98
						Amount received (Rs.):10.86

(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
Prof. S. S. Mallick	NA	MED	Powder characterization and flow property testing	Merrick Industries Private Limited	0.5	0.17
Dr. Rajnish Mallick	Dr. Anshul Sharma	MED	Generative Design approach using AI in Engineering for Digital Manufacturing	AgAutomate Pvt. Ltd., Pune	2.0	1.00
Dr. P Kalyan Chakravarthy K	Dr. Ashish Singla, Dr. Appasso Gadade and Dr. Bikramjit Sharma	MED	Conversion of Bull Power Energy into Sustainable Electrical Power Generation	SRSVS Private Limited	2.0	3.54
						Amount received (Rs.):4.71

Total amount (Lacs) received for the past 3 years: 32.49

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. Appaso M Gadade	Development of Control Algorithm for Enhanced Mobili...	2	7.90	7.90	Research Publication
Dr. Ashish Singla	R3 (Realize, Revive & Recover) - AI Enabled...	2	16.55	16.55	Research Publication
			Amount received (Rs.): 24.45		

(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
Dr. Prabhat Chand Yadav	Structure-property correlation of difficult to deform alloy	2	8.00	8.00	Research Publication
Dr. Raja Rout	Development of synchronization based cooperative control algorithm for autonomous marine vehicles	2	6.30	6.30	Research Publication
			Amount received (Rs.): 14.30		

(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. Jay Prakash Tripathi	Short term wind turbine power fluctuation reduction...	2	7.03	7.03	Research Publication
Dr. Jaskaran Singh	Sensorless based approach for rotor system fault...	2	6.30	6.30	Research Publication
Dr. Rajnish Mallick	Machine learning-bases life estimation of a smart...	2	5.94	5.94	Research Publication
Dr. Anshul Sharma	Investigation of active vibration control of additive...	2	5.25	5.25	Research Publication
Dr. P Kalyan Chakravarthy K	Cold metal transfer technique by using pulse MIG...	2	6.20	6.20	Research Publication
Dr. Arindam Bhattacharjee	Study of flexible body impacts: numerical, approximate...	2	4.75	4.75	Research Publication
Dr. Vishal Gupta, Dr. Deepa mudgal	Development of 3 D printed PLA coated bone plate for improved...	2	1.40	1.40	Research Publication
Dr. Hitesh Kumar	Transportation of Hydrogen through steel pipelines	2	7.90	7.90	Research Publication
Dr. Satish Kumar Sharma	Fabrication of Graphene Reinforced Composite for Lightning Strike Protection...	2	8.20	8.20	Research Publication
Dr. Pankaj Kumar	Structural Health Monitoring and Evaluation of Mechanical...	2	8.00	8.00	Research Publication
			Amount received (Rs.): 60.97		

Total amount (Lacs) received for the past 3 years : 99.72

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.

	Number of	Weekly utilization

Sr. No	Name of the Laboratory	students per set up(Batch Size)	Name of the Important Equipment	status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Refrigeration & Air Conditioning	5	<ul style="list-style-type: none"> Computerized air conditioning (duct type) trainer Computerized cascade refrigeration system 	UME803 , PTI	Mr. Harcharan	Mechanic	ITI
2	IC Engines	5	<ul style="list-style-type: none"> BMW twin turbo CRDI engine Variable speed turbocharged CRDI engine VCR diesel engine VCR 	UME 718 Appli	Dr. Sohan Lal I	Assistant Profe	Ph.D. ITI
3	Automobile Engineering	5	<ul style="list-style-type: none"> Allison automatic transmission system with torque convertor Cut 	UME 502/ UME	Mr. Parminder	Junior Associa	Diploma MTe
4	Solid Mechanics	5	<ul style="list-style-type: none"> Universal Testing Machine (100kN) Rockwell hardness tester Rockwell 	UES017 Solids	Mr. Dilpreet Si	Lab Superinter	Diploma Diplc
5	DOM and Vibrations	5	<ul style="list-style-type: none"> Oscilloscope (data acquisition up to 20kHz rate) Signal generator Signal 	UME 513 Dyna	Mr. Harcharan	Mechanic	ITI
6	Fluid Machinery	5	<ul style="list-style-type: none"> Pelton wheel turbine Francis turbine Reciprocating pump Hydraulic ram 	UME716 Fluid	Mr. Dilpreet Si	Lab Tech.	M.Tech.
7	Heat and Mass Transfer	5	<ul style="list-style-type: none"> Boiling heat transfer unit Film and dropwise Condensation unit Thermal conductivity of liquid and gases Heat 	UME 712/UME	Mr. Ragudeep	Lab Technicie	B.Tech.
8	Machine Tool/ Non-Traditional Machining Lab	5	<ul style="list-style-type: none"> Welding motor Generator (AC & DC) Tool and cutter grinder Shaping machine Power tooling Machine 	UME793/ UME	Mr. Sukhbir Si	Junior Associa	Diploma
9	Metrology	5	<ul style="list-style-type: none"> Surface roughness tester Profile projector Mechanical comparator Ch 	UMT411 Engin	Mr. Narinder S	Lab Associate	BCA, Diploma
10	CAD Lab. - I	1	<ul style="list-style-type: none"> IBM server HP workstation Dell workstation Dell Optiplex 7440 AIO Creo 	UTA015/UES11	Dr. Sohan Lal	Assistant Profe	Ph.D
11	CAD Lab. - II	1	<ul style="list-style-type: none"> Dell Optiplex 7440 AIO Creo Suit SW SolidWorks2018 Floating SW 	UES101 Engin	Dr. Sohan Lal	Assistant Profe	Ph.D. Diploma
12	CAM Lab(CNC Lab)	1	<ul style="list-style-type: none"> CNC turning center 8 station ATC (Maxturn Plus+) (Make: MTAB) CNC vertical milling center (Okuma) 	UTA015/UES11	Mr. Rishavdee	Lab Technician	Diploma
13	Mechatronics Lab	5	<ul style="list-style-type: none"> PLC trainer kit Microcontroller (8051) Nano 51 boards 8051 	UME410 Mech	Mr. Saleem M	Lab Techniciar	Diploma
14	Industrial Automation Lab	4	<ul style="list-style-type: none"> Pneumatic add-on electro-pneumatic and programmable logic controller (PLC) trainer kit 	UMT802: Indus	Mr. Narinder S	Lab Associate	BCA, Diploma
15	Additive Manufacturing Lab	5	<ul style="list-style-type: none"> FDM printer FFF 3D Printers DLP Printers Workstations 	URA414 Additi	Mr. Avtar Singl	Lab Techniciar	Ph.D.
16	Mechanics of Machines Lab	5	<ul style="list-style-type: none"> Motorized gyroscope apparatus Cam analysis apparatus Centrifugal force apparatus 	UME-306 Mecl	Mr. Dilpreet Si	Lab Tech.	ITI
17	Central Workshop	5	<ul style="list-style-type: none"> CNC Milling, CNC Turning , Lathe Machine , Vertical Milling , Horizontal Milling 	(UES102/UTA0	Mr. Lalit Kuma	Sr.Technical O	M.E Diploma I
18	Robotics Lab	3	<ul style="list-style-type: none"> KUKA serial robotic arms (welding:1; milling: 1) Move Master RV-M2 5-axis 	UME518 Introc	Mr. Saleem M	Lab Techniciar	Diploma
19	CAD Lab. - III	1	<ul style="list-style-type: none"> Dell Optiplex 7460 - All-in-one PC CNCtrainv8_38 software Creo Suit SW 	UTA015/UES11	Dr. Sohan Lal	Assistant Profe	Ph.D.
20	Simulation Lab	1	<ul style="list-style-type: none"> Dell Optiplex 7440 AIO Creo Suit SW SolidWorks2018 Floating SW 	UTA015 Engine	Dr. Sohan Lal	Assistant Profe	Ph.D.

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures

1	Refrigeration & Air Conditioning //	Display boards, Gloves , Face shield, Eye glass, Mask, Apron, First Aid Box, Fire Extinguisher, Fireproof cloth
2	IC Engines //	Display boards, First Aid Box, Fire Extinguisher, Fireproof cloth, Face shield
3	Automobile Engineering //	Display boards, Fire Extinguisher, Gloves, Eye glass, Apron
4	Solid Mechanics //	Display boards, Fire Extinguisher, Helmet, First aid Box, Gloves, Eye glass
5	DOM and Vibrations //	Display boards, Fire Extinguisher, Gloves , Eye glass, Ear phone, Face shield
6	Fluid Machinery //	First aid kit, Display boards, Fire Extinguisher, Helmet, Gloves, Safety Goggles, Mask, Safety Shoes, Ear Plug, Fire Blanket, Apron
7	Heat Transfer //	Display boards, Fire Extinguisher, First aid box, Fireproof cloth
8	Machine Tool/Non-Traditional Machining Lab //	Display boards, Fire Extinguisher, First aid box, Fire proof cloth, Safety Goggles, Helmet
9	Metrology //	Display boards, Fire Extinguisher, First aid box
10	Advanced Metrology //	Display boards, First aid box
11	CAD Lab. - I //	Display boards, Fire Extinguisher, First aid box
12	CAD Lab. - II //	Display boards, Fire Extinguisher, First aid box
13	CAM Lab //	Display boards, Fire Extinguisher, First aid box
14	Mechatronics //	Display boards, Fire Extinguisher, First aid box
15	Industrial Automation //	Display boards, Fire Extinguisher, First aid box

16	SIDC	Display boards, Fire Extinguisher, First aid box
17	Bulk Material Storage & Handling	Display boards, Fire Extinguisher, Helmet, Gloves, Eye glass, Mask, Apron
18	Additive Manufacturing Lab	Display boards, Fire Extinguisher, First aid box, Gloves, Safety Goggles
19	Mechanics of Machine	Display boards, Fire Extinguisher , First aid box
20	Student Design Centre	Display boards, Fire Extinguisher, First aid box
21	Surface Engineering & Tribology Research Lab	Display boards, Fire Extinguisher, Chemical Gloves, Heat resistant gloves, Earplug
22	System Modelling Lab	Display boards, First aid box
23	Workshop	Display boards, Fire Extinguisher, First aid box, Cotton Gloves, Eye glass, Full Face Shield, Welding Screen, Leather Gloves, Apron.
24	Experiential Learning Center	Display boards, Fire Extinguisher, First aid box
25	Mechanics of Composite Materials Lab	Display boards, Fire Extinguisher, First aid box
26	Advanced Welding Lab	Display boards, Chemical gloves, Heat resistant gloves, Eye protection glasses, Full Face Shield, First aid box
27	Robotics Lab	Display boards, Fire Extinguisher, First aid box

D3. Project Laboratory/Research Laboratory

S.N.	Name of the Laboratory
1	Bulk Material Storage & Handling Lab
2	Surface Engineering & Tribology Research Lab
3	Advanced Welding Lab
4	SIDC Lab
5	Advanced Metrology Lab

6	Mechanics of Composite Materials Lab
7	Systems and Control Lab
8	Center of Excellence for Advanced Manufacturing
9	Center of Excellence for Food Security (T2CEFS)
10	Thapar School of Advanced AI & Data Science (TSAAI)
11	Center of Excellence in Emerging Materials
12	Venture Lab

Brief details of the above facilities are given below.

- 1. Bulk Material Storage & Handling Lab:** The laboratory is open to students to observe the operation of PLC, SCADA, data logging system, and various instruments (load cell, pressure transmitter, etc.), operation of prime movers (such as compressor, vacuum pump and blower). This laboratory is essentially a research laboratory.
- 2. Surface Engineering & Tribology Research Lab:** The Surface Engineering and Tribology Research Lab is primarily used by PG and Ph.D. students for their research purposes. The lab is equipped with a range of equipment. The domestic microwave oven and muffle furnace are mainly used for surface modification of metals and ceramics. The metallographic examination is carried out using a metallurgical microscope available in the lab. The tribological performance of the prepared samples is evaluated using the sliding, cavitation and slurry erosion testers. The anti-icing characteristics of the developed coating and novel materials are carried out using the adhesion tester and Joule heating setups. The surface tension and wettability studies use a contact angle goniometer.
- 3. Advanced Welding Lab:** The Advanced Welding Lab is a dedicated research facility for M.E. and Ph.D. students. It offers state-of-the-art capabilities for additive manufacturing of metallic components through arc welding and subsequent processing of these developed components. This specialized lab is exclusively used for research and not for undergraduate experiments.
- 4. SIDC:** The State Initiated Design centre Lab has PC Based 3-Axis CNC Milling-Lathe (PBG-2048) for Ornamental Wood Carving of Pseudo-Symmetric Designs upto 4 Length and 6" Diameter.
- 5. Advanced Metrology Lab:** This Laboratory houses metrology equipment and specialises in performing different characterisations using various instruments such as a Coordinate Measuring machine (CMM), Spectrometer, Micro hardness tester, surface profilometer and different metallurgical/measuring microscopes. With industry-oriented equipment established in the Advanced Metrology, students will gain skills in different measuring instruments used practically in industries.
- 6. Mechanics of Composite Materials Lab:** This is a research lab for Ph.D. students and JRFs. The present focus is on the fabrication and analysis of natural fiber polymer composites and performs hydrothermal durability tests.
- 7. Systems and Control lab:** The lab has equipment like Semi-Automatic Welding Machine, 4-Axis Robot, SYMBOLS Shakti Bond Graph Software (for systems modelling).
- 8. Center of Excellence for Advanced Manufacturing:** The Centre is equipped with state-of-the-art facilities, including additive manufacturing capabilities-featuring India's first InsTek Directed Energy Deposition (DED) MX-Fab3 5-axis printer (XYZ travel of 800 × 1000 × 700 mm, controlled inert atmosphere, six feeders and hoppers, and a 2 kW laser), as well as a wire electrical discharge machining (EDM) system, powder flow analysis tools, digital manufacturing technologies, and advanced materials characterization facilities. Together, these capabilities position the Centre as a strategic enabler for the development of high-performance materials and products, process optimisation solutions, and next-generation manufacturing methodologies.
- 9. Center of Excellence for Food Security (T2CEFS):**

Key thrust areas for a Center of Excellence in Food Security (Aligned with UN SDG-2030)

 - Sustainable Agriculture: Developing resilient, eco-friendly farming practices to enhance productivity and reduce environmental impact.
 - Crop Improvement: Breeding high-yield, climate-resilient, and disease-resistant crops.
 - Post-Harvest Management: Reducing losses and improving storage, processing, and distribution efficiency.
 - Food Safety and Quality: Ensuring food is safe and nutritious from farm to table.
 - Nutrition and Public Health: Addressing malnutrition and promoting balanced diets.
 - Climate-Smart Agriculture: Adapting farming practices to mitigate climate change impacts.
 - Agro-Technology Innovation: Using digital tools and precision farming to optimize production.
 - Water and Soil Management: Enhancing soil health and water conservation practices.
 - Policy and Governance: Influencing food security policies and regulations.
 - Capacity Building and Education: Training farmers and stakeholders in sustainable practices and food security innovations.
- 10. Thapar School of Advanced AI & Data Science (TSAAI):** It is a cutting-edge academic initiative established in collaboration with NVIDIA to advance education and research in artificial intelligence and data science. It offers specialized programs and high-performance computing infrastructure to develop future AI professionals.
- 11. Center of Excellence in Emerging Materials:** A TIET (Thapar Institute of Engineering and Technology) and VT (Virginia Tech, USA) collaboration; Located in the R&D quadrant at TIET, Patiala (Punjab), India, the center seeks to act as a catalyst to foster deep collaboration between the two academic institutes to traverse academic boundaries in exploration and discovery at the cutting edge of emerging materials.
- 12. Venture Lab:** It is a startup incubator and innovation hub that supports students and early-stage entrepreneurs in building and scaling their ventures. It provides mentorship, networking and shared infrastructure to transform ideas into viable businesses.



Center of Excellence for Advanced Manufacturing



Bulk Material Storage & Handling Lab



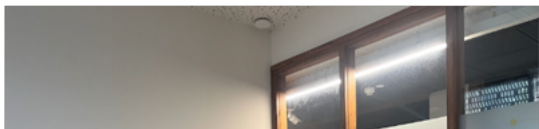
Venture Lab Thapar – The Startup Incubator

Inauguration of Venture Lab Thapar



Podcast room at Venture Lab Thapar

Lecture Theatre at Venture Lab Thapar





Office Rooms in Venture Lab Thapar

Startup Showcase



Mechanics of Composite Materials Lab

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)	2895	145	149	43	88
2024-25(CAYm1)	3210	160	168	49	90
2025-26(CAY)	3390	170	201	60	102

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 //	3000000000	2950000000	1200000000	1110171000	2000000000	1801854000	2500000000	2448668000
Library //	75000000	71500000	55000000	54198000	50000000	46316000	40000000	30822000
Laboratory equipment //	800000000	730000000	900000000	860759000	200000000	192803000	80000000	78862000
Teaching and non-teaching staff salary	2760000000	2710000000	2350000000	2346570000	2100000000	2087843000	1850000000	1827908000
Outreach Programs //	11000000	10903000	10000000	9901000	9500000	9105000	9000000	8950000
R&D //	180000000	175200000	150000000	142550000	130000000	129312000	120000000	111200000
Training, Placement and Industry linkage	25000000	24500000	24000000	23406000	15000000	14182000	8000000	7437000
SDGs //	20000000	18750000	17500000	17066000	14000000	13617000	12000000	11550000
Entrepreneurship //	10000000	9850000	9000000	8960000	8500000	8440000	8000000	7840000
Others, specify //	2400000000	2365520000	2350000000	2314155000	2000000000	1861793000	1100000000	1050522000
Total	9281000000	9066223000	7065500000	6887736000	6527000000	6165265000	5727000000	5583759000

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 //	28007838	25557152	33606447	32141169	8716418	8402758	4520395	4456092
Software //	875245	841986	896172	834560	871642	808012	1017089	1008048
SDGs //	700196	656434	653459	637253	610149	593457	678059	652632
Support for faculty development	96627041	94876551	87750168	87622090	91522388	90992561	104534135	103285828
R & D //	6301764	6133717	5601075	5322888	5665672	5635687	6780593	6283349
Industrial Training, Industry expert,	875245	857740	896172	873992	653731	618081	452040	420227
Miscellaneous Expenses*	1190333	1232240	1381598	1448401	1830448	1913907	2542722	2563629
Total	134577662	130155820	130785091	128880353	109870448	108964463	120525033	118669805