

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 : 2
Application No : 11318	Date of Submission : 28-11-2025

PART A- Profile of the Institute

A1.Name of the Institute : Muzaffarpur Institute of Technology Muzaffarpur	
Year of Establishment : 1954	Location of the Institute: Muzaffarpur
A2. Institute Address :PRINCIPAL MUZAFFARPUR INSTITUTE OF TECHNOLOGY MUZAFFARPUR AT LAKSHMI CHOWCK P.O - MIT MUZAFFARPUR BIHAR -842003	
City:Muzaffarpur	State:Bihar
Pin Code:842003	Website:www.mitmuzaffarpur.org
Email:principalmit.nba@gmail.com	Phone No(with STD Code):0621-2262650
A3. Name and Address of the Affiliating University (if any):	
Name of the University : Aryabhata Knowledge University Patna	City: Patna
State : Bihar	Pin Code: 800001
A4. Type of the Institution : Government Institute	
A5. Ownership Status : State Government	

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

- No. of UG programs: **10**
- No. of PG programs: **6**

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	PG	Advanced Electronics & Communication Engineering	2024	--	Electronics and Communication Engineering
2	Engineering & Technology	UG	Biomedical and Robotics Engineering	2022	--	Biomedical and robotics engineering
3	Engineering & Technology	UG	Chemical Engineering	2025	--	Chemical Engineering
4	Engineering & Technology	UG	Chemical Technology (Leather technology)	1986	--	Chemical Technology (Leather technology)
5	Engineering & Technology	UG	Civil Engineering	1954	--	Civil Engineering
6	Engineering & Technology	UG	Computer Science and Engineering	2024	--	Computer Science and Engineering
7	Engineering & Technology	PG	Electrical Energy Systems	2024	--	Electrical Engineering
8	Engineering & Technology	UG	Electrical Engineering	1960	--	Electrical Engineering
9	Engineering & Technology	UG	Electronics & Communication Engineering	2001	--	Electronics and Communication Engineering
10	Engineering & Technology	PG	Geotechnical Engineering	2022	--	Civil Engineering
11	Engineering & Technology	UG	Information Technology	2001	--	Information Technology
12	Engineering & Technology	PG	Machine Design	2017	--	Mechanical Engineering
13	Engineering & Technology	UG	Mechanical Engineering	1960	--	Mechanical Engineering
14	Engineering & Technology	PG	Thermal Engineering	2017	--	Mechanical Engineering

15	Engineering & Technology	PG	Transportation Engineering	2024	--	Civil Engineering
16	Pharmacy	UG	Pharmacy	1978	--	Pharmacy

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
Mechanical Engineering	No	Mechanical Engineering	UG
Electrical Engineering	No	Electrical Engineering	UG
Chemical Technology (Leather technology)	No	Chemical Technology (Leather technology)	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	1960 / --	60	No	NA	60	1960	1-44643102175/2021

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 :	ASHISH KUMAR SRIVASTAVA
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)	60	60	60	60	60	60	60
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	62	59	53	49	53	52	62
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	8	10	13	8	12	4
N3=Separate division if any	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.	62	67	63	62	61	64	66
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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)	60	62	62	206.67
2024-25 (CAYm1)	60	59	67	210.00
2023-24 (CAYm2)	60	53	63	193.33

Average [(ER1 + ER2 + ER3) / 3] = 203.33≡ 100

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).	68.00	72.00	66.00
B=No. of students who graduated from the program in the stipulated course duration	60.00	63.00	66.00
Success Rate (SR)= (B/A) * 100	88.24	87.50	100.00

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 91.91

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

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

Academic Performance	CAYm1(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
Mean of CGPA or mean percentage of all successful students(X)	7.54	7.17	7.40
Y=Total no. of successful students	53.00	48.00	46.00
Z=Total no. of students appeared in the examination	59.00	53.00	49.00
API [X*(Y/Z)]	6.77	6.49	6.95

Average API[(AP1+AP2+AP3)/3] : 6.74

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 2nd year/10)	7.17	6.86	6.81
Y=Total no. of successful students	58.00	59.00	60.00
Z=Total no. of students appeared in the examination	58.00	59.00	60.00
API [X * (Y/Z)]	7.17	6.86	6.81

Average API [(AP1 + AP2 + AP3)/3] : 6.95

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)	7.14	6.96	7.13
Y=Total no. of successful students	59.00	60.00	63.00
Z=Total no. of students appeared in the examination	59.00	60.00	63.00
API [X*(Y/Z)]:	7.14	6.96	7.13

Average API [(AP1 + AP2 + AP3)/3] : 7.08

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	68.00	72.00	66.00
X=No. of students placed	47.00	48.00	42.00
Y=No. of students admitted to higher studies	8.00	6.00	7.00
Z= No. of students taking up entrepreneurship	1.00	0.00	1.00
Placement Index(P) = $((X + Y + Z)/FS) * 100$:	82.35	75.00	75.76

Average Placement Index = $(P_1 + P_2 + P_3)/3$: 77.70 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)	Current Assoc (Y/N)
1	ASHISH KUMAR SRIVASTAVA	XXXXXXXX20K	Ph.D	Indian Institute of Technology, Indian School of Mines, Dhanbad	Materials and Manufacturing	18/09/2023	2.2	Associate Professor	Associate Professor	18/09/2023	Regular	Yes
2	PRAMOD KUMAR	XXXXXXXX37G	Ph.D	National Institute of Technology, Patna	Mechanical Engineering	17/04/2023	2.7	Assistant Professor	Assistant Professor		Regular	Yes
3	ALOK RANJAN	XXXXXXXX92J	Ph.D	National Institute of Technology, Agartala	THERMAL ENGINEERING	12/07/2024	1.4	Assistant Professor	Assistant Professor		Regular	Yes
4	JIGESH YADAV	XXXXXXXX15B	Ph.D	National Institute of Technology, Jamshedpur	Mechanical Engineering	13/04/2023	2.7	Assistant Professor	Assistant Professor		Regular	Yes
5	Md IRSHAD ALAM	XXXXXXXX74B	M.Tech	Indian Institute of Technology, Kanpur	Mechanical Engineering	17/01/2018	7.10	Assistant Professor	Assistant Professor		Regular	Yes
6	IRFAN HAIDER	XXXXXXXX62B	M.Tech	Aligarh Muslim University, Aligarh	Industrial and Production engineering	20/01/2018	7.10	Assistant Professor	Assistant Professor		Regular	Yes
7	MANHAR KUMAR SAH	XXXXXXXX22C	M.Tech	National Institute of Technology, Kurukshetra	Machine Design	24/01/2018	7.10	Assistant Professor	Assistant Professor		Regular	Yes
8	GULSHAN KUMAR	XXXXXXXX22E	M.E.	JADAVPUR UNIVERSITY, KOLKATA	MECHANICS AND HYDRAULIC	19/01/2018	7.10	Assistant Professor	Assistant Professor		Regular	Yes
9	HEMANT KUMAR CHOUDHARY	XXXXXXXX03J	M.Tech	Indian Institute of Technology, BHU	Mechanical Engineering (Production)	19/01/2018	7.10	Assistant Professor	Assistant Professor		Regular	Yes

10	PAPPU KUMAR	XXXXXXX64H	M.Tech	Indian Institute of Technology, Ropar	Mechanical Engineering	21/04/2023	2.7	Assistant Professor	Assistant Professor		Regular	Yes
11	VIKASH KUMAR	XXXXXXX31H	M.Tech	National Institute of Technology, Patna	THERMAL TURBO MACHINE	13/04/2023	2.7	Assistant Professor	Assistant Professor		Regular	Yes
12	SHALINI ANAND	XXXXXXX05P	M.Tech	National Institute of Technology, Meghalaya	FLUIDS AND THERMAL ENGINEERING	11/05/2023	2.6	Assistant Professor	Assistant Professor		Regular	Yes

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

C2. Student-Faculty Ratio (SFR)

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

UG1=1st UG program

UGn=nth UG program

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

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

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

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

PG1=1st PG program.

PGm=mth PG program

A= No. of Students in PG 1st year

B= No. of Students in PG 2nd year

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

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

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

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

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

No. of UG Programs in the Department1 No. of PG Programs in the Department2

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

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	66	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Mechanical Engineering	198	198	198
PG1.A	18	18	18
PG1.B	18	18	18
PG1: Machine Design	36	36	36
PG2.A	18	18	18
PG2.B	18	18	18
PG2: Thermal Engineering	36	36	36
DS=Total no. of students in all UG and PG programs in the Department	270	270	270
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= 270	S2= 270	S3= 270
DF=Total no. of faculty members in the Department	12	12	10
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	F1= 12	F2= 12	F3= 10
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	SFR1= 22.50	SFR2= 22.50	SFR3= 27.00
Average SFR for 3 years	SFR= 24.00		

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	$FQ = 2.5 \times [(10X + 4Y) / RF]$
2025-26(CAY)	4	8	13.00	13.85
2024-25(CAYm1)	4	8	13.00	13.85
2023-24(CAYm2)	2	8	13.00	10.00

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	1.00	0.00	3.00	1.00	9.00	11.00
2024-25	1.00	0.00	3.00	1.00	9.00	11.00
2023-24	1.00	0.00	3.00	0.00	9.00	10.00
Average	RF1=1.00	AF1=0.00	RF2=3.00	AF2=0.67	RF2=9.00	AF2=10.67

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Smt. Susmita Pramanic	Assistant Professor	Central Sanskrit University, New Delhi	Sanskrit	42.00
2	Mr. Subham Kumar	Certified Trainer	Swiftly Seva Multi Utility Private Limited, Madhubani Bihar	3D Design and Simulation through Solid Works	120.00
3	Mr. Pulkit Talwar	Application Engineer	Philips Machine Tool India Pvt. Limited	Hands On Training on Manufcaturing Technologies and CNC Machining	32.00
4	Mr. Rajkumar	Regional Head North-Additive Mnaufacturing	Philips Machine Tool India Pvt. Limited	Hands On Training on FDM based 3D printers	32.00
5	Mr Mukesh Kumar	Certified Trainer	Swiftly Seva Multi Utility Private Limited, Madhubani Bihar	Hands on Prcatice on Fusion 360 and ANSYS	120.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. Nilesh Kumar	PMRF	IIT Madras	Computer Added Design and Manufacturing Science-1	56.00
2	Mr. Sandeep Nigade	Executive Engineer	Conation Technologies Pune	Hands On Training on Vickers Harness and Optical Microscope	30.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. Nimmy Kumari	Pharmacist	MIT Pharmacy Institute	Biology for Engineers	36.00
2	Mr. Suresh Kumar	Sr. Engineer	DUCOM Material Characterization System, Bangalore, Karanataka	Workshop Hands On Training on Pin on Disc Tribometer Tester	32.00
3	Mr. Sarath Babu .M	On-site Engineer	SwamEquip, Chennai, Tamil Nadu	Hands on Prcatice on Stir Casting Technique (Manual and IOT Based)	32.00

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	18	20	7
2	No. of peer reviewed conference papers published	32	7	5
3	No. of books/book chapters published	4	5	7

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
Ambuj Saxena	Ashish Kumar Srivastava	Department of Mechanical Engineering	Design and Development of a mechanized digital Gnathodynamometer developed for biting and chewing force evaluation with calibration setup	Council of Science & Technology, UP	1 Years	3.35
						Amount received (Rs.):3.35

(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
Ambuj Saxena	Ashish Kumar Srivastava	Department of Mechanical Engineering	Design and Development of a mechanized digital Gnathodynamometer developed for biting and chewing force evaluation with calibration setup	Council of Science & Technology, UP	1 Years	3.30
						Amount received (Rs.):3.30

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Ambuj Saxena	Ashish Kumar Srivastava	Department of Mechanical Engineering	Design and Development of a mechanized digital Gnathodynamometer developed for biting and chewing force evaluation with calibration setup	Council of Science & Technology, UP	3 Years	3.54
						Amount received (Rs.):3.54

Total Amount (Lacs) Received for the Past 3 Years: 10.19**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)

(CAYm2)

(CAYm3)

Total amount (Lacs) received for the past 3 years:
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
ALOK RANJAN	Mechanical Automatic ON/Off Motor Switch for Water Tank	2 years	10.00	4.00	Controlling the water waste
Ashish Kumar Srivastava	DRISHTI	2 YEARS	4.00	2.80	SURVELIANCE BASED DRONE FOR MONITORING THE REAL TIME ACTIVITY
			Amount received (Rs.): 14.00		

(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
ALOK RANJAN	Mechanical Automatic ON/Off Motor Switch for Water Tank	2 years	10.00		for controlling the water waste
			Amount received (Rs.): 10.00		

(CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
			Amount received (Rs.): 0		

Total amount (Lacs) received for the past 3 years : 24.00

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	Workshop Lab	10	Long heart trowel, Trowel, Shank, Bench grinder Molding box, Runner etc. Discs etc. etc. etc. etc.	100%	Pramod kuma	Instructor	ITI
2	Manufacturing Process Lab	33	Double ended spanner, Calliper, Inside Calliper, Marking block, Outside Calliper, Surface plate	50%	Radhesh kum	Instructor	ITI
3	Dynamics of Machinery Lab	33	Cam analysis apparatus, Coriolis component of acceleration	50%	Amit Kumar	Instructor	ITI

4	Heat and mass transfer lab	33	Composite layer apparatus Forced convection apparatus Pin fin	50%	Anil Kumar Na	Technical Assi	Diploma
5	Steam Power System Lab	33	Steam Turbine Test Rig Double Stage Air Compressor	50%	Mr. Anil Kumar	Technical Assi	Diploma
6	Internal Combustion Engine Lab	33	Bomb Calorimeter Single Cylinder 4- Stroke Diesel Engine Multi	50%	Mr. Anil Kumar	Technical Assi	Diploma
7	Engineering Mechanics Lab	33	Funicular polygon Belt friction Sliding friction Fly wheel Worm &	50%	Mr. Anil Kumar	Technical Assi	Diploma
8	Fluid Mechanics Lab	33	Reynold's Apparatus, Notch Apparatus, Orifice & Mouthpiece	50%	Mr. Ram Kumar	Instructor	ITI
9	Fluid Machinery Lab	33	Venturimeter Apparatus, Kaplan Turbine Test Rig, Pelton Turbine Test	50%	Mr. Ram Kumar	Instructor	ITI
10	Strength of Materials Lab	33	Universal Testing Machine, Impact Testing Machine, Torsion Testing	50%	Mr. Sanjay Tripathi	Instructor	ITI
11	Manufacturing Technology Lab	33	Sine Bar, Comparator, Vernier, Two wire Method & Three wire method,	50%	Radhesh kumar	Instructor	ITI
12	Automation in Manufacturing Lab	33	CNC Lathe Machine	50%	Mr. Anil Kumar	Technical Assi	Diploma
13	Machine Drawing Lab	66	32 Desktop System (i7), LG Smart Board	100%	Mr. Simant Ish	Technical Assi	Diploma
14	Engineering Graphics and Design Lab	66	70 Graphics table with Smart board facility and Board Geometry, 3D	50%	Mr. Simant Ish	Technical Assi	Diploma
15	Design of Machine Elements Lab	66	C and C++ Programming facility with 40 computers and theoretical Design	50%	Mr. Simant Ish	Technical Assi	Diploma

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Workshop Lab (Foundry shop, Machine shop, Welding shop, Sheet metal shop,	1. Wear proper personal protective equipment (PPE) such as safety goggles, apron, and safety shoes. 2. Avoid loose clothing, jewellery, and untied long hair near rotating woodworking machines. 3. Use sharp and well-maintained hand tools and cutting tools for safe operation. 4. Ensure machine guards and safety devices are properly fitted on saws and planers. 5. Keep hands at a safe distance from cutting edges and rotating blades. 6. Use push sticks or push blocks while working on circular saws and planers. 7. Secure the workpiece firmly before cutting, planning, or drilling operations. 8. Maintain good housekeeping by keeping the floor clean and free from wood chips and dust. 9. Operate machines only after proper training and instructor supervision. 10. Switch off machines and clean the workplace after completing work.
2	Manufacturing Process Lab	1. Wearing proper PPE such as safety goggles, apron, gloves, and safety shoes is mandatory. 2. Loose clothing, jewelry, and long hair must be secured before operating machines. 3. Machines should be operated only after checking guards, covers, and emergency stops. 4. Power supply must be switched off before tool setting, cleaning, or maintenance. 5. Hands should be kept away from rotating or moving machine parts. 6. Proper tools must be used for each operation to avoid accidents. 7. Sharp chips and swarf should be removed using brushes, not bare hands. 8. Electrical equipment must not be handled with wet hands. 9. Hot workpieces should be handled using tongs or heat-resistant gloves. 10. Fire extinguishers and first-aid kits must be easily accessible. 11. Any machine fault or accident should be reported immediately. 12. Work area should be kept clean to prevent slips and injuries. 13. Students must strictly follow displayed safety instructions and signage.

3	Dynamics of Machinery (DOM) Lab	1. Safety goggles and closed footwear must be worn at all times in the laboratory. 2. Loose clothing, jewelry, and long hair should be properly secured. 3. Ensure all rotating parts such as shafts, flywheels, and belts are properly guarded. 4. Machines should be started only after checking alignment and secure mounting. 5. Hands must be kept away from moving or rotating components during operation. 6. Do not exceed the recommended speed or load limits of the apparatus. 7. Electrical connections must be properly insulated and grounded. 8. Power supply should be switched off before adjustments or measurements. 9. Vibrating machines should be operated on stable foundations only. 10. Any abnormal noise or vibration must be reported immediately. 11. Emergency stop switches must be easily accessible and known to students. 12. Students must perform experiments only under the supervision of the instructor. 13. Experiments should be conducted in a calm and disciplined manner. 14. The laboratory area should be kept clean and free from obstructions.
4	Heat and Mass Transfer Lab	1. Students must perform experiments only under the supervision of the instructor. 2. Safety goggles, heat-resistant gloves, and closed footwear must be worn. 3. Care should be taken while handling hot surfaces, steam lines, and heated fluids. 4. Proper insulation of hot pipes and equipment should be ensured before operation. 5. Do not touch heated apparatus until it has cooled down completely. 6. Ensure proper water circulation before switching on heaters. 7. Electrical heaters and instruments must be properly grounded. 8. Power supply should be switched off before making any adjustments. 9. Avoid leakage of steam, hot water, or working fluids during experiments. 10. Use caution while handling thermocouples, pressure gauges, and flow meters. 11. Do not exceed the recommended temperature and pressure limits. 12. Fire extinguishers and first-aid kits must be easily accessible. 13. Any abnormal noise, leakage, or overheating should be reported immediately. 14. Maintain cleanliness to prevent slips due to water or oil spillage.
5	Steam Power System Lab	1. All experiments must be conducted strictly under the supervision of the instructor. 2. Students must wear safety goggles, heat-resistant gloves, apron, and safety shoes. 3. Care should be taken while working with steam turbine test rigs and boiler models due to high temperature and pressure. 4. Ensure all pressure gauges, safety valves, and temperature sensors are functioning properly before operation. 5. Never exceed the recommended pressure, temperature, or speed limits of turbines and compressors. 6. Steam lines and hot surfaces must not be touched directly; proper insulation should be ensured. 7. Electrical connections for heaters, compressors, and instruments must be properly grounded. 8. Bomb calorimeter experiments must be conducted cautiously, following standard charging and ignition procedures. 9. Adequate ventilation must be provided while operating diesel engines and compressors. 10. Fuel handling for diesel engines should be done carefully to avoid spillage and fire hazards. 11. Power supply must be switched off before making adjustments or calibration. 12. Any leakage of steam, fuel, air, or cooling water should be reported immediately. 13. Fire extinguishers and first-aid kits must be readily accessible in the laboratory. 14. The laboratory floor should be kept clean and dry to prevent slips and accidents.
6	Internal Combustion Engine Lab	1. Proper ventilation must be ensured while operating petrol and diesel engines. 2. Fuel handling should be done carefully to avoid spillage and fire hazards. 3. Keep hands, tools, and clothing away from rotating and moving engine parts. 4. Do not exceed the recommended speed, load, and temperature limits of engines. 5. Ensure proper cooling water circulation before starting the engine. 6. Exhaust gases should be safely discharged through exhaust pipes. 7. Electrical connections for ignition and instrumentation must be properly insulated. 8. Students must wear safety goggles, apron, gloves, and safety shoes during experiments. 9. Bomb calorimeter experiments must be conducted carefully following standard operating procedures. 10. Switch off the fuel supply and power before making adjustments or measurements. 11. Any abnormal noise, vibration, or fuel leakage should be reported immediately. 12. Fire extinguishers and first-aid kits must be easily accessible in the laboratory. 13. Demonstrational engine models should not be operated without instructor permission.

7	Engineering Mechanics Lab	1. Ensure proper alignment and secure mounting of belt friction and sliding friction apparatus before loading. 2. Do not apply sudden or excessive loads on belt, flywheel, worm and worm wheel setups. 3. Keep hands, clothing, and tools away from rotating or moving parts. 4. Check ropes, belts, and pulleys for wear or damage before use. 5. Flywheel experiments should be conducted at recommended speeds only. 6. Load weights must be added and removed gradually to avoid imbalance. 7. Ensure the screw jack is properly lubricated and free from defects before operation. 8. Never exceed the rated load capacity of the screw jack. 9. Power supply (if applicable) must be switched off before adjustments. 10. Maintain safe distance while the apparatus is in motion. 11. Any abnormal noise, vibration, or misalignment should be reported immediately. 12. After completion, remove loads and keep the work area clean and organized. 13. Students must wear safety goggles and closed footwear during experiments.
8	Fluid Mechanics Lab	1. Students should wear safety goggles and non-slip footwear in the laboratory. 2. Ensure proper water supply and drainage before starting any experiment. 3. Check pipes, hoses, and connections for leakage before operation. 4. Do not operate pumps or valves without proper instructions. 5. Flow control valves should be opened and closed gradually to avoid pressure surges. 6. Avoid direct contact with high-velocity water jets in impact of jet apparatus. 7. Ensure stable mounting of Reynolds, notch, and Bernoulli's apparatus before use. 8. Electrical connections of pumps must be properly grounded. 9. Switch off the pump and power supply before changing settings or connections. 10. Keep the laboratory floor dry to prevent slipping due to water spillage. 11. Measuring instruments such as manometers and gauges should be handled carefully. 12. Do not exceed the recommended discharge or head limits of the apparatus. 13. Any leakage, abnormal vibration, or noise should be reported immediately.
9	Fluid Machinery Lab	1. Ensure proper water supply, drainage, and priming of pumps before operation. 2. Students must wear safety goggles and non-slip footwear in the laboratory. 3. Check all pipe joints, hoses, and valves for leakage before starting the experiment. 4. Valves should be opened and closed gradually to avoid pressure surges. 5. Do not exceed the recommended speed, head, or discharge of turbines. 6. Keep hands, clothing, and tools away from rotating turbine parts. 7. Ensure proper alignment and secure mounting of turbine test rigs. 8. Electrical connections for motors and control panels must be properly grounded. 9. Switch off power supply before making adjustments or changing connections. 10. Pitot tube should be handled carefully to avoid damage and injury. 11. Avoid standing close to high-speed rotating parts during operation. 12. Any abnormal noise, vibration, or leakage should be reported immediately. 13. All experiments must be performed only under the supervision of the instructor. 14. Maintain cleanliness and keep the floor dry to prevent slipping accidents.
10	Strength of Materials Lab	1. The components required pertaining to the experiment should be collected from Lab- in charge after duly filling in the requisition form. 2. When the experiment is completed, students should disconnect the setup made by them, and should return all the components/instruments taken for the purpose. 3. Any damage to the equipment or burnout of components will be viewed seriously either by the Lab in charge. 4. Procedure sheets/data sheets provided to the students' groups should be maintained neatly and are to be returned after the experiment. 5. Specimens should be properly aligned and firmly fixed before applying load. 6. Ensure correct selection of grips, jaws, and fixtures in testing machines. 7. Load should be applied gradually; sudden loading must be avoided. 8. Keep a safe distance from specimens during testing to avoid injury due to sudden fracture. 9. Do not exceed the maximum load capacity of the testing machines. 10. Hands and clothing must be kept away from moving parts of machines. 11. Power supply should be switched off before changing specimens or machine settings. 12. Impact testing machines should be operated with protective guards in place. 13. Handle broken or sharp specimens carefully using gloves or tools. 14. Any abnormal noise, vibration, or machine malfunction should be reported immediately. 15. Testing machines must be stopped immediately after specimen failure. 16. Maintain cleanliness and keep the laboratory area free from obstructions.

11	Manufacturing Technology Lab	1. Students should handle precision instruments like vernier calipers, comparators, and sine bars carefully. 2. Measuring instruments must be cleaned before and after use to avoid damage and errors. 3. Do not drop or apply excessive force on precision instruments. 4. Ensure proper placement of sine bar and slip gauges to prevent slipping. 5. Surface plate should be kept clean and free from dust, oil, or burrs. 6. Sharp edges of components should be handled carefully to avoid injury. 7. Height gauge should be moved gently to prevent tipping or damage. 8. Two-wire and three-wire methods must be performed with correct wire sizes and care. 9. Do not place heavy objects on the surface plate unnecessarily. 10. Measuring instruments should not be used as general-purpose tools. 11. • Store instruments in designated boxes after use. 12. Report any damaged or malfunctioning instrument immediately. 13. Maintain cleanliness and discipline in the laboratory at all times. 14. Experiments must be conducted only under the supervision of the instructor.
12	Automation in Manufacturing Lab	1. All experiments must be performed only under the supervision of trained faculty or lab staff. 2. Students must wear appropriate PPE such as safety goggles, welding helmet, gloves, apron, and safety shoes. 3. Access to robotic welding cells must be restricted during operation using safety guards and interlocks. 4. Never enter the robot working envelope while the robot is in automatic mode. 5. Proper ventilation must be ensured to avoid inhalation of welding fumes and gases. 6. Ensure correct earthing and insulation of welding and CNC machine electrical systems. 7. Keep hands, tools, and clothing away from rotating parts of the CNC lathe. 8. CNC programs should be verified and simulated before actual machining. 9. Emergency stop buttons of robot and CNC machines must be known and easily accessible. 10. Do not touch hot welded components immediately after welding. 11. Cutting tools and workpieces must be securely clamped before CNC operation. 12. Power supply should be switched off before maintenance or tool changes. 13. Any abnormal sound, spark, vibration, or error message must be reported immediately. 14. Maintain cleanliness and keep the lab area free from oil spills and obstructions
13	Machine Drawing Lab	1. Students must use computer systems only under the supervision of the instructor. 2. Proper seating posture should be maintained to avoid strain on eyes, neck, and back. 3. Electrical connections of desktop systems and smart board must be properly grounded. 4. Do not touch power cables, sockets, or switches with wet hands. 5. Food and liquids are strictly prohibited near computer systems. 6. Systems should be shut down properly after use to avoid damage. 7. Handle keyboards, mouse, and other peripherals carefully. 8. Do not install unauthorized software or change system settings. 9. • Report any malfunctioning system, loose wiring, or overheating immediately. 10. Maintain safe distance from the smart board during operation. 11. Avoid staring at screens continuously; follow proper screen-time practices. 12. Keep the lab clean and ensure proper cable management to prevent tripping hazards. 13. Bags and personal items should be kept in designated areas. 14. Emergency exits and fire extinguishers must remain unobstructed
14	Refrigeration and Air Conditioning Lab	1. Ensure proper earthing of all electrical components before switching on the system. 2. Do not touch compressors, condensers, or piping during operation due to high temperature. 3. Refrigerant charging and recovery must be done carefully to avoid leakage and inhalation. 4. Adequate ventilation should be maintained in the laboratory at all times. 5. Do not exceed recommended pressure, temperature, or voltage limits of test rigs. 6. Check hoses, joints, and valves for leaks before starting the experiment. 7. Power supply should be switched off before servicing or changing connections. 8. Moving parts such as fans and belts should not be touched during operation. 9. Handle glass gauges, pressure gauges, and thermometers carefully. 10. Any abnormal noise, vibration, overheating, or refrigerant leakage must be reported immediately. 11. Fire extinguishers and first-aid kits must be readily available in the lab. 12. Maintain cleanliness and keep the floor dry to prevent slipping hazards

15	Vashisht Narayan Sih Computer Anurupan Sodh Paryogshala (VNS)	1. Students must use computer systems only under the supervision of the instructor. 2. Proper seating posture should be maintained to avoid eye strain and musculoskeletal problems. 3. Electrical connections of all desktop systems must be properly grounded. 4. Do not touch power sockets, cables, or systems with wet hands. 5. Food and liquids are strictly prohibited near computer systems. 6. Systems should be operated carefully while running high-end software like ANSYS, SolidWorks, and MATLAB. 7. Unauthorized software installation or modification of system settings is not permitted. 8. Systems must be shut down properly after completion of work. 9. Report overheating, loose connections, or malfunctioning systems immediately. 10. Maintain adequate ventilation to avoid overheating of computer systems. 11. Avoid continuous screen exposure; follow proper screen-time practices. 12. Keep bags and personal belongings in designated areas to prevent obstruction. 13. Maintain proper cable management to avoid tripping hazards. 14. Maintain cleanliness and discipline inside the laboratory at all times.
16	Advanced Welding Laboratory (Robotic Welding)	1. Students must wear appropriate PPE such as welding helmet, safety goggles, gloves, apron, and safety shoes. 2. Access to the robotic welding cell must be restricted using safety fences and interlocks during operation. 3. Never enter the robot working envelope when the robot is in automatic or teach mode. 4. Emergency stop buttons of the KUKA robot and welding machine must be known and easily accessible. 5. Proper earthing and insulation of the MIG welding machine and robot controller must be ensured. 6. Adequate ventilation or fume extraction should be provided to avoid inhalation of welding fumes. 7. Welding cables and gas hoses should be properly routed and free from damage. 8. Do not touch hot welded components or torch immediately after welding. 9. Welding parameters and robot programs must be verified before execution. 10. Power supply should be switched off before maintenance or tool change. 11. Any abnormal sparks, noise, vibration, or error message must be reported immediately. 12. Fire extinguishers suitable for electrical and welding fires must be readily available. 13. Maintain cleanliness and keep the lab area free from oil spills and obstructions.
17	Advance Manufacturing Lab	1. Proper ventilation must be ensured while operating SLA and CFF 3D printers. 2. Avoid direct contact with liquid resins and hot extruder nozzles during 3D printing. 3. Electrical connections of printers and casting machines must be properly grounded. 4. Do not touch heated build plates, furnaces, or molten metal surfaces. 5. Ensure correct setting of temperature, speed, and material parameters before operation. 6. Molten metal handling in stir casting must be done using approved tools and PPE only. 7. Maintain a safe distance from rotating stirrers and bottom pouring mechanisms. 8. Power supply should be switched off before maintenance, cleaning, or material change. 9. Fire extinguishers suitable for electrical and metal fires must be available in the lab. 10. Any abnormal noise, vibration, leakage, or overheating should be reported immediately. 11. Spilled resin, metal, or oil must be cleaned promptly to avoid slipping hazards. 12. Maintain cleanliness and keep the working area free from obstructions.
18	Non-Conventional Machining Lab	1. Experiments must be conducted only under the supervision of trained faculty or lab staff. 2. Students must wear safety goggles, gloves, and insulated safety footwear. 3. Ensure proper earthing and insulation of the CNC Wire Cut EDM machine before operation. 4. Do not touch the wire, workpiece, or dielectric fluid during machining. 5. Keep hands, tools, and clothing away from moving wire and machine parts. 6. Check correct mounting and clamping of the workpiece before starting the machine. 7. Dielectric fluid level and circulation must be ensured prior to operation. 8. CNC program must be verified and simulated before actual cutting. 9. Never open machine covers or doors while the machine is running. 10. Power supply must be switched off before wire replacement or maintenance. 11. Avoid contact with sharp edges of machined components. 12. Any wire breakage, spark abnormality, or alarm must be reported immediately. 13. Fire extinguishers suitable for electrical fires must be available nearby. 14. Maintain cleanliness and keep the lab area free from fluid spillage and obstructions.
19	Tribology Lab	1. Ensure proper alignment and secure mounting of the pin and disc before starting the test. 2. Do not touch the rotating disc or moving parts during operation. 3. Apply load gradually and do not exceed the recommended load and speed limits. 4. Keep hands, tools, and loose clothing away from rotating components. 5. Power supply must be switched off before changing specimens or adjusting load. 6. Handle worn or fractured specimens carefully using gloves or tools. 7. Ensure proper lubrication or dry test conditions as specified in the experiment. 8. Avoid contact with hot specimens after prolonged testing. 9. Any abnormal noise, vibration, or sudden change in friction signal must be reported immediately. 10. Emergency stop button should be easily accessible and known to students. 11. Clean wear debris using brushes; never use bare hands. 12. Maintain cleanliness and keep the lab area free from obstructions and oil spillage.

20	Metallurgy and Materials Lab	1. Specimens should be firmly held while polishing to avoid slipping or ejection. 2. Do not touch rotating discs of the polishing machine during operation. 3. Use polishing fluids and abrasives carefully to avoid skin or eye contact. 4. Ensure the Micro-Vickers indenter and specimen are properly aligned before testing. 5. Apply the specified test load only; excessive loading may damage the indenter or specimen. 6. Handle sharp or fractured specimens carefully using gloves or tools. 7. Switch off power supply before changing polishing pads or cleaning machines. 8. Optical microscopes and cameras should be handled gently to avoid damage. 9. Do not touch optical lenses with bare hands; use proper lens paper for cleaning. 10. Electrical connections of all equipment must be properly grounded. 11. Report any abnormal noise, vibration, or malfunction immediately. 12. Maintain cleanliness and keep the laboratory free from debris and chemical spills.

D3. Project Laboratory/Research Laboratory

7.5. Project Laboratory

1. A separate project laboratory is identified for the benefit of all students of UG program to make/to make/to make/to do their ideas by manufacturing models/ exhibits the services of all laboratories they can utilize and keep their models at project laboratory. Some essential facilities are provided.
2. The department of mechanical engineering is well equipped with the project laboratory of area of 75 Sq. Mts.
3. The laboratory consists of well configured systems, different IC's bread boards, advanced project models like Aurdino, MSP430 Development tools and Texas instruments Kits.
4. Various facilities available in the laboratory including different completed project models are always available to the students during the college working time so that they can utilize the facilities for their course project work as well as use during participation in external events.
5. We have VNS Lab (Centre for Software Skills) it is well equiped with 70 desktop computer with Solid work software, Ansys Software and Matlab software which is utilized for UG and PG Projects.

The lab is dedicated to projects with high configuration computer systems installed with software like MATLAB version 2015a version. Mini micro fabrication works, namely soldering, can be carried out and used by the students to perform their academic projects. This lab also utilized the faculty and other staff members for carrying out their research work. The systems available here are installed with much software's to be used during the installation of 3D printing and different types of robots.

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 $((NS1*0.8) + (NS2*0.2)) / (\text{No. of required faculty (RF4)})$; Percentage= $((NS1*0.8) + (NS2*0.2)) / RF$
2023-24(CAYm2)	335	17	7	13	48
2024-25(CAYm1)	400	20	16	19	83
2025-26(CAY)	480	24	17	24	77

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

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

Items	Budgeted in 2025-26	Actual Expenses in 2025-26 till	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till
Infrastructure Built-Up	14668000	11000000	12947900.00	10983575	8700629	8614463	12500000	12177263
Library	1200000.00	0	1200000.00	1189871.00	800000	750000	500000	480000
Laboratory equipment	30200000.00	13106679.00	40832160.00	36685557	35917351.00	35917114.00	27200000.00	27032426.00
Teaching and non-teaching staff	140907000.00	101935902.00	155757000.00	129168161.00	131284000.00	110623758.00	123751003.00	102239680.00

Outreach Programs	0	0	0	0	0	0	0	0
R&D	6000000	5825000	3000000	2979500	0	0	0	0
Training, Placement and	75000	75000	67500	67500	71000	71000	88000	88000
SDGs	1875000	1875000	800000	792098	1800000	1796988	0	0
Entrepreneurship	300000	300000	600000	600000	250000	250000	0	0
Others, specify	200000.00	200000.00	0	0	0	0	0	0
Total	195425000.00	134317581.00	215204560.00	182466262.00	178822980.00	158023323.00	164039003.00	142017369.00

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 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	500000	490000	15000000	14318196	3200000	3203366	7000000	6150500
Software	0	0	750000	722117	0	0	0	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty development	0	0	1700000	1678711	300000	231228	125000	121760
R & D	6000000	5825000	0	0	0	0	0	0
Industrial Training, Industry expert,	0	0	0	0	0	0	0	0
Miscellaneous Expenses*	70000	70088	700000	662377	1400000	1387542	200000	195435
Total	6570000	6385088	18150000	17381401	4900000	4822136	7325000	6467695