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: 10959	**Date of Submission**: 03-09-2025

PART A- Profile of the Institute

A1.Name of the Institute: GLOBAL ACADEMY OF TECHNOLOGY	
Year of Establishment : 2001	Location of the Institute: Bengaluru
A2. Institute Address:IDEAL HOMES TOWNSHIP2ND STAGEOFF MYSORE ROADRAJARAJESHWARINAGARBENGALURU	
City:Bangalore Urban	State:Karnataka
Pin Code:560098	Website:www.gat.ac.in
Email:principal@gat.ac.in	Phone No(with STD Code):80-28603158
A3. Name and Address of the Affiliating University (if any):	
Name of the University : VISVESVARAYA TECHNOLOGICAL UNIVERSITY	City: Bangalore Urban
State : Karnataka	Pin Code: 560098
A4. Type of the Institution: Autonomous CAY(2020-21)	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **10**
- No. of PG programs: **3**

Table No. A6.1: List of all programs offered by the Institute.

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Aeronautical Engineering	2020	--	Aeronautical Engineering
2	Engineering & Technology	UG	Artificial Intelligence and Data Science	2020	--	Artificial Intelligence and Data Science
3	Engineering & Technology	UG	Artificial Intelligence and Machine Learning	2021	--	Artificial Intelligence and Machine Learning
4	Engineering & Technology	UG	Civil Engineering	2004	--	Civil Engineering
5	Engineering & Technology	UG	Computer Science and Engineering	2001	--	Computer Science and Engineering
6	Engineering & Technology	PG	Computer Science and Engineering	2014	--	Computer Science and Engineering
7	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2022	--	Computer Science and Engineering (Artificial Intelligence and Machine Learning)

8	Engineering & Technology	UG	Electrical and Electronics Engineering	2001	--	Electrical and Electronics Engineering
9	Engineering & Technology	UG	Electronics & Communication Engineering	2001	--	Electronics and Communication Engineering
10	Engineering & Technology	UG	Information Science & Engineering	2001	--	Information Science and Engineering
11	Engineering & Technology	UG	Mechanical Engineering	2003	--	Mechanical Engineering
12	Engineering & Technology	PG	Structural Engineering	2013	--	Civil Engineering
13	Management	PG	Master of Business Administration	2004	--	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
Mechanical Engineering	No	Mechanical Engineering	UG

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.

Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

No Record

PART-B: Program information

B1. Provide the Required Information for the Program Applied For:

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Mechanical Engineering	UG	2003 / --	60	Yes	2021	60	2003	Approved EoA letter Dated: 3rd Jan 2025	Granted accreditation for 3 years for the period (specify period)	2022	2025	2	4

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

List of the Allied Departments/Cluster and Programs:

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

A. Name of the HoD :	Dr. Bharat Vinjamuri
B. Nature of appointment:	Regular
C. Qualification:	Ph.D

B3. Program Details

Table No.B3.1: Admission details for the program excluding those admitted through multiple entry and exit points.

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	60	60	60	120	120	120
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	30	32	16	12	26	73	117
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	30	16	41	28	25	11
N3=Separate division if any	0	0	0	0	0	2	1
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	3	3	2	3	6	5	6
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	33	65	34	56	60	105	135

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

B4. Enrolment Ratio in the First Year

Table No. B4.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	60	30	3	55.00
2023-24 (CAYm1)	60	32	3	58.33
2022-23 (CAYm2)	60	16	2	30.00

Average [(ER1 + ER2 + ER3) / 3] = 47.78≡ 5.00

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

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

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	148.00	145.00	135.00
B=No. of students who graduated from the program in the stipulated course duration	51.00	69.00	104.00

Success Rate (SR)= (B/A) * 100	34.46	47.59	77.04

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 53.03

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

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

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
Mean of CGPA or mean percentage of all successful students(X)	6.09	6.46	5.95
Y=Total no. of successful students	26.00	17.00	15.00
Z=Total no. of students appeared in the examination	35.00	17.00	15.00
API [X*(Y/Z)]	4.52	6.47	5.96

Average API[(AP1+AP2+AP3)/3] : 5.65

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

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	6.67	6.65	6.78
Y=Total no. of successful students	33.00	54.00	59.00
Z=Total no. of students appeared in the examination	33.00	56.00	60.00
API [X * (Y/Z)]	6.67	6.41	6.67

Average API [(AP1 + AP2 + AP3)/3] : 6.58

B8. Academic Performance of the Third Year Students of the Program

Table No.B8.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.18	6.73	6.48
Y=Total no. of successful students	52.00	59.00	102.00
Z=Total no. of students appeared in the examination	54.00	59.00	104.00
API [X*(Y/Z)]:	6.91	6.73	6.36

Average API [(AP1 + AP2 + AP3)/3] : 6.67

B9. Placement, Higher Studies, and Entrepreneurship

Table No.B9.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	148.00	145.00	131.00
X=No. of students placed	39.00	75.00	90.00
Y=No. of students admitted to higher studies	11.00	7.00	7.00
Z= No. of students taking up entrepreneurship	0.00	1.00	1.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	33.78	57.24	74.81

Average Placement Index = (P_1 + P_2 + P_3)/3: 55.28 Placement Index Points:

PART C: Faculty Details in Department and Allied Departments

(Data to be filled in for the Department and Allied Departments)

C1. Faculty details of Department and Allied Departments

Table No.C1: Faculty details in the Department for the past 3 years including CAY

Sr.No	Name of the Faculty	PAN No.	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?
1	Dr. Bharat Vinjamuri	XXXXXXX35F	Ph.D	JNTU	Material Technology	14/07/2016	9.1	Associate Professor	Professor	01/10/2020	Regular	Yes		Yes
2	Dr. Ravi Kumar D.V	XXXXXXX96P	Ph.D	VTU, Belgaum	Metal Matrix Composites	14/03/2005	20.5	Lecturer	Professor	01/09/2023	Regular	Yes		No
3	Dr. Vijay Tambrallimath	XXXXXXX55E	Ph.D	Dayananda Sagar University	3D Printing	19/12/2024	0.8	Professor	Professor	19/12/2024	Regular	Yes		No
4	Dr. Ravi Kumar V	XXXXXXX96H	Ph.D	VTU, Belgaum	Metal Matrix Composites	07/02/2007	18.6	Lecturer	Associate Professor	01/08/2012	Regular	Yes		No
5	Dr. Shreekala N	XXXXXXX95G	Ph.D	VTU, Belgaum	Gas Turbine Combustion	15/02/2019	6.6	Assistant Professor	Associate Professor	01/10/2020	Regular	Yes		No
6	Dr. Guru Nagendra G R	XXXXXXX56F	Ph.D	VTU, Belgaum	Alloys & Composition	18/08/2005	20	Lecturer	Associate Professor	01/08/2012	Regular	Yes		No
7	Dr. Rajesh R	XXXXXXX77K	Ph.D	VTU, Belgaum	Additive Manufacturing	13/07/2015	10.1	Assistant Professor	Associate Professor	01/01/2025	Regular	Yes		No
8	Dr. Asha P B	XXXXXXX12M	Ph.D	VTU, Belgaum	Material Technology	19/07/2010	15.1	Lecturer	Assistant Professor		Regular	Yes		No
9	Mr. Gurusharan	XXXXXXX40B	M.Sc. (Engineering)	Coventry	Rotating Machine Design	12/08/2009	16	Lecturer	Assistant Professor		Regular	Yes		No
10	Mr. Poorna chandra	XXXXXXX08K	M.Tech	VTU, Belgaum	Computer Integrated Manufacturing	19/07/2010	15.1	Lecturer	Assistant Professor		Regular	Yes		No
11	Mrs. Savitha D.C	XXXXXXX44C	M.Tech	VTU, Belgaum	Thermal Power Engineering	23/01/2012	13.7	Lecturer	Assistant Professor		Regular	Yes		No
12	Mr. Kiran R	XXXXXXX18B	M.Tech	VTU, Belgaum	Computer Integrated Manufacturing	03/02/2014	11.6	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Mr. Maruthi G V	XXXXXXX45R	M.Tech	VTU, Belgaum	Machine Design	12/11/2024	0.9	Assistant Professor	Assistant Professor		Regular	Yes		No

14	Dr. C. Chanakyan	XXXXXXX46A	Ph.D	Anna University	Advanced Manufacturing	09/07/2025	0.1	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Dr. Senthil Kumar P	XXXXXXX94A	Ph.D	IIT Madras	Thermal Engineering	24/07/2025	0.1	Assistant Professor	Assistant Professor		Regular	Yes		No
16	Dr. N. RanaPratap Reddy	XXXXXXX07R	Ph.D	NITK	Thermal Power Engineering	17/02/2016	8.6	Professor	Professor	17/02/2016	Regular	No	05/09/2024	No
17	Dr. Prashanth T	XXXXXXX89K	Ph.D	Nicaragua	Composite Materials	10/01/2020	4.7	Professor	Professor	10/01/2020	Regular	No	24/08/2024	No
18	Ms. Sneha Sarika Murthy	XXXXXXX99G	M.Tech	VTU, Belgaum	Computer Integrated Manufacturing	19/02/2020	4.3	Assistant Professor	Assistant Professor		Regular	No	31/05/2024	No
19	Dr. T Krishna Rao	XXXXXXX86K	Ph.D	JNTU	Machine Design	25/05/2017	6.2	Professor	Professor	07/06/2017	Regular	No	31/07/2023	No

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

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)
C= No. of Students in UG 3rd year (ST)
D= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
A= No. of Students in PG 1st year
B= No. of Students in PG 2nd year
Student Faculty Ratio **(SFR)** = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.
No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)
Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.
F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

No. of UG Programs in the Department1 No. of PG Programs in the Department0

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

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	66	66	66
UG1.C	66	66	132
UG1.D	66	132	132
UG1: Mechanical Engineering	**198**	**264**	**330**
DS=Total no. of students in all UG and PG programs in the Department	198	264	330
AS=Total no. of students of all UG and PG programs in allied departments	0	0	0
S=Total no. of students in the Department (DS) and allied departments (AS)	**S1=** 198	**S2=** 264	**S3=** 330

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
DF=Total no. of faculty members in the Department	11	14	15
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 11	**F2=** 14	**F3=** 15
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= 18.00**	**SFR2= 18.86**	**SFR3= 22.00**
Average SFR for 3 years	**SFR= 19.62**		

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)]
2024-25(CAY)	6	5	9.00	22.22
2023-24(CAYm1)	8	6	13.00	20.00
2022-23(CAYm2)	7	8	16.00	15.94

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = 1/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents:.
- RF2= No. of Associate Professors required = 2/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- RF3= No. of Assistant Professors required = 6/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3
2024-25	1.00	2.00	2.00	3.00	6.00	6.00
2023-24	1.00	3.00	2.00	4.00	8.00	7.00
2022-23	1.00	4.00	3.00	3.00	11.00	8.00
Average	RF1=1.00	AF1=3.00	RF2=2.33	AF2=3.33	RF2=8.33	AF2=7.00

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

(CAYm2)

(CAYm3)

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	8	7	14
2	No. of peer reviewed conference papers published	0	1	0
3	No. of books/book chapters published	0	1	0

C7. Sponsored Research Project

Table No. C7.1: List of sponsored research projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	0.00
						Amount received (Rs.):0.00

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	0.00
						Amount received (Rs.):0.00

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	0.00
						Amount received (Rs.):0.00

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

Note*:

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

C8. Consultancy Work

Table No. C8.1: List of consultancy projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Nil	Nil	Nil	Nil	Nil	Nil	
						Amount received (Rs.):0

(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
Nil	Nil	Nil	Nil	Nil	Nil	
						Amount received (Rs.):0

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. T Krishna Rao	Dr. Bharat V	Mechanical Engineering	Corporate Training Program for GETs of TEPL	Suprajiv technical and managements and Skill sonics India Pvt. Ltd	45 days	5.56
						Amount received (Rs.):5.56

Total amount (Lacs) received for the past 3 years: 5.56

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
Nil	Nil	Nil			Nil
			Amount received (Rs.): 0		

(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
Nil	Nil	Nil			Nil
			Amount received (Rs.): 0		

(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. Bharat V	Augment the Research facility of the Mechanical Department	0ne year	7.29	7.29	Established R&D cell Research on tribology of Materials
			Amount received (Rs.): 7.29		

Total amount (Lacs) received for the past 3 years : 7.29

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	Computer-Aided Engineering Drawing	60	Computer systems Dell OptiPlex 3020M (MFF Desktop)	Utilized for Lab	Manjunath B	Assistant Instructor	ITI
2	Material Testing Lab	18	Brinell Hardness Testing Machine / Impact Testing Machine / Magnetic Particle Flow Detector / Metallurgical Microscope / Polishing Disc Machine /	Utilized for IPC	X Francis / Hanumanthara	Forman / Assistant Instruc	ITI / ITI
3	Foundry Forging Lab	21	Sieve Shaker / Universal Sand Testing Machine / Electric Baking Oven / Precision Weighing Balance / Open Hearth Furnace	Utilized for Lab	Gururaj Rao / Hanumanth	Instructor / Assistant Instru	ITI / ITI
4	Machine shop	17	Lathe Cone Pully (09 Nos) / Lathe all Geared (06 Nos) / Milling Machine / Shaping Machine (5 Nos) / Rolex Pillar Type Drilling Machine / 450 Amps Welding	Utilized for labs	Gururaj Rao / Jagadish P	Instructor / Instructor	ITI / Diploma
5	Computer-Aided Machine Drawing	49	Computer systems Dell OptiPlex 3020M (MFF Desktop)	Utilized for labs	Vishakantaiah	Lab Assistant	ITI
6	Mechanical Measurement & Metrology	17	Calibration of Pressure Gauge Setup / Calibration of load cell setup / Pressure Gauge / Slip Guage Block set / Gear Tooth Micrometer / Gear Tooth Vernier	Utilized for labs	X Francis / Sudharshan M	Foreman / Lab Assistant	ITI / ITI
7	Heat Transfer Lab	18	Heat Transfer Through Metal Rod / Heat Transfer Through Composite Wall / Stefan Boltzman Apparatus / Emissivity Measurement Apparatus / Parallel Flow &	Utilized for Hea	Nanjundaiah M B / Gurur	Lab Assistant / Instructor	ITI / ITI
8	Fluid Mechanics and Machinery lab	18	Friction in Pipe Setup / Minor Losses in Pipe Fitting / Impact of Jet on Vanes / Venturimeter / Orifice Meter / Nozzle Meter / Rotameter Setup / Notch Calibration	Utilized for Flui	Nanjundaiah M B / Guru	Lab Assistant / Instructor	ITI / ITI
9	Analysis Lab	18	Computer systems Dell OptiPlex 3020M (MFF Desktop)	Utilized for Lab	Manjunath B	Lab Assistant Instructor	ITI
10	Computer Integrated Manufacturing Lab	18	Computer systems Dell OptiPlex 3020M (MFF Desktop)	Utilized for 8MI	Sudharshan M S	Lab Assistant	ITI

11	Fuel & Engine Testing Lab	18	Abels Flash Point Apparatus / Redwood Viscometer / Torsion Viscometer / Valve Timing Diagram / Pensky	Ability Enhanc	Gururaj Rao	Instructor	ITI
12	Design Lab	22	Strain Guage Rosette / Polariscope with digital dial indicator 12" Research Version / Balancing of Rotating	Design Lab 22I	X Francis / Hanumantaraj	Forman / Assistant Instru	ITI / ITI

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Computer Aided Engineering Drawing	General Safety Measures • Fire extinguishers • First-aid kits • Emergency power switches • Electrical grounding • UPS systems Lab-Specific Safety Measures • Cable management systems • Surge protectors • Data backup servers • Adequate lighting • Workstation spacing
2	Foundry and Forging Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency exits • Safety goggles • Leather aprons • Safety helmets • Heat-resistant gloves • Safety shoes Foundry Safety Measures • Molding tools (rammers, lifters, slicks, trowels) • Tool storage racks • Sand handling equipment • Ventilation systems • Crucibles • Furnace guards Forging Safety Measures • Metal tongs (various sizes) • Anvils • Hammers • Cooling zones • Heat shields • Quenching tanks
3	Machine Shop	General Safety Measures • Fire extinguishers • First-aid kits • Emergency stop buttons • Safety goggles • Safety shoes • Aprons • Machine guards Lab-Specific Safety Measures • Coolant systems • Chip guards • Work holding devices
4	Mechanical Measurement & Metrology	General Safety Measures • Fire extinguishers • First-aid kits • Emergency stop buttons • Safety shoes • Lab uniforms Lab-Specific Safety Measures • Equipment stands • Inspection tables
5	Computer Aided Machine Drawing	General Safety Measures • Fire extinguishers • First-aid kits • Emergency power switches • Electrical grounding • Ergonomic furniture • Anti-glare screens Lab-Specific Safety Measures • UPS systems • Data backup systems • Network security • Licensed software
6	Material Testing Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency stop buttons • Lab coats • Safety shoes • Safety goggles • Warning signboards Lab-Specific Safety Measures • Safety shields • Specimen holders
7	Heat Transfer Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency shut-off valves • Lab coats • Closed-toe shoes • Heat-resistant gloves • Safety goggles Lab-Specific Safety Measures • Temperature sensors • Insulated pipes • Pressure gauges • Hot water circulation systems • Cooling systems • Electrical heaters • Thermal insulation • Pressure relief valves
8	Fluid Mechanics and Machinery Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency shut-off valves • Lab coats • Closed footwear • Non-slip flooring Lab-Specific Safety Measures • Measuring tanks • Flow meters • Pressure gauges • Control valves • Piping systems • Suction/delivery pipes • Pressure relief valves • Water drainage systems

9	Analysis Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency power switches • Ergonomic workstations • Adequate lighting • Air conditioning Lab-Specific Safety Measures • ANSYS software suite • UPS systems • Data backup servers • Network security systems • Licensed software • Anti-virus protection
10	Computer Integrated Manufacturing Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency power switches • Ergonomic furniture • Adequate lighting • Air conditioning Lab-Specific Safety Measures • CAD/CAM software (AutoCAD, SolidWorks, CATIA) • UPS systems • Data storage servers • Network infrastructure • Simulation software • Licensed applications
11	Hydraulics & Pneumatics Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency shut-off valves • Closed-toe shoes Hydraulic Safety Measures • Hydraulic trainers • Pressure gauges • Control valves • Pressure relief valves Pneumatic Safety Measures • Pneumatic trainers • Pressure regulators • Moisture separators • Air filters • Pressure gauges • Safety valves
12	3D Printing Lab	General Safety Measures • Fire extinguishers • First-aid kits • Safety shoes • Emergency stop buttons • Ventilation systems Lab-Specific Safety Measures • Ventilation/fume extraction • Non-flammable work surfaces • Safety Data Sheets (SDSs) • Material storage cabinets • Cleaning equipment
13	Fuel & Engine Testing Lab	General Safety Measures • Fire extinguishers • First-aid kits • Lab coats • Protective gloves • Safety goggles • Ventilation systems • Spill containment kits Lab-Specific Safety Measures • Temperature sensors • Pressure gauges • Cooling systems • Standard Operating Procedures (SOPs)
14	Toyota Lab	General Safety Measures • Fire extinguishers • First-aid kits • Lab coats • Protective gloves • Safety barriers Lab-Specific Safety Measures • Mounting stands
15	Centre For CIM	General Safety Measures • Fire extinguishers • First-aid kits • Emergency stop buttons • Safety goggles • Safety shoes • Machine guards • Adequate lighting Lab-Specific Safety Measures • CNC controllers • Cutting tools • Tool holders • Work holding fixtures • Coolant systems • Chip guards • Electrical grounding systems • Cable protection systems • Dry work environments
16	Project Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency stop buttons • Safety shoes • Lab coats/aprons • Safety goggles • Machine guards Lab-Specific Safety Measures • Welding helmets • Welding gloves • Face shields • Chuck keys • Tool rests • Grinding wheels • Earthing systems • Chip removal brushes
17	Design Lab	General Safety Measures • Fire extinguishers • First-aid kits • Emergency stop buttons • Lab coats • Safety shoes • Warning signboards Lab-Specific Safety Measures • Shaft guards • Coupling guards • Lubrication systems • RPM limiters • Vibration sensors • Emergency stop systems

D3. Project Laboratory/Research Laboratory

Centre of Excellence in CNC Technology

The Computer Numerical Control (CNC) Training Centre was established in 2019 with the following objectives:

- Train students in the programming and operation of Computer Numerical Control (CNC) machines
- Provide a platform for the fabrication of components for student projects
- Enable students to work on a production machine to become industry-ready

CNC DRILL TAP MACHINING CENTER

The 3-axis CNC Drill Tap Vertical Machining Center (VMC) has eight tool ATC with a spindle speed of 8000 rpm. The CNC Drill Tap Machining Center is a compact & economical machine ideally suitable for aluminum & cast-iron application capable of taking a maximum load of 200 kgf on the table. The machine is loaded with a table size of 650 X 310 mm & has a stroke size of 400 X 300 X 250 along the x, y & z axis, respectively.

CNC HORIZONTAL TURNING CENTER

The 2-axes horizontal turning center is equipped with 8 stations Bi-directional turret (BTP-50) controlled by a FANUC CNC controller. The equipment can handle a maximum workpiece size of 190 mm diameter and 200 mm length and is suitable for machining aluminum and cast iron with a power capacity of 3.7 kW

	
CNC DRILL TAP MACHINING CENTER	**CNC HORIZONTAL TURNING CENTER**

TRAINING PROGRAMS

Teaching and non-teaching faculty members are encouraged to attend training programs to get acquainted with the latest technologies in CNC technology.

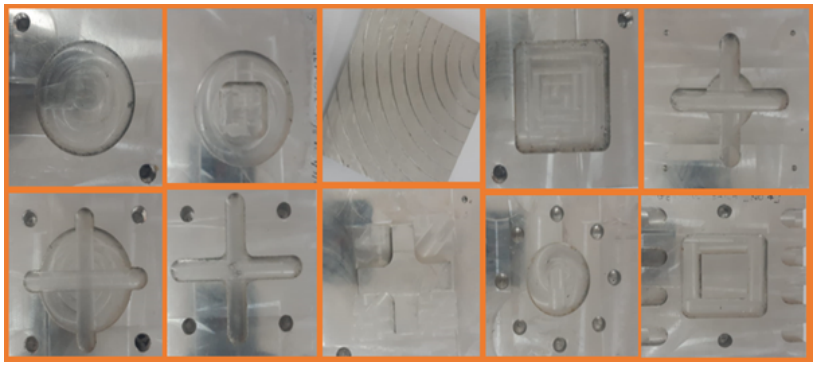
15 Days of Hands-on Training on CNC technology for Graduate Engineer Trainees of Tata Electronics Pvt. Ltd., Hosur	
Date: 28th July 2021 – 13th August 2021	Participants: GET of TEPL (29 Girls, 09 Boys)
Location: CIM Center, GAT	Resource Person: Experts from CIM Center, GAT, Mr. Rajiv, Director, Suprajiv Mr. Thangaraj, Tech Expert, Skillsonics

15 Days of Hands-on Training on CNC technology for Graduate Engineer Trainees of Tata Electronics Pvt. Ltd., Hosur	
Date: 16th Aug 2021 – 01st Sep 2021	Participants: GET of TEPL (30 Girls, 03 Boys)
Location: CIM Center, GAT	Resource Person: Experts from CIM Center, GAT Mr. Rajiv, Director, Suprajiv Mr. Thangaraj, Tech Expert, Skillsonics

15 Days of Hands-on Training on CNC technology for Graduate Engineer Trainees of Tata Electronics Pvt. Ltd., Hosur	
Date: 06th Sep 2021 – 23rd Sep 2021	Participants: GET of TEPL (30 Girls)
Location: CIM Center, GAT	Resource Person: Experts from CIM Center, GAT Mr. Rajiv, Director, Suprajiv Mr. Thangaraj, Tech Expert, Skillsonics

Five Days Value Added program on CNC technology for Undergraduate Engineers, GAT	
Date: 04th April 2022 – 08th April 2022	Participants: 25 Students from GAT
Location: CIM Center, GAT	Resource Person: Mr. Ravishankar, Director & Co-founder, ToolKart Experts from CIM Center, GAT

MODELS IN VERTICAL MACHINING CENTER



MODELS IN CNC TURNING CENTER

Details of Equipment in CNC Centre of Excellence				
Sl. No.	Machine Type	Quantity	Make	Supplier
1	ACE CNC Lathe (Tutor)	1	ACE Micromatics	ACE Designers
2	Spark SL	1	ACE Micromatics	ACEManufacturing Systems
3	Compressor	1	LAC-3150 3HPLEINTZ	LEINTZ Pneumatic Pvt. Ltd.
4	Collet	7	ACE Micromatics	Micro Matic Machine Tools
5	BT-30 Tool Holder Kit	1 Set	ACE Micromatics	Micro Matic Machine Tools
6	Digimatic Height Gauge	1	MITUTOYO	Sastha Scientific Agencies
7	Digimatic Caliper	1	MITUTOYO	Sastha Scientific Agencies

Project Lab

Details of equipment in Project Lab

The following facilities have been made available in the project lab to support student learning and skill development:

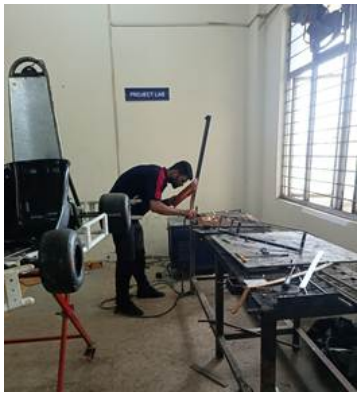
Available Facilities in the Project Laboratory

- HMT Lathe
- Arc Welding Machine
- Bench Vice
- Surface Grinding Machine
- Grinding Machine
- Drilling Machine
- Tool Kit (1 No.)
- Shearing Machine
- Box-Bending Machine

- Band Saw

Equipment	Relevance	Student Learning Outcome
HMT Lathe	Machining and shaping components	Understand turning operations and tool geometry
Arc Welding Machine	Joining processes	Apply welding parameters and safety standards
Bench Vice	Work holding	Demonstrate precision hand-working skills
Surface/Bench Grinding Machine	Finishing processes	Achieve surface finish and tolerance specifications
Drilling Machine	Hole making	Perform drilling and tapping operations
Shearing and Box-Bending Machines	Sheet metal fabrication	Design and fabricate formed sheet parts
Band Saw	Material cutting	Optimize material cutting speed and feed
Tool Kit	Assembly operations	Use standard workshop tools effectively

Each machine and tool in the project laboratory contributes to specific learning outcomes by facilitating design, manufacturing, assembly, and testing operations that develop fundamental and advanced mechanical engineering competencies.



R&D lab

The R&D lab was established under the scheme modernize and remove obsolescence in the Laboratories / Workshops/ Computing facilities (Libraries are excluded), to enhance the functional efficiency of Technical Institutions for Teaching, Training, and experimenting purposes. The scheme was sanctioned to Department of Mechanical Engineering, Global Academy of Technology for the project with title “Modernization of Material Testing Laboratory to upgrade the testing facilities and to characterize the new materials developed as per institutional standards”

The R&D Lab provides students and faculty with advanced facilities for experimental studies, testing, and validation, thereby nurturing a research oriented mindset.

The lab was established to characterize new materials developed for various industrial applications. The students, research scholars and teachers develop skills to evaluate the behavior of the materials and involve themselves in research of novel materials.

Name of the Coordinator : HoD, Dept. of ME, GAT

Duration of the project : 2 Years

Total grant applied : Rs. 17,55,000.00

Facilities Available : 1. Micro Hardness Tester

2. DUCOM Wear Testing Machine

3. Dry Sand Abrasive test rig

4. Precision Analytical Balance

5. Computing Facilities

Total Grant Sanctioned : Rs. 12,76,471.00

Letter of sanction : F.No.9-209/IDC/MODROB/Policy-1/2019-20dated 20-07-2020

Total Invested : Rs. 20,00,000

PART E: First Year faculty and financial Resources

(Data to be filled in for the first year course faculty and budget allocation and utilization)

E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage= ((NS1*0.8) +(NS2*0.2))/RF

2022-23(CAYm2)	960	48	21	62	61
2023-24(CAYm1)	960	48	19	78	64
2024-25(CAY)	1260	63	25	83	58

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

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

Items	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Infrastructure Built-Up	50000000.00	31232226.00	50000000.00	49162342.00	5000000.00	785517.00	15000000.00	12640160.00
Library	4300000.00	808447.00	2000000.00	1432417.00	2000000.00	981259.00	1000000.00	605816.00
Laboratory equipment	45587500.00	46812342.00	3000000.00	2784511.00	3000000.00	1503497.00	2000000.00	1027592.00
Teaching and non-teaching staff salary	350000000.00	319218997.00	250000000.00	248051193.00	200000000.00	212743279.00	200000000.00	190713681.00
Outreach Programs	2000000.00	1934294.00	1000000.00	1088711.00	1000000.00	132009.00	500000.00	292461.00
R&D	1000000.00	775000.00	2500000.00	2000323.00	2500000.00	987460.00	2500000.00	1944830.00
Training, Placement and Industry linkage	2050000.00	1638400.00	3000000.00	2903242.00	3000000.00	3208679.00	3000000.00	2252311.00
SDGs	1500000.00	1466062.00	2000000.00	1800000.00	2000000.00	1063247.00	1000000.00	865326.00
Entrepreneurship	30000000.00	21394870.00	30000000.00	28248128.00	20000000.00	10836153.00	10000000.00	5275634.00
Others, specify	146500000.00	135574971.00	146500000.00	156290079.00	136500000.00	140066823.00	132000000.00	116704265.00
Total	**632937500.00**	**560855609.00**	**490000000.00**	**493760946.00**	**375000000.00**	**372307923.00**	**367000000.00**	**332322076.00**

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

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

Items	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till	Budgeted in 2021-22	Actual Expenses in 2021-22 till
Laboratory equipment	2572000	787740	0	0	0	0	729529	729529
Software	76000	0	0	0	0	0	0	0
SDGs	0	0	0	0	0	0	0	0

Support for faculty development	180000	51500	300000	0	200000	0	200000	0
R & D	0	0	0	0	0	0	0	0
Industrial Training, Industry expert, Internship	0	0	0	0	0	0	0	0
Miscellaneous Expenses*	383000	175177	421500	125006	559000	72653	704000	111858
Total	**3211000**	**1014417**	**721500**	**125006**	**759000**	**72653**	**1633529**	**841387**