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: 10562	**Date of Submission**: 12-04-2025

PART A- Profile of the Institute

A1.Name of the Institute: Hyderabad Institute of Technology and Management	
Year of Establishment : 2001	Location of the Institute: Gowdavelli village Hyderabad
A2. Institute Address:Gowdavelli Village Medchal Mandal Ranga Reddy District Telangana State PIN 501401	
City:Ranga Reddy	State:Telangana
Pin Code:501401	Website:www.hitam.org
Email:principal@hitam.org	Phone No(with STD Code):-
A3. Name and Address of the Affiliating University (if any):	
Name of the University : Jawaharlal Nehru Technological University Hyderaba	City: Ranga Reddy
State : Telangana	Pin Code: 500085
A4. Type of the Institution: Self-Supported Institute	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **8**
- No. of PG programs: **0**

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	Computer Science and Engineering	2001	--	Computer Science and Engineering
2	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2020	--	Computer Science and Engineering (Artificial Intelligence and Machine Learning)
3	Engineering & Technology	UG	Computer Science and Engineering (Cyber Security)	2020	2023	Computer Science and Engineering (Cyber Security)
4	Engineering & Technology	UG	Computer Science and Engineering (Data Science)	2020	--	Computer Science and Engineering (Data Science)
5	Engineering & Technology	UG	Computer Science and Engineering (Internet of Things)	2020	2023	Computer Science and Engineering (Internet of Things)
6	Engineering & Technology	UG	Electrical and Electronics Engineering	2001	--	Electrical and Electronics Engineering

7	Engineering & Technology	UG	Electronics & Communication Engineering	2001	--	Electronics and Communication Engineering
8	Engineering & Technology	UG	Mechanical Engineering	2002	--	Mechanical Engineering

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

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

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Electronics and Communication Engineering	No	Electronics & Communication Engineering	UG
Computer Science and Engineering	Yes	Computer Science and Engineering	UG
Mechanical Engineering	No	Mechanical Engineering	UG

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.
Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

No Record

PART-B: Program information

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

Table No. B1: Program details.
A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Mechanical Engineering	UG	2002 / --	60	Yes	2023	30	2023	JNTUH: Affiliation Grant-02/11/2023	Granted accreditation for 3 years for the period (specify period)	2022	2025	1	4

Sanctioned Intake for Last Five Years for the Mechanical Engineering	
Academic Year	**Sanctioned Intake**
2024-25	30
2023-24	30
2022-23	60
2021-22	60
2020-21	60
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. Ruchir Shrivastava
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)	30	30	60	60	60	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	6	12	17	23	30	41
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	25	41	12	36	19	38
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	1	0	0	1	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	31	31	53	30	59	49	79

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)	30	30	1	103.33
2023-24 (CAYm1)	30	6	0	20.00
2022-23 (CAYm2)	60	12	0	20.00

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).	96.00	139.00	158.00
B=No. of students who graduated from the program in the stipulated course duration	34.00	33.00	60.00
Success Rate (SR)= (B/A) * 100	35.42	23.74	37.97

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 32.38

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)

X=(Mean of 1st 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 1st year/10)	6.00	6.00	6.00
Y=Total no. of successful students	6.00	12.00	17.00
Z=Total no. of students appeared in the examination	6.00	12.00	17.00
API [X*(Y/Z)]	6.00	6.00	6.00

Average API[(AP1+AP2+AP3)/3] : 6.00

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)	6.50	6.90	6.80
Y=Total no. of successful students	45.00	24.00	55.00
Z=Total no. of students appeared in the examination	53.00	29.00	59.00
API [X * (Y/Z)]	5.52	5.71	6.34

Average API [(AP1 + AP2 + AP3)/3] : 5.86

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)	6.20	6.80	6.60
Y=Total no. of successful students	24.00	55.00	49.00
Z=Total no. of students appeared in the examination	24.00	55.00	49.00

Average API [(AP1 + AP2 + AP3)/3] : 6.53

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	96.00	139.00	158.00
X=No. of students placed	42.00	40.00	60.00
Y=No. of students admitted to higher studies	9.00	5.00	6.00
Z= No. of students taking up entrepreneurship	2.00	1.00	1.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	55.21	33.09	42.41

Average Placement Index = (P_1 + P_2 + P_3)/3: 43.57 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. Kowdadi Siva Prasad	XXXXXXX34F	Ph.D	IIT Kanpur	Solid Mechanics	01/08/2019	5.8	Professor	Professor		Regular	Yes		No
2	Dr. Ruchir Shrivastava	XXXXXXX25B	Ph.D	IIT ISM Dhanbad	Composite Materials	19/07/2024	0.8	Associate Professor	Associate Professor		Regular	Yes		Yes
3	Dr. Motilal Lakavat	XXXXXXX42C	Ph.D	Lincoln University	Material Science	12/08/2024	0.7	Associate Professor	Associate Professor		Regular	Yes		No
4	Lt. Col. CS Pawan Kumar	XXXXXXX04E	M.E/M.Tech	IIT Kharagpur	Thermal Engineering	01/05/2024	0.11	Assistant Professor	Assistant Professor		Regular	Yes		No
5	Santosh Naik M	XXXXXXX03A	M.E/M.Tech	Reva University	Machine Design and Dynamics	29/08/2020	4.7	Assistant Professor	Assistant Professor		Regular	Yes		No
6	Seema Naga Sai Santhosh	XXXXXXX69C	M.E/M.Tech	JNTU Hyderabad	Engineering Design	16/10/2017	7.5	Assistant Professor	Assistant Professor		Regular	Yes		No
7	Pagidipalli Praveen	XXXXXXX68C	M.E/M.Tech	JNTU Hyderabad	Advanced Manufacturing Systems	07/02/2018	7.2	Assistant Professor	Assistant Professor		Regular	Yes		No
8	Srilatha T	XXXXXXX70E	M.E/M.Tech	JNTU Hyderabad	Thermal Engineering	25/07/2022	2.8	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Ambati Syamala	XXXXXXX97J	M.E/M.Tech	JNTU Kakinada	Thermal Engineering	23/08/2022	2.7	Assistant Professor	Assistant Professor		Regular	Yes		No
10	MVA Ramakrishna	XXXXXXX56P	M.E/M.Tech	NIT Calicut	Manufacturing Technology	07/12/2023	1.4	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Madhavaram Srinivasa Rao	XXXXXXX50K	M.E/M.Tech	Acharya Nagarjuna University	Machine Design	29/02/2024	1	Assistant Professor	Assistant Professor		Regular	No	28/03/2025	No
12	Bhaskar Rao Palagani	XXXXXXX12K	M.E/M.Tech	JNTU Hyderabad	Machine Design	02/08/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Mohammad Mainnodin	XXXXXXX33N	M.E/M.Tech	JNTU Hyderabad	Thermal Engineering	26/02/2022	3.1	Assistant Professor	Assistant Professor		Regular	No	31/03/2025	No
14	Chetla Venu Gopal	XXXXXXX50K	M.E/M.Tech	IIT Kharagpur	Mechanical Design	07/03/2022	3.1	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Nalluri Krishnaveni	XXXXXXX71B	M.E/M.Tech	JNTU Kakinada	Thermal Engineering	02/08/2022	2.1	Assistant Professor	Assistant Professor		Regular	No	14/09/2024	No
16	Ponnekanti Sai Chandu	XXXXXXX12E	M.E/M.Tech	Hindustan University	Thermal Engineering	24/08/2015	9.7	Assistant Professor	Assistant Professor		Regular	Yes		No

17	Yedulla Anil Reddy	XXXXXXX52R	M.E/M.Tech	JNTU Hyderabad	Advanced Manufacturing Systems	19/11/2014	10.4	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Baby Theresa	XXXXXXX75A	M.E/M.Tech	JNTU Kakinada	Machine Design	07/02/2014	11.2	Assistant Professor	Assistant Professor		Regular	Yes		No
19	Dr. Munagala Sreeramulu	XXXXXXX85H	Ph.D	JNTU Hyderabad	Thermal Engineering	24/12/2018	5.5	Professor	Professor		Regular	No	31/05/2024	No
20	Gali Singaiah	XXXXXXX01E	M.E/M.Tech	JNTU Kakinada	Machine Design	11/12/2014	9.5	Assistant Professor	Assistant Professor		Regular	No	31/05/2024	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	33	66	66
UG1.C	66	66	66
UG1.D	66	66	132
UG1: Mechanical Engineering	**165**	**198**	**264**
DS=Total no. of students in all UG and PG programs in the Department	165	198	264
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=** 165	**S2=** 198	**S3=** 264
DF=Total no. of faculty members in the Department	15	14	14
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=** 15	**F2=** 14	**F3=** 14
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 11.00**	**SFR2= 14.14**	**SFR3= 18.86**
Average SFR for 3 years	**SFR= 14.67**		

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)	3	12	8.00	24.38
2023-24(CAYm1)	2	12	9.00	18.89
2022-23(CAYm2)	2	12	13.00	13.08

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	1.00	1.00	2.00	5.00	12.00
2023-24	1.00	2.00	2.00	0.00	6.00	12.00
2022-23	1.00	2.00	2.00	0.00	8.00	12.00
Average	RF1=1.00	AF1=1.67	RF2=1.67	AF2=0.67	RF2=6.33	AF2=12.00

C5. Visiting/Adjunct Faculty/Professor of Practice

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

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr K.Santosh	Assistant Professor	MGIT	Kinematics of Machinery & Dynamics of Machinery	54.00
2	Mr KRISHNA MURTHY KURUVA	Assistant Professor	VNRVJIET	ICGT & FM&HM	56.00
3	Dr. Bhaskar Sharma	Retrd R&D	BHEL	Dynamics Of Machinery, DMM-I	54.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr.K.Deepak	Associate Professor	Vardhaman College	Turbo machinery and Engineering Gaphics	56.00
2	Mr K.Santosh	Assistant Professor	MGIT	Kinematics of Machinery & Dynamics of Machinery	54.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. Mala Kondaiah	Assistant Professor	ACE Engineering College	ICGT AND THERMODYNAMICS	52.00
2	Mr. K. Santhosh	Assistant Professor	MGIT	Kinematics of Machinery & Dynamics of Machinery	56.00
3	Dr.K.Deepak	Associate Professor	Vardhaman College	Turbo machinery , FM&HM	54.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	10	10	4
2	No. of peer reviewed conference papers published	11	18	8
3	No. of books/book chapters published	0	0	2

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
Mr.Santosh Naik		Innovation cell	Mentor-Mentee program	AICTE	2023-2024	2.25
Dr.K.Siva prasad		Yukthi innovations	Aqua Skimmer	AICTE	2023-2024	6.00
						Amount received (Rs.):8.25

(CAYm2)

(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
Mr Santosh Naik		UBA Cell HITAM	Perennial Fund Award	Unnat Bharath Abhiyan	2021-22	1.75
						Amount received (Rs.):1.75

Total Amount (Lacs) Received for the Past 3 Years: 10.00

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
Mr. Santhosh Naik (PI)		Mechanical Engineering	Deep dive (underwater robot) using kria KR260 robotics starter kit	Technumen Systems Private Limited	1 year	2.00
Mr. Praveen (PI)		Mechanical Engineering	OCTACLEANER: An Underwater Drone	Apsuja Infratech Limited	1 year	7.00
Dr. Devika SV (PI)	Mr. Santhosh Naik (CO-PI)	Mechanical Engineering	Vertical Farming /Hydroponics for Urban spaces Based on Soilless farming	Technumen Systems Private Limited	2 years	15.75
						Amount received (Rs.):24.75

(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. Siva Prasad K (PI)		Mechanical Engineering	Agri bot	Khet Aadhar	6 months	1.75
Dr. Siva Prasad K (PI)		Mechanical Engineering	An autuomation system for HR operations	Technumen Systems Private Limited	3 months	3.75
						Amount received (Rs.):5.50

(CAYm3)

Total amount (Lacs) received for the past 3 years: 30.25

Note*:

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

C9. Institution Seed Money or Internal Research Grant to its Faculty for Research Work

Table No. C9.1: List of faculty members received seed money or internal research grant from the Institution.

(CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Mr. Santhosh Naik (PI)	Deep dive (underwater robot) using kria KR260 robotics starter kit	1 Year	0.20	0.20	Component Selection & Procurement Plan,Prototype Control Algorithm (dry run)
Mr. Praveen (PI)	OCTACLEANER: An Underwater Drone	1 Year	0.70	0.70	Procurement of Core Components for Prototype,Prototype Development (Dry Run Model)
Dr.Devika SV (PI),Mr. Santhosh Naik (CO-PI)	Vertical Farming /Hydroponics for Urban spaces Based on Soilless farming	2 years	1.57	1.57	System setup and maintenance
			Amount received (Rs.): 2.47		

(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. Siva Prasad K (PI)	Agri bot	6 months	0.17	0.17	Feasibility Study & Design Documentation,Initial Hardware Purchase,Dry Run Basic Bot
Dr. Siva Prasad K (PI)	An autuomation system for HR operations	3 months	0.37	0.37	MVP Design & Initial Development,Basic Workflow Automation
			Amount received (Rs.): 0.54		

(CAYm3)

Total amount (Lacs) received for the past 3 years : 3.01

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	Engineering Workshop & Production Technology Lab	30	Arc Welding, Spot Welding, Gas welding (O2 & Acetylene Gas Cylinders), Hydraulic Pressing Machine, Plasma Welding (Water), Tig Welding Machine	22	Mr. Durga Rao	Lab Instructor	ITI(Turner)
2	Metrology & Machine Tool Lab	30	Lathe machine, Drilling Machine, Milling Machine, Cylindrical & Surface Grinding.	12	Mr. Muralidhar	Lab Instructor	ITI (Fitter)
3	Material Science and Mechanics of Solids & Thermal Engineering Lab	30	Universal Testing Machine, Torsion Testing Machine, Impact Testing Machine, Rockwell hardness Tester, metallurgical microscope, Four stroke single Cylinder	16	Mr. Anjaneyulu	Lab Instructor	ITI (Diesel Mechanics)

4	Fluid Mechanics and Hydraulic Machine & Heat Transfer Lab	30	Pelton Wheel, Francis Turbine, Kaplan Turbine, Single Stage Centrifugal Pump, Multi Stage Centrifugal Pump, Reciprocating Pump , Film and Drop wise condensation	12	Mr. Kaleem	Lab Instructor	Diploma
5	Kinematics and Dynamics & Instrumentation and Control System Lab	30	CAM & Follower, Universal Governor, Gyroscope, Balancing of masses, SCADA	12	Mr. Anjaneyulu	Lab Instructor	ITI (Diesel Mechanics)
6	Computer Aided Machine Drawing Practice Lab	30	Computer Systems	12	Mr. Muralidhar	Lab Instructor	ITI (Fitter)
7	CAEM (Computer Aided Engineering & Manufacturing) Lab	30	Auto CAD Software, Inventors Software, Fusion 360 Software, CNC-Turning Machine, CNC-Milling Machine.	12	Mr. Ramaiah	Lab Instructor	ITI (Fitter)

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Engineering Workshop & Production Technology	□ Students are required to wear Lab Apron and Shoe mandatorily. □ Damaged equipment's are identified and serviced at the earliest. □ First aid box are kept in laboratory. □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ Appropriate storage areas are available. □ Usage of cell phones is prohibited. □ Fire Extinguisher □ Do not touch/switch on equipment without reading complete instructions
2	Metrology & Machine Tool	□ Students are required to wear Lab Apron and Shoe mandatorily. □ Damaged equipment's are identified and serviced at the earliest. □ First aid box are kept in laboratory. □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ Appropriate storage areas are available. □ Usage of cell phones is prohibited. □ Fire Extinguisher □ Do not touch/switch on equipment without reading complete instructions
3	Metallurgy and Material Science &Mechanics of Solid &Thermal Engineering	□ Students are required to wear Lab Apron and Shoe mandatorily. □ Damaged equipment's are identified and serviced at the earliest. □ First aid box is kept in laboratory. □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ Appropriate storage areas are available. □ Usage of cell phones is prohibited. □ Fire Extinguisher □ Do not touch/switch on equipment without reading complete instructions
4	Fluid Mechanics and Hydraulic Machines & Heat Transfer	□ Students are required to wear Lab Apron and Shoe mandatorily. □ Damaged equipment's are identified and serviced at the earliest. □ First aid box is kept in laboratory. □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ Appropriate storage areas are available. □ Usage of cell phones is prohibited. □ Fire Extinguisher □ Do not touch/switch on equipment without reading complete instructions
5	Kinematics & Dynamics / Instrumentation & Control System	□ Students are required to wear Lab Apron and Shoe mandatorily. □ Damaged equipment's are identified and serviced at the earliest. □ First aid box are kept in laboratory. □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ Appropriate storage areas are available. □ Usage of cell phones is prohibited. □ Fire Extinguisher □ Do not touch/switch on equipment without reading complete instructions
6	Computer Aided Machine Drawing Practice	□ First aid box is kept in laboratory. □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ Usage of cell phones is prohibited. □ Fire Extinguisher
7	Computer Aided Engineering & Manufacturing	□ First aid box is kept in laboratory. □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ Appropriate storage areas are available. □ Usage of cell phones is prohibited. □ Fire Extinguisher

D3. Project Laboratory/Research Laboratory

The Department of Mechanical Engineering provides dedicated laboratories to support projects, research, and innovation. These specialized facilities encourage students and faculty to work on cutting-edge technologies, foster innovation, and facilitate collaboration with industry.

S.No	Name of the Laboratory
1	**Project Laboratory-Fraternity of Mechanical and Automotive Engineers (FMAE)**
2	**Research Laboratory- Skill Development Center**
3	**Centre of Excellence** **-Robotics Center**

7.5.1 Project Laboratory-Fraternity of Mechanical and Automotive Engineers (FMAE)

Objectives:

- **To promote academic excellence and technical proficiency** among members by organizing workshops, seminars, and hands-on projects related to mechanical and automotive engineering.
- **To cultivate leadership, teamwork, and professional growth** through community service, intercollegiate collaborations, and participation in engineering competitions and industry events.

Outcomes:

- Apply fundamental principles of mechanical and automotive engineering to analyze and solve real-world engineering problems through collaborative projects and technical activities.
- Demonstrate effective communication, leadership, and teamwork skills by participating in fraternity-led events, workshops, and industry engagements.

Fig7.5.1.1Workshop on FMAE

Fig7.5.1.2 Students Teams Prepared Kart for dirt kart design challenge competition organized by FMAE.

Fig7.5.1.3 3rd Year Mechanical Engineering Students Participated in SAEINDIA National Leve; Design 2024 Event .

Fig7.5.1.4 4th Year Mechanical Engineering Students Participated in SAEINDIA National Level Design won first prize.

7.5.2 Research Laboratory- (Skill Development Center)

Objectives:

- **To enhance students practical and research skills** by providing hands-on experience with advanced tools, technologies, and methodologies in engineering and applied sciences.
- **To motive innovation and critical thinking** by encouraging student-led research projects, interdisciplinary collaboration, and participation in technical publications and competitions.

Outcomes:

· **Students will be able to design and conduct experiments**, analyze data, and interpret results to develop innovative solutions to real-world problems.

· **Students will demonstrate improved technical, research, and communication skills** through active participation in projects, presentations, and technical documentation.

- 10 papers published in Scopus indexed Journals.
- Students participated in National level competitions and got prize.

Fig7.5.2.1 Problem Identification Kolanupaka Village on 14 Feb 2024

Fig7.5.2.2 3D Priting Equipment

Fig. 7.5.2.3 Visit to Palle Srujana for Problem Identification on 6 & 7December 2023

7.5.3 Centre of Excellence -Robotics Center

Objectives:

- **To provide students with advanced knowledge and hands-on training in robotics** by integrating theoretical learning with practical applications through labs, workshops, and real-time projects.
- **To promote innovation and interdisciplinary research** in robotics by encouraging student-led projects, participation in competitions, and collaboration with industry and academic institutions.

Outcomes:

- **Students will be able to design, program, and operate robotic systems** by applying principles of mechanical, electrical, and computer engineering.
- **Students will demonstrate the ability to work in multidisciplinary teams** and develop innovative robotic solutions for real-world challenges through project-based learning and research.

Fig.7.5.3.1 Robotics & Automation

Fig7.5.3.2 Workshop on Robotics & Automation

Fig.7.5.3.3 Workshop on Floating Waste Removal

Fig.7.5.3.4 Seminar on Robotics and Automation

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)	540	27	20	10	67
2023-24(CAYm1)	600	30	22	11	66
2024-25(CAY)	720	36	30	13	74

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 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Infrastructure Built-Up	130000000	136628792	38000000	40769983	2000000	2205450	45000000	47342252
Library	700000	452723	1200000	1365752	1000000	1136130	1000000	959710
Laboratory equipment	2800000	3086525	8000000	8749441	4500000	4929643	5500000	5576837
Teaching and non-teaching staff salary	155000000	156312830	150000000	146247866	113000000	112295386	75000000	74849825
Outreach Programs	500000	477434	1000000	1175039	300000	298885	500000	335748
R&D	800000	504700	1500000	1341214	500000	502582	1550000	1644500
Training, Placement and Industry linkage	4500000	4889355	3500000	3450861	2500000	2395655	3000000	3834576
SDGs	2200000	2117622	2000000	2363732	500000	613062	1500000	1530944
Entrepreneurship	500000	488816	500000	500000	1000000	1256784	1000000	705555
Others, specify	0	0	0	0	0	0	0	0
Total	**297000000**	**304958797**	**205700000**	**205963888**	**125300000**	**125633577**	**134050000**	**136779947**

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 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Laboratory equipment	150000	130288	700000	656235	350000	320253	350000	331305
Software	150000	116634	50000	43720	100000	74118	150000	114842
SDGs	200000	169410	200000	189099	50000	49045	150000	122475
Support for faculty development	250000	242020	400000	369632	600000	566708	300000	276504
R & D	50000	40376	100000	107297	50000	40207	150000	131560
Industrial Training, Industry expert, Internship	400000	391148	300000	276069	200000	191652	300000	306766
Miscellaneous Expenses*	10000	0	10000	0	5000	0	5000	0
Total	**1210000**	**1089876**	**1760000**	**1642052**	**1355000**	**1241983**	**1405000**	**1283452**