



GLOBAL ACADEMY OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

NEWS LETTER

FEB 2022-JULY 2022



INDUSTRIAL VISIT

The Industrial Visit offered students a valuable opportunity to observe real-time industrial systems and enhance their practical understanding.

CULTURAL EVENTS

The cultural events showcased the rich talents of our students, highlighting music, dance, drama, and the spirit of togetherness.

The Mechanical Engineering Department is committed to excellence in technical education, innovation, and hands-on learning. Our students actively engage in projects, research, and industry exposure to become future-ready engineers.

Faculty publications highlight the department's strong research culture, with numerous papers published in reputed journals and conferences across various engineering domains.

GLOBAL ACADEMY OF TECHNOLOGY

INSTITUTE VISION

Become a premier institution imparting quality education in engineering and management to meet the changing needs of society.

INSTITUTE MISSION

- M1: Create environment conducive for continuous learning through quality teaching and learning processes supported by modern infrastructure.
- M2: Promote Research and Innovation through collaboration with industries.
- M3: Inculcate ethical values and environmental consciousness through holistic education programs

DEPARTMENT VISION

Become one of the leading providers of education in mechanical engineering with emphasis on research, development and innovation for the benefit of society.

DEPARTMENT MISSION

- M1: Impart quality technical education in the field of mechanical engineering through excellent teaching-learning process, modern infrastructure and computing tools.
- M2: Prepare students for successful careers by providing placements and encouraging research, development and innovation through industry-institute interaction.
- M3: Instill professional ethics and environmental consciousness amongst students through inclusive development programs.

GLOBAL ACADEMY OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES (PEOs) of the DEPARTMENT

PEO of Graduate students in Mechanical Engineering aims to have:

- **PEO1:** Engineering competence, critical thinking, creativity, and ethical inclusivity in professional practice.
- **PEO2:** Continuous intellectual growth through advanced education, professional development, independent inquiry, and experiential learning.
- **PEO3:** Leadership and teamwork excellence throughout professional careers.

PROGRAM SPECIFIC OUTCOMES (PSOs) of the DEPARTMENT

After successful completion of Mechanical Engineering Program, the graduates will be able to:

- **PSO1:** Specify, design, and analyze machine elements using CAD/CAE software.
- **PSO2:** Evaluate thermal performance of Heating, Ventilation & Air-Conditioning systems, electronic systems, Solar Roof Top Photo-Voltaic systems using experimental approach or /and CFD tools and design these systems for better performance.
- **PSO3:** Develop composite materials, manufacturing processes and products in an efficient, safe and cost-effective manner.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

INDUSTRIAL VISIT

Students visited Mother Dairy as part of their industrial exposure program, gaining valuable insights into modern food processing and dairy production systems. The visit provided a detailed understanding of milk collection, pasteurization, packaging, and quality control procedures. Students also learned about automated processing technologies, hygiene standards, and supply chain operations that ensure safe and efficient delivery of dairy products.

This experience enriched their practical knowledge and highlighted the importance of technology in food engineering and large-scale production.

SI No	Industry Visited	Date
1	Mother Dairy	26/05/2022

NUMBER OF FUNCTIONAL MEMORANDUM OF UNDERSTANDING (MOU)S ACTIVE DURING THE ACADEMIC YEAR

During the academic year 2021–2022, active MoUs with Toolkart Precision Tools Pvt. Ltd. and the GAT – Toyota Centre of Excellence supported student training, technical skill development, and strengthened industry–academia collaboration.

SI NO	Name of the institution/ industry/ corporate house	Month and Year of signing MoU	Duration
1	Toolkart Precision Tools Pvt Ltd	2022	16.03.2022 - 16.03.2024
2	GAT – Toyota Centre of Excellence	2018	21-06-2018-Still active

VALUE ADDED PROGRAMS

Value Added Programs on CNC Technology, Python Programming, and Industrial Hydraulics & Pneumatics were conducted to equip students with essential technical skills, hands-on industrial knowledge, and enhanced employability for future engineering roles.

SI NO	Title of the Event	From	To	No Of Days
1	Value added program on CNC Technology	04-04-2022	08-04-2022	5
2	Value added program on Python programming for mechanical engineers	11-04-2022	19-04-2022	5
3	Value added program on Automation through hydraulics and pneumatics	25-04-2022	29-04-2022	5

STUDENTS PARTICIPATION IN PROFESSIONAL EVENTS

SI NO	Name of the student	Name of the event	Date	Venue
1	Ullas N	Internship Training	18th-24th April	Taurus PVT.LTD

Karnataka State Council for Science and Technology (KSCST) funded projects

The objective of the proposed work is to design and fabricate a compact ,cost-effective ,portable electrical furnace (Tiny Asher) to convert domestic waste into ash .

Expected outcome: This project aims to demonstrate a compact domestic asher which can be installed at every home / apartment/ party hall.This helps in proper waste management avoiding spillage during transport and reducing landfills

Sl. No.	Project Title	Name of Guide	Name of the students	Amount
1	Tiny Asher	Dr. Shreekala N	Mr. G MEENAKSHI SUNDARAM	Rs. 7000/-
			Mr. KEERTHAN R	
			Mr. KIRAN KUMAR B S	
			Mr. AKASH U	

FACULTY DEVELOPMENT PROGRAM ATTENDED BY FACULTIES

Sl. No	Name of Teacher who attended the programme	Title of the programme	Duration (from - to) (DD-MM-YYYY)
1	Dr.Bharath Vinjamuri	FDP on “No code AI”	1-2-2022 to 5-2-2022
2	Dr.Ravi Kumar D.V	FDP on “No code AI”	1-2-2022 to 5-2-2022

FACULTY PUBLICATIONS

Sl. No.	Name of the Faculty	Title of Paper	Details of the Journal
1	Mr. G R Gurunagendra	Optimization of Tribological Properties of Micro-particulate- Reinforced ZA-27 Composites	Springer nature, pp 141–155, May 2022
2	T.Krishna Rao	A Novel ,Tuneable sensitivity target flow measurement sensor for various water flow applications	Journal of Applied science and Engineering
3	T.Krishna Rao	Sensitivity variation of a flowmeter with varying shapes of the target	Journal of Mines , Metals & Fuels
4	Poorna Chandra, V. Ravi Kumar, R. Kiran, D. V. Ravi Kumar, C. R. PrakashRao, R. Suresh	Fabrication, Characterization and Machining of Al6061 Reinforced with Red Mud Composite	Journal of Minerals and Materials Characterization and Engineering

TRAINING PROGRAM

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

Name of the Editor :

Dr. Shreekala N

V Dhanyanth (1GA19ME070) (VI)

Student Members :

Chandan Krishna (1GA19ME013)

Kashyap S (1GA19ME032) (VI)