GLOBAL ACADEMY OF TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

NEWSLETTER

AUG 2022 - JAN 2023

NEWS

Featuring department news, achievements, events, research, and student contributions – all in one place.

PUBLICATIONS AND VALUE ADDED PROGRAMS

Highlights of research publications and value added programs that mark the innovative spirit of our department.

STUDENT CULTURAL ACTIVITES

A celebration of student spirit – showcasing cultural events, talents, stories, and memories from our vibrant campus life."

Highlights of our industrial visit:
learning, exploration, and hands-on exposure.

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.

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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.

GUEST LECTURES

A guest lecture session featuring Mr. Suraj Manjanna and Mr. Shuvo Mukhopadhyay provided students with valuable insights into Additive Manufacturing and the essential skills required to become industry-ready manufacturing professionals. The speakers highlighted modern technologies, practical skill development, and the importance of bridging the gap between academics and industry.

SI NO	Title	Date	No Of Students	Resourse person
01	Additive manufacturing	18-11-2022	40	Mr. Suraj Manjanna
02	How to be an industry ready manufacturing (professional)	24-11-2022	50	Mr Shuvo Mukhopadhyay

INDUSTRIAL VISIT

The Department of Mechanical Engineering organized an industrial visit to Allige Casting Pvt. Ltd., giving students practical exposure to real-world casting processes. The visit enhanced their understanding of manufacturing techniques, machinery, and industry practices beyond classroom learning.

Semester	Industry Visited	Date of Visit	Subject Mapping
III Sem	Alliage castings	11-11-2022	Material science and Manufacturing Process
III Sem	IMTEX	24-01-2023	Manufacturing Process

SPORTS ACHIVEMENTS

SI NO	USN	Name	Date	Event	Venue	Results
1	1GA20 ME030	Swarup Santosh. M	04th & 05th November 2022	VTU Bangalore South Division Badminton (M&W) Tournament 2022	S J B Institute of Technology Bengaluru	Winners
2	1GA19 ME012	Chankya G Magar	28TH &29TH October 2022	VTU State Level Weightlifting (M &W) & Best Physique (M) Championship 2022	Global academy of technology	Gold Medal
3	1GA19 ME012	Chankya G Magar	12th &13th December 2022	VTU State Level Wrestling & Judo Men & Women Competation 2022	Vidyavardhaka college of Engineering,Mysore	Bronze Medal

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

SI No.	Name of the institution/ industry/ corporate house	Month and Year of signing MoU	Duration
1	Advance Mechanical Service P Ltd. / Suprajiv	2020	14.12.2020 - 14-12-2022
2	GAT – Toyota Centre of Excellence	2018	21-06-2018- Still active

LIST OF PROGRAMS ORGANIZED

Sl. No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/ International level	Date of Event (DD/MM/YYYY)
1	Indian Society of Heating, Refrigerating & Air conditioning Engineers (ISHRAE)	A guest lecture on "Carrier Opportunities in HVAC Industries"	National	13/01/2023

STUDENTS PARTICIPATED IN PROFESSIONAL EVENTS

Sl.No	Name of the student	Name of the Event	Date of Event (DD/MM/YYYY)	Name of Award
1	Suraksha.S	coursera-Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360	22-10-2022	Certified

MOOC COURSE

SI NO	Student Name	USN	Course Registered	START/END DATE
1	Suraksha S	1GA20ME037	An online course on Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360	22-10-2022
2	B.Dheemanth Prakash	1GA21ME002	Introduction to Machine Learning	02-12-2022

STUDENT PUBLICATIONS.

SI NO	Name of the Student	Sem	Name of the Publisher	Name of the Journal/ Conference, etc.
1	Nitish P. Bharadwaj	8	PESIT	ISME International conference on Advances in Mechanical Engineering at PESIT, Bengaluru

NPTEL ONLINE CERTIFICATION CLEARED BY FACULTIES

SI NO	Name of the faculty	Title of the program	Duration
1	Dr.G.R.Gurunagendra	NPTEL online course on Robotics	01-07-2022 to 30-09-2022

FACULTY DEVELOPMENT PROGRAM ATTENDED BY FACULTIES

SI NO	Name of the faculty	Title of the programme	Duration
1	R.Rajesh	Workshop on "Introduction to Fusion 360"	21-11-2022 to 25-11-2022
2	Dr.Shreekala.N	Workshop on "Introduction to Fusion 360"	21-11-2022 to 25-11-2022
3	Sneha sarika Murthy	Workshop on "Introduction to Fusion 360"	21-11-2022 to 25-11-2022
4	Dr.Shreekala.N	Online course on "Computational Mathematics for Data sciences".	01-08-2022 to 12-08-2022
5	Dr.Bharath.V	Online course on "Computational Mathematics for Data sciences".	01-08-2022 to 12-08-2022
6	Savitha.D.C	Online course on "Computational Mathematics for Data sciences".	01-08-2022 to 12-08-2022
7	Dr.Shreekala.N	Online FDP on "Application of Ansys for Engineering Problems".	19-12-2022 to 23-12-2022
8	Savitha.D.C	Online FDP on "Application of Ansys for Engineering Problems".	19-12-2022 to 23-12-2022

FACULTY RESEARCH PAPERS

SI NO	Name of the Faculty	Title of Paper	Details of the Journal
1	Dr. T. Prashanth	Base drag estimation in suddenly expanded supersonic flows using backpropagation genetic and recurrent neural networks	Journal of Aerospace Engineering, Vol. 236, No. 14, 2022
2	Dr. T. Prashanth	“CFD based Optimization of Base Pressure Behavior in Suddenly Expanded Flows at Supersonic Regimes using Neural networks”	Progress in Computational Fluid Dynamics, An International Journal, Inderscience PublicationsVol. 22, No.3, pp. 59-173, 2022.
3	Dr. T. Prashanth	Heat Transfer Characteristics of Fullerene and Titania Nano-tubes Nanofluids under Agitated Quench Conditions”	ACS Omega, Vol. 7, No. 52, PP. 47764–47783, 2022
4	Dr. T. Krishna Rao	Sensitivity variation of a flowmeter with varying shapes of the target	Journal of Mines, Metals and Fuels, 70(3A), 124–126.July 2022
5	Dr. T. Krishna Rao	A Novel, Tuneable sensitivity target flow measurement sensor for various water flow applications	Journal of Applied science and Engineering,Vol.26, No 5, August 2022

Name of the Editor :

Dr. Shreekala N

Saahil S Pawar (1GA20ME025) (VI)

Student Member :

Rohith S (1GA20ME024)

Swarup Santhosh M (1GA20ME030) (VI)