



LATEST IN MECHANICAL ENGINEERING!!

**90-ton 3D printer to build world's biggest
rocket**

Rocket Lab has revolutionized rocket manufacturing with its ground-breaking Automated Fibre Placement (AFP) machine, designed for the Neutron rocket—the world's largest carbon composite rocket. Weighing 90 tons, the AFP can 3D print carbon fibre layers at incredible speeds of 328 feet per minute, dramatically reducing production time and saving over 150,000 hours of labour.



INSIDE THIS ISSUE:

- *Latest in Mechanical Engineering*
- *Vision, Mission*
- *Techfest - Mexterious-2024*
- *Charity Pilgrim*
- *Faculty Achievements*
- *Student Achievements*
- *PEOs*
- *POs and PSOs*

VISION

“To become a centre of excellence in Mechanical Engineering, producing innovative and creative mechanical engineers to meet the global challenges”

MISSION

1. To Provide a platform to the students towards attaining quality education in Mechanical Engineering.
2. To Educate students about professional & ethical responsibilities and train them to build leadership and entrepreneurship qualities for their career development.
3. To Create opportunities and guide students in acquiring career-oriented jobs in the field of Mechanical Engineering.

TECHFEST - MEXTERIOUS-2024

The technical fest Mexterious 2024, organized by the Department of Mechanical Engineering, Vimal Jyothi Engineering College, was successfully held on November 8, 2024, as part of the larger technical event, Tantra 24. The fest featured a variety of activities that highlighted technical creativity and innovation.



CHARITY PILGRIM

On November 7, 2024, the second-year B.Tech students (2023-27 Batch) from the Department of Mechanical Engineering, Vimal Jyothi Engineering College visited Theresa Bhavan, a psycho-social rehabilitation center operated by Innamuel Charitable Trust in Vembuva, Payyavoor. This visit was part of the college's Charity Pilgrim Program 2024. Eighteen students from S3 ME, along with four staff members, participated in the program. The visit aimed to foster connections with the residents, understand their needs, extend companionship, and inspire the students to become more compassionate and supportive individuals. Through interactions with individuals facing social, mental, or physical challenges, the students gained insights into the daily lives of the residents, encouraging a sense of empathy, responsibility, and commitment to community service.



FACULTY ACHIEVEMENTS

1. Dr. Christopher Ezhil Singh published a paper in Journal of Alloys and Metallurgical Systems (ScienceDirect), titled: “Effect of ZrB₂ and ZrC and mixing method on Mechanical properties and wear behaviour of Al7075 based composites for aircraft aerofoil surfaces” [Volume 8].

<https://doi.org/10.1016/j.jalmes.2024.100118>.



Dr. Christopher Ezhil Singh

STUDENT ACHIEVEMENTS

Mr. Yadhukrishna from the 2021-25 ME batch, Mr. Abhay Anil from the 2022-26 ME batch, and their team secured the first runner-up position in the KTU F-Zone Kho-Kho tournament.



STUDENT ACHIEVEMENTS

Mr. Mirwaiz Omar A Nazeer from the 2021-25 ME batch and his team secured the first runner-up position in the KTU F-Zone badminton tournament.



Mr. Thomas V. S. from the 2022-26 ME batch and his team secured the 2nd position in the KTU Intercollege Basketball Tournament.



Program Educational Objectives (PEO'S)

PEO1: Graduates will be able to pursue successful professional career in Mechanical Engineering with sound technical and managerial capabilities.

PEO2: Graduates will have skills and knowledge to formulate, analyze and solve problems in mechanical engineering to meet global challenges.

PEO3: Graduates will be capable of pursuing mechanical engineering profession with good communication skills, leadership qualities, team spirit and professional ethics to meet the needs of the society.

PEO4: Graduates will sustain an appetite for continuous learning by pursue higher education and research in the allied areas of science and technology.

Program Outcomes (POs)

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 modelling 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.

Program Specific Outcomes (PSOs)

PSO1: Ability to design and develop mechanical systems tailored for various engineering applications.

PSO2: Capability to effectively use resources to improve mechanical system performance

Mr. Arunlal M P (Asst. Prof, ME)

Student Editors:

Mr. Sayooj Rajan (S8 ME), Mr. Joel Sunny (S8 ME)