MECHAZINE

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We are proud to present the September 2022 edition of Mechazine, capturing the vibrant journey of the Department of Mechanical Engineering from May to August. This issue showcases our students' academic achievements, industrial exposure, alumni interactions, and innovation-led learning. From prestigious internships to global alumni talks and emerging technology workshops, this edition reflects our department's commitment to excellence. We hope this magazine inspires and informs our readers while celebrating the dedication and passion of the VIT Mechanical community.

THE HEAD SPEAKS:

I am delighted to witness the continual growth of our department through the energetic participation of students and faculty. The achievements highlighted in this edition of Mechazine reflect our focus on industry readiness, research orientation, and global exposure. As we move ahead, let us embrace emerging technologies while staying rooted in core engineering values. I congratulate everyone involved and encourage all students to keep learning, innovating, and striving for excellence.

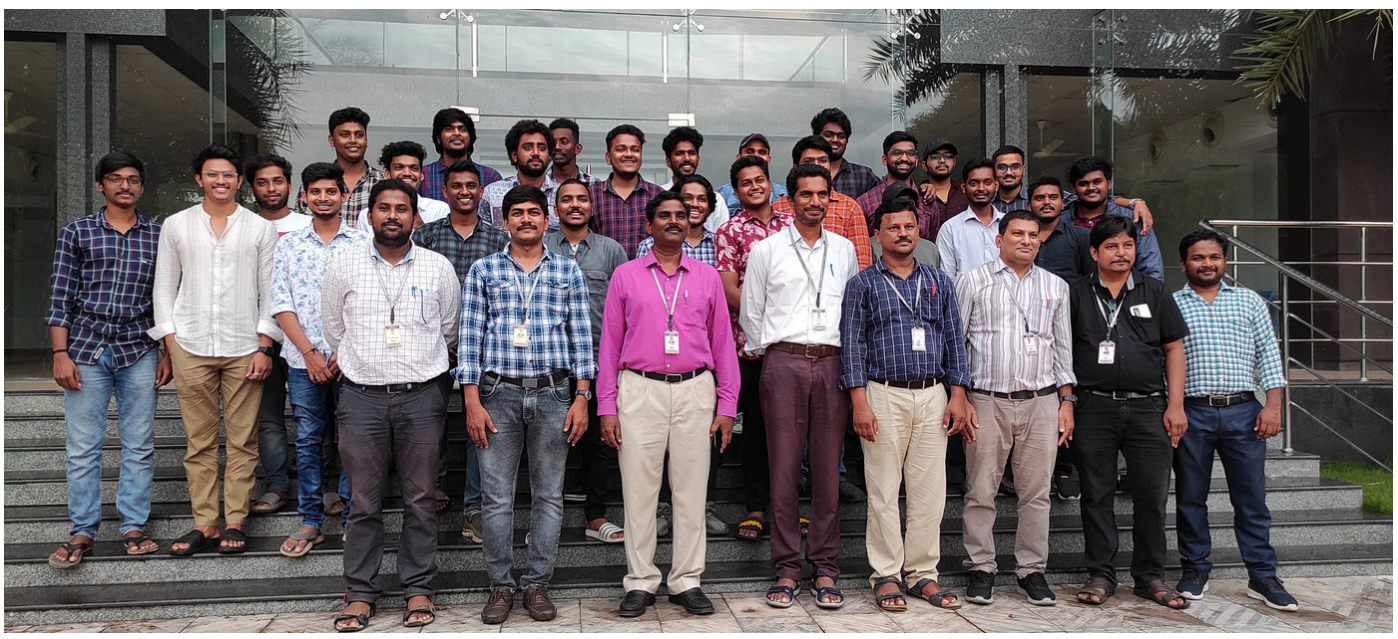
-Dr. M. Venu

Head of the Department, ME.

Department Activities and Achievements

A vibrant department is known not just for academics, but for its participation in co-curricular excellence. The summer term was filled with certifications, internships, workshops, and student-led initiatives.

- CATIA Design Training (Aug 12–19): 28 students trained in 3D modeling software, a vital skill in today's product design space.
- 3D Printing Workshop (July 21–26): Students explored practical applications of additive manufacturing through hands-on sessions.
- Non-Destructive Testing Workshop (May 12–17): Provided insight into safety-critical testing techniques used in aerospace, automotive, and infrastructure.
- Poster Presentation Competition (30th July 2022) Organized by VITAMEN and SAE Collegiate Club, this event encouraged students to research multidisciplinary themes. It highlighted how engineers must look beyond core fields to solve real-world challenges.



Industrial Visits

Real-world exposure remains a pillar of engineering education at VIT. From factories to international training events, these visits enhance classroom learning with field understanding.

- Gujarat Industrial Tour (June 2022)

Thirty pre-final year students visited top companies including MG Motors, AMUL, Hindustan Coca-Cola, and TBEA India. This intensive five-day tour offered a sweeping view of Indian manufacturing across multiple sectors.

- FESTO Mobile Expotainer (August 23, 2022)

An innovation on wheels—this mobile lab brought advanced pneumatic and automation demonstrations to campus. Students interacted with systems used in high-tech industries, linking theory with future industry demands.

- Faculty attended IMTEX 2022 in Bangalore (June) and Industry 4.0 FDP in Bengaluru (August), ensuring their pedagogy remains in tune with industry innovations.

Department of Mechanical Engineering

Pre-final year students - Industrial Visit to Gujarat

Morris Garages (MG) Motors, Halol

TBEA India, Karjan

Mafatlal Industries, Nadiad

BANCO Products Pvt.Ltd, Padra

Hindustan Coca-Cola Beverages Pvt. Ltd, Goblej

Anand Milk Union Limited, Anand

Alumni Talk

Connecting with our alumni helps students envision future pathways and draw inspiration from those who once walked these halls. Alumni from across the globe shared their experiences this quarter, guiding juniors with career insights and global opportunities.

- Mr. N. Kali Prasad Varma (2nd July 2022)

An insightful session was held with Mr. Varma, Senior Executive Engineer at Thermax Ltd. He spoke about the current industry landscape for mechanical engineers and skills in demand. The talk provided clarity on specialization and market expectations.

- Mr. K E V Satya Prasad (22nd June 2022)

Mr. Satya Prasad, Assistant Manager at Hyundai Motors India, spoke to first and second-year students about vehicle safety analysis, inspiring attendees to explore the automotive sector with a practical outlook.

- Mr. Venkata Satish Raju Mudundi (27th August 2022)

Currently at AIRBUS, Germany, Mr. Raju shared valuable tips on pursuing higher education and career opportunities abroad, with emphasis on communication skills and learning German.

Parent Meet

Parental involvement forms a critical support system for students. The Mechanical Engineering Department values every opportunity to interact with families and align academic planning with student aspirations.

- May 15, 2022 – Parent Meet for 2nd Years

A successful meeting was held for parents of 2020–2024 batch students. The agenda covered academic performance, involvement in internships and workshops, and strategies for improvement.

- July 31, 2022 – Parent Meet for 1st Years

A follow-up engagement with the 2021–2025 batch helped build confidence among parents about the academic environment and career orientation provided by the department. Parents appreciated the openness and commitment of faculty.

TechPulse

- Additive Manufacturing of Functional Heat Exchangers

In May mechanical engineers at ETH Zurich designed and fabricated functionally graded heat exchangers using metal 3D printing. These optimized geometries increase thermal performance and reduce pressure drop—important in HVAC, aerospace, and power systems.

- Breakthrough in Triboelectric Nanogenerators

Researchers integrated TENGs (triboelectric nanogenerators) into rotating mechanical parts to harvest energy from motion and vibrations. This opens up possibilities for self-powered sensors in gear systems, pipelines, and rotating shafts.

- Launch of ISRO’s SSLV-D1

India's ISRO launched the Small Satellite Launch Vehicle (SSLV-D1). Although the mission faced anomalies, it introduced a cost-effective and rapidly deployable platform for small satellite launches, aimed at commercial payload delivery.

Triboelectric nanogenerators (TENGs)

These are innovative energy-harvesting devices that convert mechanical energy—such as motion, vibration, or friction—into electrical energy using the principles of the triboelectric effect and electrostatic induction. When two materials with differing electron affinities come into contact and then separate, electrons are transferred between them, generating a charge imbalance. This induces an electric potential that can be harnessed through electrodes to produce current. TENGs are lightweight, flexible, and capable of operating without batteries, making them ideal for powering small devices in remote or mobile settings. In mechanical engineering, they are increasingly used for self-powered sensors in rotating machinery, wearables, and structural health monitoring, offering sustainable and maintenance-free alternatives for energy generation in smart systems.

Gallery


HCCB
HINDUSTAN COCA-COLA BEVERAGES PVT. LTD.


Banco Products (I) Ltd


ARVIND MAFATLAL GROUP
The ethics of excellence
MAFATLAL
CO. OP. CONS.
SOCIETY
MAHA SALE
EXPORT CLOTH
MAFATLAL
CO. OP CONS.
SOCIETY
MAHA SALE
EXPORT CLOTH
MAIN GATE


I ♥ Amul

Do you Know?

Bicycles are considered the most efficient mode of human transportation—mechanically speaking, they convert about 98% of a cyclist's energy into forward motion.

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