MECHAZINE

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We are pleased to present the May 2022 edition of Mechazine, capturing the dynamic activities of our department. This edition highlights insightful industrial visits that gave students hands-on exposure to real-world engineering processes. Our students' enthusiastic participation in BAJA competitions reflects their growing passion for automotive design and innovation. Enriching guest lectures further expanded academic perspectives. We are also excited to launch Tech Pulse, a brand-new column featuring cutting-edge advancements in mechanical engineering from India and around the world. Dive in and explore the journey of learning, innovation, and industry readiness.

THE HEAD SPEAKS:

It gives me great pleasure to witness the department's continuous progress, marked by student participation in industrial visits, BAJA competitions, and academic enrichment through expert talks. A key milestone this period was the successful NBA inspection in April 2022, which reflects our commitment to quality education and institutional excellence. I am also glad to introduce Tech Pulse, a new column capturing global advancements. Let us continue striving for innovation, excellence, and industry-readiness in every endeavor.

-Dr. M. Venu

Head of the Department- ME

ATV Competition

The prestigious All-Terrain Vehicle (ATV) competition titled SAEINDIA BAJA 2022 was held at Pithampur, Indore from 6th to 10th April 2022, bringing together budding engineers from across the nation to showcase their skills in design, manufacturing, and real-world testing of rugged, off-road vehicles. The event was organized by SAEINDIA, a platform known for promoting innovation and technical excellence among engineering students.

Representing the Vishnu Institute of Technology, Bhimavaram, Team KRONOS enthusiastically participated in this challenging competition. Comprising a group of passionate and determined mechanical engineering students, the team designed, fabricated, and tested their own All-Terrain Vehicle to meet the stringent event criteria. Their vehicle underwent multiple rounds of technical inspection, including acceleration, suspension, maneuverability, and the ultimate endurance race which tested the performance of the ATV under extreme conditions.

Participation in SAE BAJA 2022 was a testament to the technical capabilities, team coordination, and perseverance of Team KRONOS. It provided the students with invaluable hands-on experience in engineering design, project management, fabrication techniques, and time-bound problem-solving.

Events and Participations

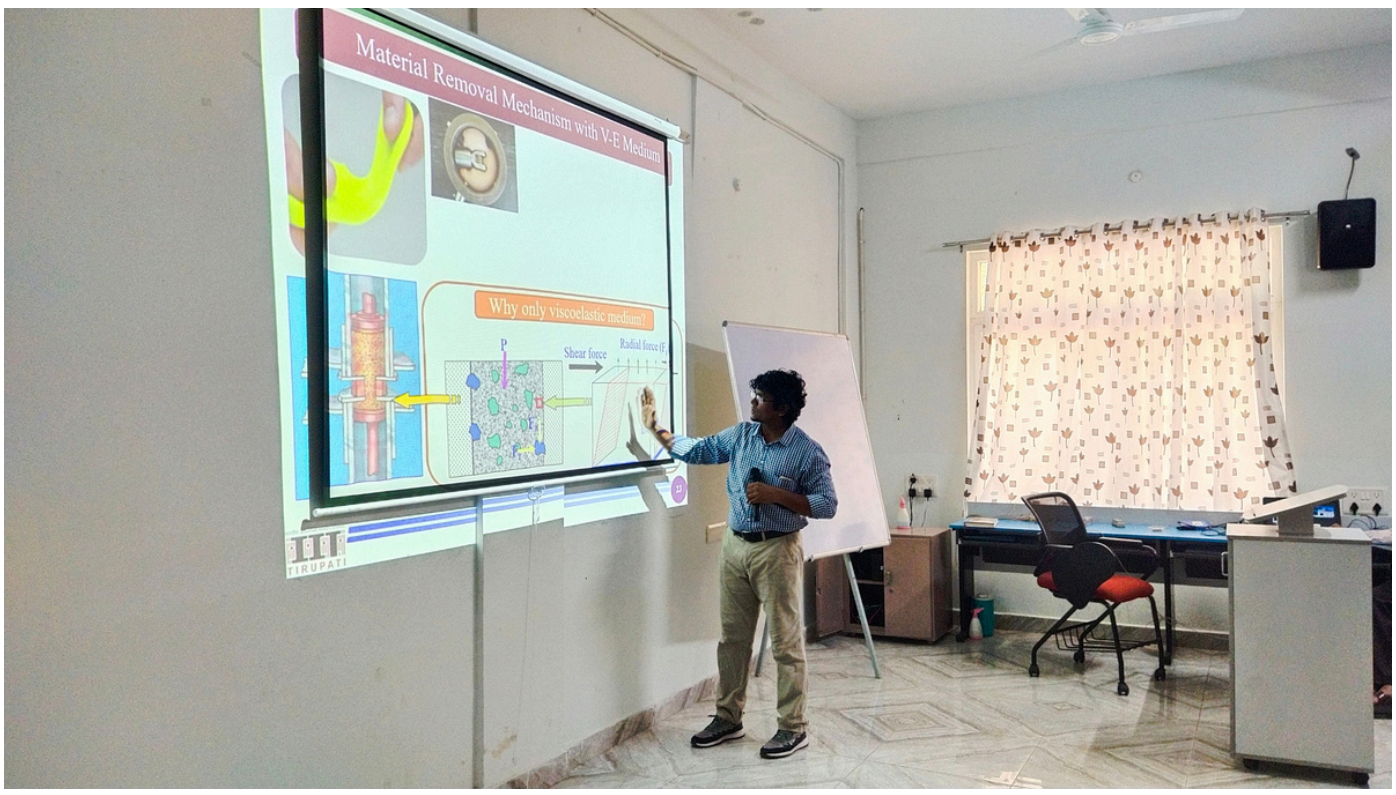
Two of our bright second-year students, Y. Pushpa Vardhini and K. Jhanavi from the 2020–2024 batch, brought laurels to the Department of Mechanical Engineering by securing First Prize in the Paper Presentation event at MX'XCEL 2K22, a national-level technical symposium organized by JNTU Narasaraopet on 23rd April 2022. Competing against students from multiple institutions, their paper stood out for its clarity, technical relevance, and innovative thinking. The event provided an excellent platform for students to showcase research-oriented work and improve their public speaking and presentation skills. Their success reflects not only personal dedication but also the department's encouragement of academic excellence beyond classrooms.

DEPARTMENT EVENTS

The Department of Mechanical Engineering at Vishnu Institute of Technology, Bhimavaram, organized an enlightening guest lecture on “Micro, Nano, and Bio Manufacturing” on 25th April 2022. The session was delivered by Dr. M. Ravi Shankar, Associate Professor from the Department of Mechanical Engineering, IIT Tirupati—a reputed researcher in advanced manufacturing technologies.

Dr. Ravi Shankar’s talk provided students with a fascinating insight into cutting-edge fabrication techniques that operate at microscopic and nanoscopic scales. He elaborated on how micro-manufacturing is revolutionizing industries like biomedical engineering, aerospace, and electronics by enabling precise and miniaturized components. The discussion also explored bio-manufacturing, where engineering intersects with biological systems to create tissue scaffolds, microfluidic devices, and drug delivery systems.

Such expert sessions continue to enrich the learning experience at VIT, exposing students to real-world innovations and future-oriented engineering practices.



Industrial Visits

As part of the department's ongoing efforts to provide practical exposure and bridge the gap between academic learning and real-world applications, the Second Year (2020–24 Batch) Mechanical Engineering students of Vishnu Institute of Technology, Bhimavaram, undertook a series of industrial visits on 9th April 2022. This initiative aimed to familiarize students with real-time operations, manufacturing processes, and industrial challenges across a variety of mechanical domains.

- Photons Food Processing Engineers, Nidadavole: Students explored the design and functioning of food processing machinery, observing mechanical integration in automated systems used for cleaning, packaging, and quality control.
- New Vijaya Sprayers & Vijaya Industries, Peravali: These visits provided exposure to the fabrication and assembly of agricultural sprayers and mechanical components, emphasizing product lifecycle and quality assurance.
- BSM Foundries, Ajjaram: At this facility, students learned about the casting process, mold preparation, and metal flow in foundry operations —an essential experience for those interested in core manufacturing sectors.
- Rajswari Industries, Ajjaram: This stop showcased mid-scale industrial manufacturing, giving students a better understanding of machining operations, maintenance practices, and supply chain integration.

Tech Pulse

Welcome to the debut edition of Tech Pulse, a dedicated section in Mechazine that brings you the latest breakthroughs, innovations, and trends in mechanical engineering. In an era where technology evolves faster than ever, Tech Pulse serves as a snapshot of the most impactful developments—both in India and around the world. From smart manufacturing and aerospace materials to energy harvesting and wearable tech, this section is your window into the future of engineering.

- Researchers at IIT Madras' eMobility Lab designed an energy-efficient modular hybrid electric vehicle drivetrain, tailored for emerging EV markets in India.
- IIT Bombay's BETiC center developed over 50 innovative medical devices, including smart prosthetics and diagnostics, blending mechanical engineering with healthcare applications.
- NASA and ESA research teams created carbon-zirconium-boride composites for ultra-high-temperature applications, improving reusability of thermal shields in spacecraft.
- Engineers at MIT developed bio-inspired, topologically structured 3D-printed lattices that combine ultra-low weight with high mechanical strength.
- Scientists at the Chinese Academy of Sciences and Georgia Tech produced textile-based triboelectric generators to power wearable electronics using body motion.

Gallery


MEENA FOODS
BREADS, BUNS, RUSKS
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Healthy food Healthy Life
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VISHNU INSTITUTE OF TECHNOLOGY
(AUTONOMOUS)
VISHNUPUR, BHIMAVARAM
One-Week Workshop on
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Their Industrial Applications"
12th. 17th May, 2022
in association with VIDAL NDT, VIJAYAWADA
Organized by
SAEINDIA COLLEGIATE CLUB OF VISHNU INSTITUTE OF TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING


IMTEX FORMING 2022
International Forming Technology Exhibition
HALL 3
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Do You Know?

Thermoelectric generators can convert heat directly into electricity using the Seebeck effect. They’re used in spacecraft like NASA’s Curiosity rover to generate power from radioactive decay heat.

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