

MECHAZINE

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We are excited to present this edition of MECHAZINE, capturing the vibrant activities of the Department of Mechanical Engineering from January to April 2025.

This quarter was filled with dynamic learning experiences, notable achievements, and valuable industry exposure. Our students participated in international programs like the Sakura Science Exchange in Japan, received hands-on training in NXCAD, and attended expert sessions on Design Thinking and Computational Fluid Dynamics.

A proud highlight was our historic victory at hBAJA SAEINDIA 2025, where Team AMIGOS clinched the Overall Championship, along with five category awards — a testament to their hard work and determination.

THE HEAD SPEAKS:

The first quarter of 2025 has been remarkable for our department. Team AMIGOS secured the Overall Championship at hBAJA SAEINDIA 2025, a long-awaited win after narrowly missing it last year. The team also clinched five category awards including Endurance and Design.

This period also saw active participation in expert talks, R&D showcases, industrial visits, and international student programs. I congratulate our students, faculty, and thank the management for their continued support.

– Dr. N. Naga Krishna
HoD, Mechanical Engineering

Full Throttle to Victory Overall Champions of hBAJA

In a proud and historic achievement, Team AMIGOS from Vishnu Institute of Technology clinched the Overall Championship at hBAJA SAEINDIA 2025, one of India's most prestigious off-road vehicle competitions. This win marks a major milestone for the team, who narrowly missed the title last year by securing the first runner-up position.

This year, the team demonstrated exceptional performance, securing five category awards — Endurance, Engineering Design, Acceleration, Sustainability, and Sledge Pull — a testament to their innovation, technical skill, and relentless determination. The team comprised 29 students from the Department of Mechanical Engineering and one student from the AI & ML Department, showcasing interdisciplinary collaboration and team spirit. Over several months, the students worked passionately — designing, fabricating, and rigorously testing an all-terrain vehicle capable of withstanding harsh conditions and performance challenges.

Their journey was supported by dedicated faculty mentors, HoD of Dept. ME, Principal and the constant encouragement of the college management, who provided all necessary resources and motivation. Competing against top engineering institutions from across the country, Team AMIGOS proved their mettle on the national stage.



A newspaper article featuring our hBAJA 2025 win.



hBAJA Buggy Displayed at Bharath Mobility Global Expo- 2025

Bridging Borders: Visit to Kumamoto University, Japan

Mr. P. Rajesh Sri Manikanta (21PA1A0380) and Mr. P. Yaswanth Pavan Venkat (21PA1A0381), final-year students from the Department of Mechanical Engineering, participated in the prestigious Sakura Science Exchange Program at Kumamoto University, Japan, held from 19th to 25th January 2025. Sponsored by the Japan Science and Technology Agency (JST), the program was conducted under the guidance of Prof. Shuichi Torii.

During their visit, the students explored advanced topics in renewable and sustainable energy systems, gaining exposure to cutting-edge research and global best practices. The program also provided cultural immersion, allowing them to experience the traditions, lifestyle, and cuisine of Japan, broadening their global outlook.

On 1st February 2025, they shared their learnings and experiences with I, II, and III-year Mechanical Engineering students, encouraging them to pursue similar international academic opportunities.

Their participation marks a proud moment for the department, showcasing our commitment to fostering global competence and academic excellence among our students.



Students of SVES at Kumamoto University, Japan, with Prof. Shuichi Torii and Dr. A. Raju.

Faculty members from the Department of Mechanical Engineering actively engaged in industrial and academic visits during the January–April 2025 period, aimed at strengthening industry-institute interactions, exploring collaborations, and enhancing academic exposure.

In January 2025, Mr. M. Praveen, Associate Professor, visited prominent industries in Pune, including Kinetic Electric Motor Co. Pvt. Ltd., Raymond India Pvt. Ltd., Brembo, EKA Mobility, TKIL Industries, Kalyani Forge (Bharat Forge), and Praj Industries, gaining insights into the latest trends in manufacturing and mobility solutions.

From 4th to 6th March 2025, he also attended the IESA Vision Summit 2025 held in Gandhinagar, Gujarat, along with faculty from the sister institution, exploring innovations in the electronics and semiconductor sector.

On 20th March 2025, five faculty members — Dr. N. Naga Krishna, Mr. Y. Srinivas, Dr. K. Anupama Francy, Dr. I. Ramu, and Dr. S. V. Sai Sudheer — had an academic interaction with Prof. John A. Kershaw from the University of New Brunswick, Canada, broadening international academic linkages.

In April, Dr. M. Venu, Principal, and Mr. M. Praveen visited Yamaha Motor Corporation, Chennai, to explore collaborative opportunities in internships, research, and placements. Faculty also visited IFB Industries Ltd., further extending the department's industry outreach.



Industrial Visits

As part of experiential learning, Mechanical Engineering students participated in multiple industrial visits during the January–April 2025 period, aimed at bridging academic concepts with real-world applications.

In February 2025, second-year students visited Meena Foods, gaining exposure to food processing machinery and automation. Meanwhile, third-year students explored Shri Srinivasa Polymers at Undi – Bhimavaram, where they learned about plastic molding and manufacturing processes.

On 8th March 2025, a group of 41 second-year students from the 2023 batch visited Photons Food Process Engineers and Nandina Iron & Steels Limited. These visits offered insights into industrial workflows, safety protocols, equipment handling, and operational efficiency in both food and metal industries.

Each visit was carefully planned to align with the academic curriculum, providing students with valuable exposure to industrial environments and current engineering practices. These experiences not only enhanced their practical understanding but also inspired them to explore future career paths in core sectors.

Students' active participation in industrial visits.



Polavaram Project



Vigyan Vaibhav 2k25 Exhibition at
Gachibowli Stadium



Nandina Iron & Steels Limited,
Nidadavole



Shri Srinivasa Polymers

TechPulse

Recent Scientific Breakthroughs

- ISRO's XPoSat Mission Begins Scientific Observations

India's first polarimetry space observatory, XPoSat, launched in late 2023, began delivering data in early 2025. It studies cosmic X-ray sources, helping scientists understand the behavior of neutron stars and black holes.

- 3D-Printed Titanium Aircraft Parts for Flight Use

Airbus and GE Aviation successfully qualified 3D-printed titanium components for aircraft, reducing weight and improving manufacturing flexibility—marking a milestone for aerospace-grade additive manufacturing.

- Smart Materials for Self-Healing Structures

Scientists at MIT introduced a polymer-based smart material that can automatically repair microscopic cracks in pipelines and turbine blades, extending component life in mechanical systems.

- Hyperloop Test Tunnel Operational in India

A test tunnel for Hyperloop technology was inaugurated in Maharashtra, signaling India's entry into ultra-high-speed transport research and advanced mechanical system integration.



How was this photo of the Discovery shuttle taken if it was flying on top of everything.

Gallery



Winning moments and celebration, hBAJA-2025, Indor



Principal, vice principal HoD(Dept. ME) with the department Alumni at Puene Alumni meet



Students of SVES visiting Japan



"Ask the right questions, and nature will open the doors to truth."

— Dr. Vikram Sarabhai

(Father of the Indian Space Program)

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