



LLOYD
INSTITUTE OF ENGINEERING
& TECHNOLOGY



Departmental Technical Magazine

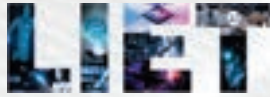
MECHNOVA

Volume - 4, Issue: 01

Department of Mechanical Engineering

Session- 2024-25

About



LIET, Lloyd Institute of Engineering & Technology has become a place where dreams are indeed transformed into reality. The institute is affiliated to Dr. A.P.J. Abdul Kalam Technical University (Formerly UPTU) and recognized by the A. I. C. T. E. (Min of HRD), New Delhi, and

Affiliated to



Lucknow

Approved by



New Delhi



VISION

"To emerge as an Institute of academic excellence by empowering young minds through problem-solving skills, knowledge & ethical values and transforming them into professionals of global competence".



MISSION

M1: To equip the students with state-of-the-art technological advancement and skills.

M2: To create a conducive environment for teaching and learning through continuous engagement with industry for corporate understanding and Professionalism.

M3: To focus on holistic development of students through enhanced learning along with moral and ethical value system.



About Department

Established in 2002, the Mechanical Engineering Department focuses on quality education, research, and technological innovation. The department equips students with strong fundamentals in mechanics, energy, and materials, preparing them to design, operate, and maintain modern engineering systems. Through industry-oriented learning and problem-solving approaches, students are trained to adapt, innovate, and lead in diverse engineering and industrial careers. The four-year program is AICTE approved and affiliated with Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh.



The Mechanical Engineering Department of Lloyd Institute of Engineering and Technology, will mold their students into technically sound as well as ethically perfect professionals with innovative leadership qualities and a confident attitude for serving the society with global attention.



To impart a thorough knowledge of various core engineering subjects to our entire undergraduate and postgraduate students for ascertaining their fundamental strength in Mechanical engineering.

To expose our students to a curriculum consisting of modern laboratories, interdisciplinary subjects and industrial training in such a way that they get international exposure in world class industries.

To train our students with modern drafting & analysis software for developing their computational capabilities as well as promoting higher studies and research works.





Program Educational Objectives (PEOs)

1. Preparation: To prepare learner with sound foundation in the mathematical, scientific and engineering fundamentals.
2. Core Competence: To prepare Learner to use modern tools effectively in order to solve real life problems.
3. Breadth: To prepare learner for a successful career in Indian and Multinational Organisations and to excel in their postgraduate studies

Program Specific Outcomes (PSOs)

1. Identify, Formulate and Analyze complex Engineering problems in Thermal Engineering, Design Engineering, Manufacturing Engineering and automobile Engineering, and Energy
2. An ability to find out, articulate the local industrial problems and solve with the use of mechanical engineering tools for realistic outcomes.
3. An ability of collaborative learning to find out cost-effective, optimal solution for social problems.

President

Mr. Manohar Thairani



It gives me immense pride and satisfaction to witness the remarkable growth and achievements of the CSE & Allied Branches at LIET. In an age where technology drives progress and innovation shapes the future, Computer Science stands at the core of global transformation.

At LIET, we believe that education must evolve alongside technology. Our vision is to create a dynamic academic ecosystem that nurtures innovation, leadership, ethical values, and a spirit of entrepreneurship. The CSE & Allied Branches are playing a pivotal role in realizing this vision by producing future-ready professionals equipped with technical excellence and strong moral foundations.

This magazine is a reflection of the intellectual energy, creativity, research excellence, and innovative mindset of our students and faculty members. It highlights their accomplishments and reinforces our commitment to academic distinction and continuous improvement.

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I extend my heartfelt congratulations to the entire CSE & Allied Branches team for their dedication and commendable efforts in bringing out this publication. I encourage all students to think big, stay curious, and lead the technological revolution with confidence and integrity.

Together, let us build a future driven by knowledge, innovation, and excellence.

Senior Director

Prof. (Dr.) Rajeev Agrawal



In the era of exponential technological evolution, I extend a warm welcome to all students, faculty members, and readers of the CSE Magazine at LIET. Today, technology is not merely advancing — it is transforming the way we live, learn, and innovate. At LIET, we recognize the importance of staying ahead in this ever-evolving digital landscape.

Our commitment goes beyond conventional education. We strive to nurture future-ready engineers equipped with cutting-edge technical expertise, innovative thinking, and the adaptability required to excel in a fast-paced global environment. The Department of Computer Science & Engineering plays a pivotal role in driving this vision by fostering creativity, research, and industry-oriented learning.

This magazine reflects the intellectual vibrancy, technical achievements, research initiatives, and creative pursuits of our CSE students and faculty. It stands as a testament to their dedication and the institution's progressive academic environment.

I encourage all students to embrace innovation, think beyond boundaries, and continuously upgrade their skills. The future belongs to those who are prepared to evolve with technology and lead with vision.

Embrace the evolution. Shape your future.

Dean (R & D)– LIET

Dr. S.P. Dwivedi



At Lloyd Institute of Engineering and Technology, the Department of Computer Science & Engineering is emerging as a dynamic center of technological excellence and research-driven innovation. As Dean (R&D), I am proud of the enthusiasm and dedication shown by our CSE students and faculty in rapidly evolving fields such as Artificial Intelligence, Machine Learning, Data Science, Cyber Security, Cloud Computing, and the Internet of Things. Our focus is not only on academic achievement but also on nurturing analytical thinking, creativity, and a strong problem-solving mindset that prepares students to lead in the digital era.

The Research & Development ecosystem within the CSE branch is designed to encourage curiosity, experimentation, and collaboration. Through funded research projects, industry-driven problem statements, hackathons, coding competitions, and interdisciplinary innovation initiatives, students are provided with hands-on exposure that bridges the gap between academic learning and industry expectations. We actively promote research publications, patent filing, startup incubation, and participation in national and international technical competitions to strengthen our students' global outlook.

Collaboration remains the cornerstone of our growth. We continuously seek partnerships with technology companies, research organizations, and academic institutions to provide our students with advanced laboratories, expert mentorship, internships, and real-time project opportunities. Our aim is to build a dynamic research culture where innovation thrives and ideas transform into impactful technological solutions.

I firmly believe that the future belongs to those who innovate. Through strong academic foundations, ethical values, and a spirit of continuous learning, the CSE branch at LIET is committed to shaping future-ready professionals who will contribute significantly to society, industry, and the nation. Together, let us continue to explore, innovate, and excel in the ever-evolving world of computing and technology.



MechXPO 2025

Lloyd's Mechanical Engineering Departments proudly present MechXPO-2025, a technical program designed to challenge, inspire, and showcase your skills in the world of sustainability, creativity and engineering. You'll have the chance to compete in exciting competitions that will test your knowledge, creativity, and technical abilities in real-world sustainability & other challenges! Hey future engineers & innovators, we want YOU to be a part of it!



Innovation in Motion: Mechanical Startup Team Shines at IIT BHU Conclave

The Lloyd Institute of Engineering and Technology (LIET) is delighted to announce its active participation in the **Bharat Innovation Conclave 2025**, organized by the Atal Incubation Centre, Banaras Hindu University (BHU), Varanasi, held from 18th–20th September 2025.

The event was highly enriching and provided valuable exposure to the innovation and startup ecosystem at the national level. Participation in such prestigious platforms reflects LIET's commitment to promoting innovation, research, entrepreneurship, and practical learning among students. The institute continues to encourage students and faculty members to participate in national innovation platforms, startup events, and technology exhibitions to enhance learning, collaboration, and entrepreneurial development.



HANDS-ON ENGINEERING: LIET'S INDUSTRY VISIT TO MOON BEVERAGES

Lloyd Institute of Engineering & Technology is thrilled to share the success of an insightful industry visit to the Coca-Cola Bottling Plant (Moon Beverages Limited), organized by the Mechanical & Civil Engineering Departments on May 26, 2025.

This experience gave our students a close-up look at real-world industrial processes with automation application in action. From high-speed bottling lines to sustainable packaging technologies, the tour bridged the gap between classroom learning and industrial practice. The students learnt the manner in which the plant combines the concentrates with still and/or sparkling water, and/or sweeteners, depending on the product, to prepare, package, sell and distribute finished beverages



INNOVATION & DEVELOPMENT ON DRONE CHALLENGE COMPETITION

Innovation and development in drone technology have transformed various industries, including agriculture, defense, healthcare, logistics, and disaster management. Modern drones are now equipped with advanced sensors, GPS navigation, artificial intelligence, and high-resolution cameras, enabling accurate data collection and autonomous operations. In agriculture, drones are used for crop monitoring, pesticide spraying, and soil analysis, improving productivity and reducing labor costs. In disaster management, drones help in search and rescue operations and damage assessment. Continuous research in battery technology, lightweight materials, and automation is further enhancing drone efficiency, flight time, and safety, making drone technology an important part of future smart systems and infrastructure development.



Hands-On Learning: One-Day Capsule Course on Mechanical Testing of Metals at BIS

A One-Day Capsule Course on Mechanical Testing of Metals was organized at the Bureau of Indian Standards to enhance technical knowledge and practical understanding of material testing methods. The course covered important mechanical testing techniques such as tensile testing, hardness testing, impact testing, and fatigue testing of metals. Participants gained valuable exposure to standard testing procedures, equipment usage, and quality control practices followed in industry. The program provided a great learning opportunity for students and faculty to understand the importance of material testing in engineering applications and industrial standards.



CREATIVE & INNOVATIVE IDEA COMPETITION

The Department of Mechanical Engineering Club **Mechnova** at Lloyd Institute of Engineering & Technology successfully organized a Bootcamp on **Creative & Innovative Idea Competition**. The bootcamp aimed to encourage students to think creatively, develop innovative ideas, and transform their concepts into practical solutions. Students actively participated and presented innovative ideas across various domains of engineering and technology. The event provided a platform for young innovators to showcase their creativity, problem-solving skills, and entrepreneurial mindset. Such initiatives help in promoting innovation, research culture, and startup awareness among students.



AWARDS AND ACHIEVEMENTS





LLOYD SKILLS CENTRE

Empowering Through Skills



TRAINING MODULE

I - DRONE TECHNOLOGY

This lab focuses on the design, building and customization of Unmanned Aerial Vehicles (UAVs) or drones for various applications. Catering to diverse needs such as agricultural survey, mapping, reconnaissance and surveillance this incubation centre will create new dimension for students



II-ELECTRIC VEHICLES



III - BATTERY LAB

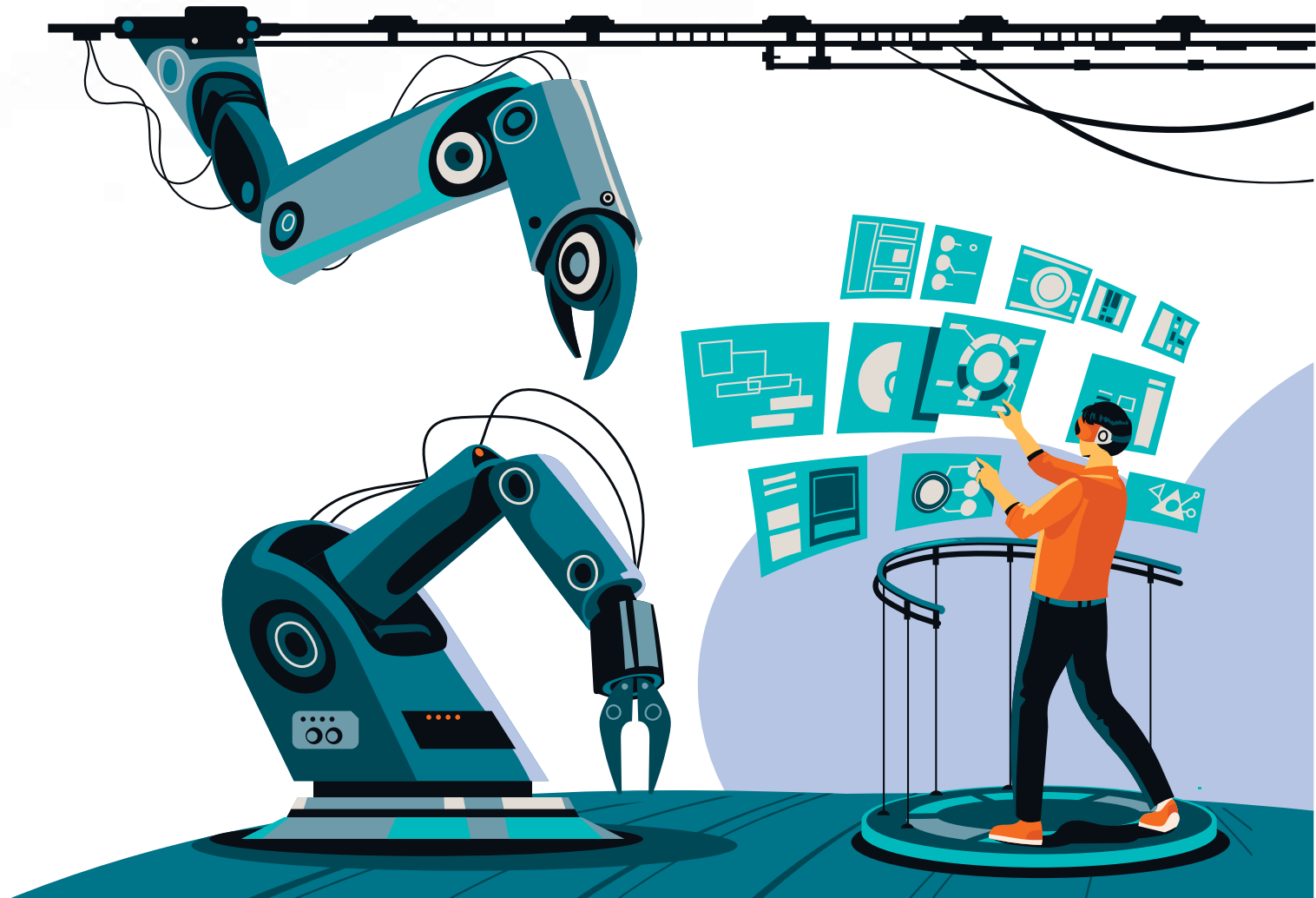


Future of Mechanical Engineering in the Age of AI

Mechanical engineering is rapidly evolving with the integration of Artificial Intelligence (AI). Traditionally focused on machines and mechanical systems, the field now combines data, automation, and intelligent decision-making. AI enables predictive maintenance, where machines can detect faults before failure, reducing downtime and costs. It also helps engineers design more efficient systems through simulation and optimization. In modern industries, smart factories use AI to improve productivity and quality. As a result, future mechanical engineers must develop skills in programming, data analysis, and basic machine learning. Rather than replacing engineers, AI is enhancing their capabilities and transforming the field into a smarter and more innovative domain.

VINEET KUMAAR

B.Tech ME 2nd Year

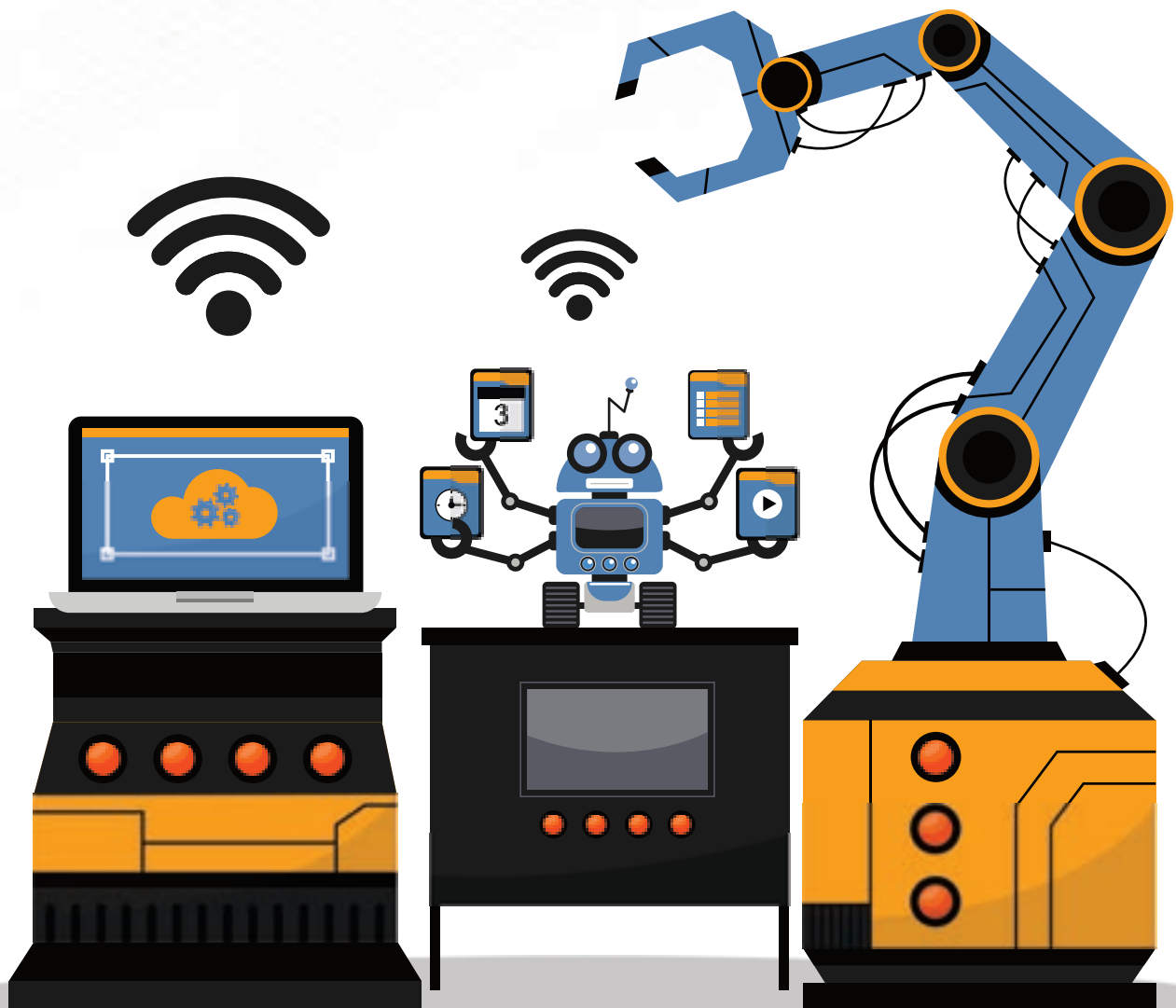


Basics of Robotics and Automation in Manufacturing

Robotics and automation play a vital role in modern manufacturing industries. Robotics involves the use of machines that can perform tasks automatically, while automation refers to the use of control systems to operate equipment with minimal human intervention. A robot typically consists of sensors to detect its surroundings, actuators to perform movements, and a controller that acts as its brain. In manufacturing, robots are widely used for welding, painting, assembly, and material handling. Automation increases production speed, improves accuracy, and reduces human errors and risks. As industries continue to advance, robotics and automation are becoming essential tools for achieving efficiency, safety, and high-quality production.

TANMAY KUMAR

B.Tech ME 2nd Year



Sustainable Manufacturing Practices

Sustainable manufacturing focuses on producing goods in an environmentally friendly and resource-efficient manner. It aims to reduce waste, conserve energy, and minimize the negative impact on the environment. Mechanical engineers play a key role in designing machines and processes that use less energy and generate fewer emissions. Practices such as recycling materials, using renewable energy sources, and optimizing production processes are important aspects of sustainable manufacturing. This approach not only protects the environment but also reduces costs and improves long-term efficiency. In today's world, sustainability has become a crucial responsibility for engineers and industries alike.

MANOJ KUMAR

B.Tech ME 2nd Year



Evolution of Electric Vehicles in India

The evolution of electric vehicles (EVs) in India has gained significant momentum in recent years. With increasing concerns about pollution and rising fuel prices, EVs are emerging as a sustainable alternative to traditional petrol and diesel vehicles. The Indian government has introduced various policies and incentives to promote electric mobility, such as subsidies and the development of charging infrastructure. Advances in battery technology have improved the performance and range of EVs, making them more practical for daily use. Many automobile companies are now focusing on electric models, including cars, bikes, and buses. The growth of EVs is not only beneficial for the environment but also opens new opportunities for innovation in mechanical and automotive engineering.

DEEPTI

B.Tech CSE 2nd Year



Aerial Intelligence: Drones in Action

Drone technology is rapidly transforming the way industries operate by offering speed, precision, and real-time data. From agriculture and construction to surveillance and disaster management, drones are helping improve efficiency while reducing human effort and risk.

In farming, drones assist in crop monitoring and spraying, while in infrastructure, they enable quick surveys and inspections. They also play a vital role in emergency situations by providing aerial views and delivering supplies to inaccessible areas.

With continuous advancements in automation, AI, and battery technology, drones are becoming more reliable and widely used. As they evolve, drones are set to play a key role in shaping the future of innovation and smart technologies.

HARSH RAJ

B.Tech 2nd Year



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