

DEPARTMENT OF MECHANICAL ENGINEERING

Vibrant

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VOLUME I

2024-2025

MANAKULA VINAYAGAR
INSTITUTE OF TECHNOLOGY

Kalitheerthalkuppam, Puducherry – 605 107

VISION:

“The Mechanical Engineering Department aspires to be acclaimed globally for renowned education and research to accelerate well qualified engineers who are creative ,entrepreneurial and flourishing in advanced fields of engineering and research “.

MISSION:

Higher order Thinking: *To assure Quality Education to the students and broaden their profession to make them globally competent Mechanical Engineers.*

Continuous learning: *Nurturing vital state of art, Research facility to provide students and faculty with outstanding opportunities to discover, illustrate , implement and disseminate wisdom .*

Competency: *To develop alliance with world class R & D Organizations and Educational Institutions in India and overseas for teaching, research and consultancy services.*

Entrepreneurship: *To provide the students with academic environment of excellence, leadership and ethical guidelines needed for lifelong prospective career.*

ABOUT THE DEPARTMENT:

Under graduation Education (UG) Course B.Tech in Mechanical Engineering is a Comprehensive degree program. The goal of Mechanical Engineering Curriculum is to create a flexible undergraduate educational experience in Design, Mathematics, Modeling, Computation, Quality Management, Engineering Science & Humanities.

The Department of Mechanical Engineering has been continuously striving to make progress in Teaching and Research. The Department was started with an intake (UG) of 60 students in 2012 and 120 students in 2015. The Mechanical Department is well equipped with excellent laboratories to make the students to easily understand and study the latest research areas such as Computational Fluid dynamics, Mechanics of Robot, Aerospace and Defense field, etc and also has separate Department library houses, best books in the technical field this vast reservoir of knowledge is a source of constant value addition to the students and faculty members the library is rich in manufacturing , Design , Metallurgy , Drawing and Materials science . To enhance the Technical skills of the students , the department also organizes various program such value added course ,Quiz Competition ,seminars , workshops , Industrial Visits and Guest Lectures which would make them globally competitive as well as students to become as indispensable Engineer and earn the income they deserve .

GOALS AND STRATEGIES

- a. Ensuring the preeminence of learning.
- b. Providing high quality programs that meet the evolving needs of our students, community and sector.
- c. Ensuring scholarly and creative activity.



l to our core sectors.

ere all students have the opportunity

partnerships with our peers.

ENGINEERS DAY

A Guest lecture for Engineer's day was conducted by the Department of Mechanical Engineering in association with the Institution of Engineers India IE(I) Mechanical Engineering Students Chapter, Puducherry state centre on 23rd August 2024.

Dr. B. Radjaram, IP Chairman of IE(I), Member of ISHRAE, NIQR, and Head MECH, warmly welcomed the students and highlighted the significance of engineers in various fields..**Mr. Venkataboopathy, Associate Consultant, Capgemini, Chennai**, was the Chief guest and address the gathering on the theme of "Driving Sustainability with Engineering Solutions Embracing the latest AI driven Technologies. The session aimed to inspire students by highlighting real-world applications and career prospects in the field of Artificial Intelligence. Mr. S. Ganeshkumar, AP/MECH, delivered the vote of thanks.



WORLD ENVIRONMENT DAY

In commemoration of World Environment Day, the Department of Mechanical Engineering, in association with ISHARE Puducherry Sub-Chapter, organized a **drawing competition** for school students on 31st May 2024.

Dr. B. Radjaram, IP Chairman of IE(I), Member of ISHRAE, NIQR, and Head MECH, extended a warm welcome to the attendees. The event was coordinated by Mr. A. Thiagarajan, AP/MECH, and a member of ISHRAE. This initiative sought to inspire young minds to artistically convey the critical importance of environmental preservation, fostering awareness and creativity in sustainability.



SCIMIT 25



SCIMIT 25 – National Science Day (A Mega Project Contest) was celebrated on 28th February 2025 to commemorate the birth anniversary of Nobel Laureate Sir C.V. Raman. The event was organized by Manakula Vinayagar Institute of Technology, an Institution member of The Institution of Engineers (India).

Dr. B. Radjaram, IP Chairman of IE(I), Member of ISHRAE and NIQR, and Head of the Department of Mechanical Engineering, served as the Convener of the event

250 projects across India, from more than 100 colleges and 700 students participated and exhibited a wide range of innovative and application-oriented projects that reflected emerging technologies and problem-solving approaches.

Cash prizes worth more than ₹1,50,000 were awarded to the most outstanding projects to recognize and motivate young minds in the domains of research, innovation, and product development.

MITILENCE 25



MITILENCE – a National Level Technical Symposium – was held on 14th March 2025, showcasing a variety of events across Mechanical Engineering and other departments. The symposium featured both technical and non-technical competitions, drawing enthusiastic participation from students of various institutions. Aimed at nurturing innovative, skilled, and entrepreneurial engineers capable of contributing to cutting-edge engineering and research. The winners of the various events are awarded with cash prizes and merit certificates. Dr. B. Radjaram, Head / MECH, warmly welcomed the participants. The event was coordinated by Mr. R. Ilandjezian, AP/MECH.

Guest Lecture



A Guest Lecture On "*Basics of Psychrometry*", conducted in association with Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) Mechanical Engineering Students Chapter, Puducherry on 27th July 2024.

Dr. B Radjaram, IP Chairman, IE(I), Member ISHRAE, NIQR & HOD / MECH, introduced the chief guest. Mr.V.Alisodai, Proprietor,Vayhu Consultant Chennai was the Chief guest and addressed the students with fundamental knowledge and practical insights into psychrometric applications in HVAC systems.



A Guest Lecture on ***“Offshore, Oil & Gas Industries”*** conducted in association with Indian Plumbing Association (IPA) Mechanical Engineering Students Chapter, Puducherry on 21st August 2024.

Dr. B. Radjaram, IP Chairman of IE(I), Member of ISHRAE, NIQR & HOD / MECH, introduced the chief guests. Mr. Jayabaskaran (Digital Marketing Manager), Mr. Samchay Jain (Marketing Executive), and Mr. Shakthivel (Trainer) from Pondicherry International Safety Training Academy (PISTA) served as the chief guests and delivered insightful addresses. They provided students with valuable knowledge on the fundamentals, operations, and career opportunities in the offshore oil and gas sector.



A guest lecture on ***“Unleashing the Power of Engineers to Advance Sustainable Development”*** was organized by the Department of Mechanical Engineering in collaboration with IE(I) on 10th March 2025.

Dr. B. Radjaram, Head of the Department, delivered the welcome address, emphasizing the pivotal role engineers play in shaping a sustainable future.

The session was delivered by the Chief Guest, Mr. Murugavel Bala, Chief Skills Officer, Shield Group, Chennai, who shared valuable perspectives on empowering engineering professionals to drive sustainable development initiatives. The event concluded with a vote of thanks delivered by Mr. S. Ganeshkumar, Assistant Professor, Mechanical Engineering.



To commemorate **World Water Day 2025**, Department of Mechanical Engineering organized a Guest Lecture on the topic “Importance of Valves and Water Level Controllers” for Mechanical Engineering students in association with Indian Plumbing Association (IPA)-MIT Students Chapter on 19th March 2025.

Dr. B. Radjaram, Head of the Mechanical Engineering Department, warmly welcomed the gathering and emphasized the relevance of fluid control technologies in modern engineering applications.

The session was delivered by the Chief Guest, Mr. S. V. Raja, Managing Partner of ADR Automation & Technologies, Chennai, who shared valuable insights on the practical significance and innovations in valve systems and water level controllers.

The event concluded with a vote of thanks delivered by Dr. A. Mathiarasu, Assistant Professor, Department of Mechanical Engineering.



A Guest lecture on **“Transformative & Futuristic Technologies: Industry 4.0 and Beyond with Learning 4.0”** was organized by the Department of Mechanical Engineering in Association with the ISHRAE on 10th March 2025.

Dr. B. Radjaram, Head of the Mechanical Engineering Department, extended a warm welcome to the gathering. He highlighted the significance of preparing students for the rapidly evolving digital landscape.

The session was delivered by Chief Guest Mr. Sriram Hariharan, Founder and Chief Strategist of shield group, Chennai, who provided a comprehensive overview of Industry 4.0 advancements, the evolving landscape of intelligent systems, and the critical role of Learning 4.0 in preparing students for the demands of future-ready engineering careers. Dr. A. Thiagarajan, Assistant Professor, delivered the vote of thanks.



A guest lecture on **“Significance of AI in Sustainable Energy Technologies”** was organized by the Department of Mechanical Engineering in collaboration with the Energy Club on 3rd April 2025.

Dr. B. Radjaram, Head of the Mechanical Engineering Department, extended a warm welcome to the students and highlighted the importance of integrating AI into emerging energy solutions.

The session was led by the Chief Guest, Dr. K. Karthik Selva Kumar, Assistant Professor, Department of Green Energy Technology, Pondicherry University, Puducherry, who delivered a thought-provoking lecture focusing on the transformative role of Artificial Intelligence in optimizing and advancing sustainable energy systems. Mr. S. Ganeshkumar, AP/MECH, delivered the vote of thanks.

WORKSHOP COURSES



One day workshop on **“Welding Inspection Techniques”** was conducted by Mr. R.Pradeepkumar, General Managar, Shri Sai NDT, Puducherry on 1st August 2024 for II, III & IV year Mechanical students. This workshop aims to bridge theoretical knowledge with practical skills for industry-ready competence.



One day workshop on **“Digital Fabrication & Planning and Designing of Industrial Sheet Metal Parts”** was conducted by Mr.J.Jagan, Chairman, Vector Solution, Puducherry on 27th September 2024 for II, III & IV year Mechanical students. This workshop aims to equip mechanical engineering students with the skills to design and fabricate industrial sheet metal parts using digital tools and techniques. It also bridges academic learning with practical industry applications in precision manufacturing and design.



A one-day workshop on “GATE & Government Exams: Roadmap to a Secure Career” was conducted by the Department of Mechanical Engineering in association with the Institution of Engineers India IE(I) Mechanical Engineering Students Chapter, Puducherry state centre on 18th February 2025.

Dr. B. Radjaram, IP Chairman of IE(I), Member of ISHRAE, NIQR, and Head MECH, warmly welcomed the students and emphasized that GATE is a crucial stepping stone for higher education, government jobs, and professional growth in engineering. Mr. S. Poonkundran, Director, Genz Academy 2025 was the Chief guest and delivered an insightful session emphasizing the value of competitive exams such as GATE, ESE, SSC JE, and PSU recruitments in building a stable and rewarding career path. This session provided valuable guidance and motivation for students to pursue competitive exams as a pathway to a secure and successful engineering career. Mr. S. Ganeshkumar, AP/MECH, delivered the vote of thanks.



Mr.M.R.Hariharan, Senior CAD Engineer – Business Support Chairman, CADD CENTRE Puducherry conducted a workshop titled “**Digital Factory**” for Mechanical Engineering students on 25th February 2025. This workshop aimed to provide students with insights into the evolving landscape of industrial design and research, emphasizing emerging trends, innovation strategies, and the skill sets required to pursue careers in R&D and product development within the engineering industry.



Mr. M. Govindan, Faculty in the domain of CAD/CAM/CAE, conducted a workshop under the aegis of NIQR titled “**Recent Technology in Computer Aided Engineering**” for Mechanical Engineering students on 25th March 2025. This program aimed to equip students with insights into the latest advancements and practical applications of Computer Aided Engineering technologies.



A one-day workshop on “**Green Energy Technology**” was conducted on 25th March 2025 by Dr. Perumal Elumalai, PhD (IISc) and Professor in the Department of Green Energy Technology, Puducherry University, for Mechanical Engineering students of I, II, III, and IV year. This workshop aimed to enhance students’ understanding of sustainable energy solutions, introduce

emerging technologies in the green energy sector, and encourage environmentally responsible engineering practices.



A one-day workshop titled **“Opportunities for Engineers in Industrial Design and Research”** was organized on 12th April 2025 for I, II, III, and IV year Mechanical Engineering students, led by Er. J. Pugazhendhi, Assistant Manager – R&D at Schwing Stetter India Pvt. Ltd., Chennai. The session aimed to expose students to career prospects in industrial design and research, highlighting current industry trends, innovation processes, and the essential skills required for R&D roles in the engineering sector.



A workshop on **“Data Collection Procedures and Data Analysis Methods”** was conducted on 11th February 2025 by Dr. A. Mathiarasu, Assistant Professor, Department of Mechanical Engineering, for Mechanical Engineering students. The session was designed to enhance students' research capabilities by providing in-depth knowledge of systematic data acquisition techniques and analytical methodologies.

INDUSTRIAL VISIT



Students of II ,III & IV Year Mechanical Engg visited **Suja Shoe**, Tindivanam on 12th August 2024 is to explore the mechanical engineering aspects of shoe manufacturing, focusing on machinery, automation, and production efficiency.



Students of II ,III & IV Year Mechanical Engg visited **Pista International Safety Training Academy And Accommodation** , Puducherry on 27th August 2024 to deepen their practical knowledge in industrial safety practices, enhancing expertise in hazard management and risk assessment. It offers hands-on training and exposure to best safety practices.



Students of II, III, and IV Year Mechanical Engineering undertook an industrial visit to Puducherry Power Corporation Limited, Karaikal, on 13th February 2025, with the objective of acquiring in-depth exposure to power generation technologies and gaining firsthand understanding of the operational dynamics and engineering practices within a thermal power plant setting.



Students of I, II, III, and IV Year Mechanical Engineering visited the Batteries Lab at the Centre for **Green Energy Technology, Pondicherry University**, on 25th March 2025. This visit aimed to provide students with practical insights into advanced battery technologies and their applications in sustainable energy systems.



Students of I, II, III, and IV Year Mechanical Engineering visited the Micro, Small, and Medium Enterprises (MSME) Centre in Puducherry on 25th March 2025 to gain exposure to industrial practices, understand the role of MSMEs in the manufacturing sector, and explore opportunities for innovation, entrepreneurship, and skill development in small-scale industries.

IPR AWARENESS PROGRAM



Awareness session on **“How to file IPR”** on 06th September 2024 was conducted by Dr.P.Natarajan, AP / Mech, for II, III & IV year. The session aims to empower students to safeguard their inventions and ideas effectively.

WORKSHOPS ATTENDED



Dr. B. Radjaram, Dr. P. Natarajan, Mr. A. Thiagarajan, and Mr. R. Ilandjezian participated in the One-Day National Workshop on "Green Hydrogen: Technology to Application," organized by the Department of Green Energy Technology, Pondicherry University.

PROFESSIONAL ETHICS PROGRAM



A poster presentation event on “**Professional Ethics and the Indian Constitution**” was organized for final-year students on 2nd April 2025, providing them an opportunity to explore and visually communicate key concepts related to ethical practices and constitutional values in the professional domain.

IPR AWARENESS PROGRAM



An awareness session on **“How to File IPR”** was conducted on 18th March 2025 by Dr. S. Krishna Kumar, Assistant Professor / Mechanical Engineering, for **III year students**. This session aimed to educate students on the fundamentals of Intellectual Property Rights (IPR), with the objective of fostering innovation and guiding them through the procedures and importance of protecting their original ideas, designs, and inventions through proper IPR filing.

EDC ACTIVITIES



A workshop on **“CNC and Advanced Manufacturing Ventures”** was conducted on 22nd March 2025 for final-year Mechanical Engineering students by Mr. A. Krishnan, Marketing Manager at the Micro, Small, and Medium Enterprises (MSME), Puducherry. The session aimed to provide insights into modern CNC technologies and entrepreneurial opportunities in advanced manufacturing within the MSME sector.

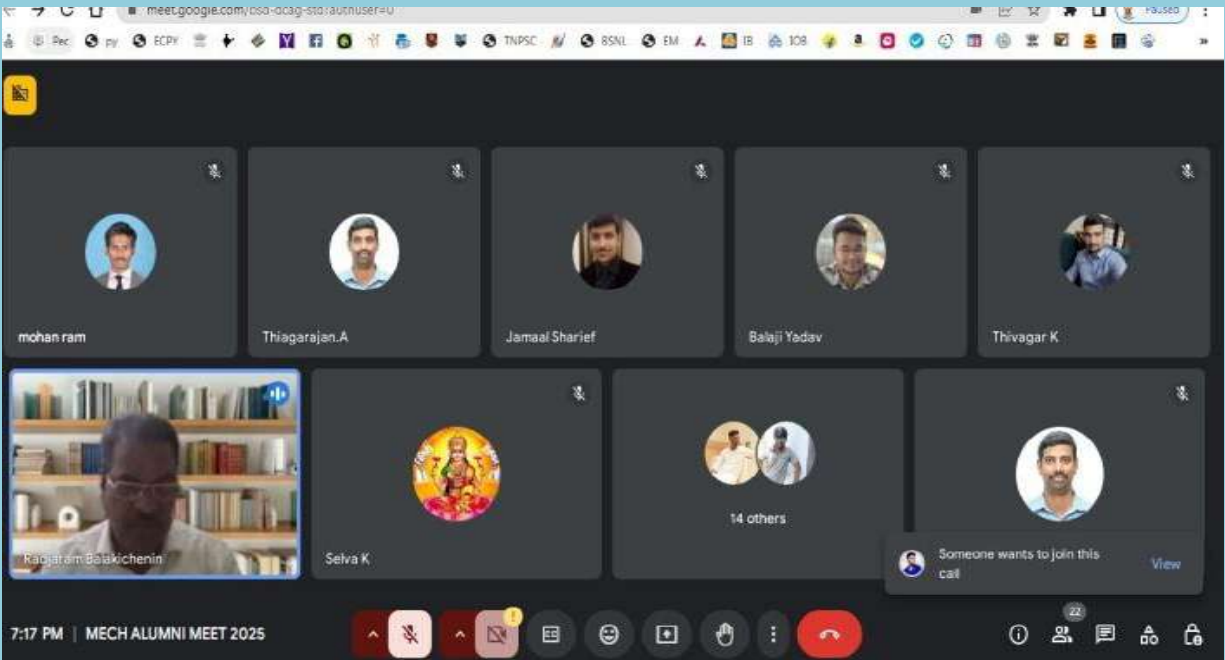
ALUMNI ACTIVITIES



A session titled **“Preparing for the Core Industry Environment”** was held on 8th January 2025 for third-year Mechanical Engineering students, delivered by Mr. Prassana, an alumnus of the 2016–2020 batch. The session focused on equipping students with practical insights, industry expectations, and essential skills needed to thrive in core engineering sectors.



A session titled **“Success Principles for a Promising Future in the Core Industry”** was conducted on 8th January 2025 for final-year students by Mr. Siranthan, an alumnus from the 2016–2020 batch. The session aimed to inspire students by sharing key strategies, industry insights, and personal experiences essential for building a successful career in the core engineering sector.



The Department of Mechanical Engineering conducted a vibrant **Alumni Meet 2K25** to reconnect former students and reinforce their bond with the institution. Alumni from various batches participated enthusiastically, sharing memories and professional insights.

The event served as a valuable platform for interaction between alumni, faculty, and current students. Discussions focused on industry trends, career development, and emerging technologies in mechanical engineering.

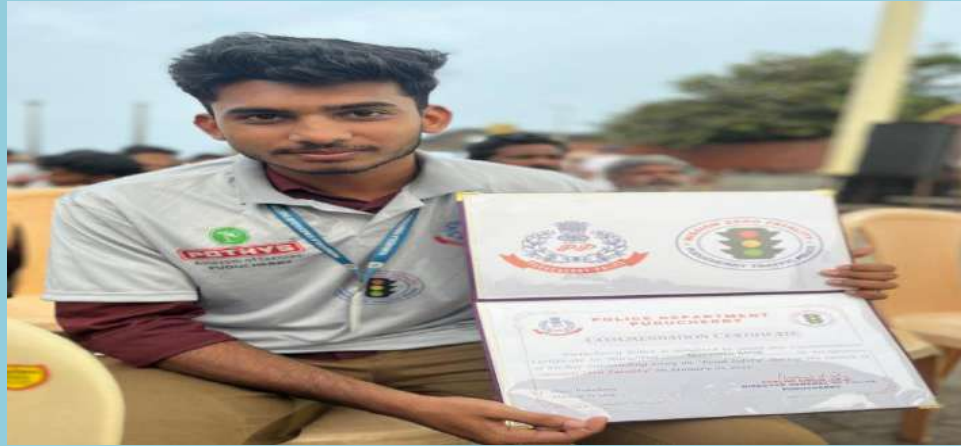
Notable alumni achievements were highlighted, fostering inspiration and pride among attendees.

Opportunities for future collaboration in internships, mentorship, and research were explored. Mr. A. Thiagarajan, Assistant Professor, delivered the welcome address.

Dr. B. Radjaram, Head of the Department, delivered the felicitation address. Several alumni shared their interview experiences, industrial exposure, and preparation tips for juniors. The event concluded with a vote of thanks from the Alumni Coordinator, expressing appreciation to all contributors.

STUDENTS ACTIVITIES





Mr. Mohamed Noor, a final-year Mechanical Engineering student, was honored with a **Certificate of Appreciation** by the Honorable Lieutenant Governor of Puducherry for his outstanding performance in an essay competition held as part of the Mission Zero Fatality Awareness Campaign, organized by the Puducherry Traffic Police on 10th January 2025.



Final-year students Mr. B. Sakthi Saravanan and Mr. S. Akash Kumaran took part in the ISHRAE **A-QUEST 25** contest and qualified for the Semi-Finals held at Maharaja Institute of Technology, Mysore, with sponsorship from the ISHRAE Puducherry Sub-Chapter.



Ms.S.Pavithra and Mr.Sangeeth Zeon Madhav, third-year Mechanical Engineering students, successfully completed a specialized course on **“Advanced Manufacturing Techniques and Process Monitoring”** conducted from 17th to 21st March 2025. This intensive program was organized by the Department of Mechanical Engineering, Indian Institute of Technology, Madras, and aimed at enhancing technical competencies in cutting-edge manufacturing methodologies and real-time process analytics.



Mr. A. Arunkumar, a second-year student, participated in the **poster presentation** at the South Asia Foundation-sponsored National Conference on “Green Energy Technologies for Sustainability” (NCGETS2025), a UNESCO Chair initiative, held on 20th and 21st March 2025.



First Year Mechanical Engg students Ragul.K, Jean Francois, Kalaiperarasu have presented a project titled Auto Sleep Detection in Mailam Engineering college in Tech Xplore 25 project competition on 26th March 2025

About Vibrant

Vibrant is a yearly Magazine compiled and published among students by the students

community in Manakula Vinayagar Institute of Technology from the Department of Mechanical Engineering. Students from all years can indulge in Innovative and interested topic related either engineering related trends or in Non Technical related topics.

Students can express their own confession or any other ideas they can give for the development of Mechanical Engineering Department and the Institution.

Students Extracurricular and all other stuffs that they were really interested and want to develop can indulge in this magazine and show case their talent.

Chief Editors

Mr. BHUVAN SANKAR. E Second year / Mechanical Engineering

Mr. RAGUL. K / Second Year/Mechanical Engineering

Associate Editor

Mr. VISHVA. M / Second Year/Mechanical Engineering

Contact us

Manakula Vinayagar Institute of Technology

Kalitherthalkuppam ,Puducherry – 605 107

Phone: 0413 -2643007

Fax: 2643008,
2643014

Website:
www.mvit.edu.in