

"Where Mechanics, Electronics and Computing Converge"

DEPARTMENT OF MECHATRONICS ENGINEERING

A.Y. 2025-26 (SEM-I) • December 2025



Welcome and best wishes to all the friends of the Department who receive this Newsletter.

This Newsletter is an attempt towards achieving Motivation. This is one of the first university affiliated departments in the Savitribai Phule Pune University to offer a Bachelor of Engineering degree program in Mechatronics Engineering.

Vision, Mission & PSO

Vision

To be a centre of excellence in mechatronics engineering producing competent professionals capable of developing innovative solutions for industry and society.

Mission

M1: Providing quality education in interdisciplinary domains through integration of hardware and software systems, while fostering professional ethics and lifelong learning for industry and societal needs.

M2: Equipping students with skills to design, develop, and implement efficient, reliable, and socially relevant engineering solutions through teamwork, innovation, and effective communication.

M3: Promoting innovation, practical learning, and strong industry interaction, enabling students to address real-world challenges and pursue research, entrepreneurship, and emerging technologies.

Program Specific Outcomes (PSO)

PSO1: To be able to apply fundamentals of mechanical, electrical, electronics and control engineering to design, analyze and maintain a mechatronics system.

PSO2: To be able to develop and implement solutions for industrial and societal problems applying multidisciplinary engineering principles.

MESSAGE FROM HEAD OF THE DEPARTMENT



Dr. Sonali S. Patil

Head of Department, Mechatronics

It gives me immense pleasure to welcome you to this edition of the Mechatronics Engineering Department Newsletter. Our department has always been committed to fostering a culture of innovation, creativity and technical excellence, bridging the gap between theory and real-world applications. Mechatronics Engineering, being an interdisciplinary field that integrates mechanical, electronics, computer and control systems, opens a world of opportunities for our students to explore smart technologies, automation and Industry 4.0 solutions.

This newsletter is a testament to the remarkable achievements of our students and faculty. It highlights the academic, research and co-curricular activities that help our students develop critical thinking, problem-solving skills and practical knowledge. From expert lectures and workshops to industrial visits and innovative projects, every initiative is designed to inspire learning, enhance professional competence and prepare students for the dynamic challenges of the engineering world.

I encourage all students to participate actively, embrace challenges and pursue excellence in every endeavour. Let us continue to foster a spirit of curiosity, innovation and collaboration that contributes to individual growth and advances the field of Mechatronics Engineering. Together, we can shape a future where technology and creativity go hand in hand.

- Dr. Sonali S. Patil (HoD Mtrx.)

EDITOR'S VIEW

It is a pleasure to present this edition of the Mechatronics Engineering Department Newsletter. The activities and achievements featured here reflect the hard work and innovative spirit of our students and faculty. We hope this issue inspires continuous learning and fosters stronger collaboration within the department.

- Asst. Prof. Akshay U. Padekar (Faculty Editor)

Expert Lectures

Expert Lecture on "Automation in Automobile Sector"

Date: 19th September 2025

The department organised an expert lecture on Automation in the Automobile Sector, delivered by Mr. Mohemmed Jamadar, Manager at the Automotive Research Association of India (ARAI), Pune. The session gave valuable insights into the role of automation in modern vehicle manufacturing, including robotics in assembly lines, advanced quality inspection systems and smart diagnostics.

The expert also highlighted emerging trends such as electric mobility, autonomous driving and connected vehicles, and stressed the growing demand for skilled engineers in automotive automation. Students gained a clearer understanding of industry expectations and future technological directions.

Expert Lecture on “CATIA for Smart Product Development”

Date: 20th September 2025

To enhance students’ design and product development skills, the department hosted an expert lecture on CATIA for Smart Product Development. The session demonstrated CATIA’s capabilities in 3D modelling, digital prototyping, design simulation and product lifecycle management, reflecting its wide use in the manufacturing and product engineering industry.

Students learnt how advanced CAD platforms enable faster and more efficient product development, from initial concept to final manufacturing. The lecture also highlighted current industry expectations and the importance of software proficiency for careers in product design and development.

Expert Lecture on “Thermodynamic Analysis of PCB in ANSYS”

Date: 30th October 2025

An expert session on Thermodynamic Analysis of PCB in ANSYS was conducted for Second Year Mechatronics Engineering students, highlighting the role of thermal simulation in PCB design. The resource person demonstrated how ANSYS tools can be used to analyse heat distribution, temperature rise and cooling strategies for printed circuit boards under real operating conditions.

Students learnt how to define material properties, apply boundary conditions and interpret simulation results to improve PCB reliability and performance. The session strengthened their awareness of thermal management in electronics and the growing demand for CAE-based analysis in modern product development.



Industrial Visit

Industrial Visit to Kalyani Maxion Wheels Pvt. Ltd., Chakan, Pune

Date: 30th September 2025



As part of experiential learning, students visited Kalyani Maxion Wheels Pvt. Ltd. to observe industrial operations and manufacturing technologies. They saw the complete wheel production process, including metal forming, heat treatment, welding, machining, surface finishing and quality inspection.

Industry experts explained how automation, robotics and CNC systems deliver high precision and productivity in automotive wheel manufacturing. Students also learnt about material selection, safety standards and modern quality assurance practices.

The visit bridged the gap between classroom learning and real-world industrial applications, and inspired students to explore careers in manufacturing, design and automation in the automotive sector.

Events

Five Days Training Workshop on “Industry Automation, Robotics with IIoT”

Date: 13th to 17th September 2025

The Department of Mechatronics Engineering conducted a five-day hands-on training workshop on Industrial Automation, Robotics and IIoT. It aimed to bridge the gap between academic learning and current industrial practice, giving students exposure to smart manufacturing environments and Industry 4.0 technologies.

Students took part in technical sessions on PLC programming, HMI development, an introduction to SCADA and robotic arm control. Practical demonstrations on modern industrial hardware let them interface sensors, actuators and communication modules for real-time automation tasks. Special emphasis was placed on industrial data acquisition and monitoring using IIoT platforms, and their role in predictive maintenance and smart factory operations.

Industrial experts shared insights into automation trends, workforce demands and industry expectations, and interactive Q&A sessions helped students understand real-world applications of robotics and IIoT in the automotive, manufacturing and process industries.

The workshop boosted students’ confidence and prepared them for emerging opportunities in automation and robotics. Participants said the hands-on experience and exposure to professional tools strengthened their problem-solving and system-integration abilities.



Academic Toppers

Congratulations to our toppers for their hard work and excellent results!

BE (Final Year)

RANK 1	RANK 2	RANK 3
		
Saurabh Radhesham Bante SGPA: 8.98	Rehan Rajesaab Mulla SGPA: 8.35	Aditya Amol Mali SGPA: 7.79

TE (Third Year)

RANK 1	RANK 2	RANK 3
		
Ashutosh Umashankar Agarwal SGPA: 9.57	Aryan Sanjay Barbade SGPA: 9.29	Prajakta Kishor Kulkarni SGPA: 9.12

SE (Second Year)

RANK 1	RANK 2	RANK 3
		
Uday Santosh Taware SGPA: 9.73	Parth Baban Konde SGPA: 9.45	Sanskruti Atul Deokar SGPA: 9.27

Editorial Board & About Us

Editorial Board

STUDENT EDITOR

Sumedh Kamble

FACULTY EDITOR

Asst. Prof. Akshay U. Padekar

Department of Mechatronics
Engineering

About the Institute

Marathwada Mitra Mandal's Institute of Technology, Lohgaon Pune was established in 2008 and conducts the following courses leading to a Bachelor's Degree in Engineering:

- Computer Engineering
- Mechatronics Engineering
- Mechanical Engineering

HEAD OF DEPARTMENT**Dr. Sonali S. Patil**

- Civil Engineering
- Artificial Intelligence & Data Science
- Robotics & Artificial Intelligence

All these courses are approved by All India Council for Technical Education (AICTE), New Delhi, sanctioned by Govt. of Maharashtra and affiliated to Savitribai Phule Pune University. The Marathwada Mitra Mandal Society, Pune was established in 1963.

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