

MMCOE

# YANTRADNYA

JANUARY 26

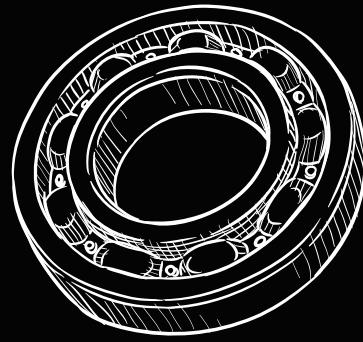
NEWSLETTER

ISSUE 17

AN INVITATION TO EXPLORE THE DEPARTMENT'S EXCELLENCE,  
INNOVATION, AND THE JOURNEY OF FUTURE ENGINEERS.

DEPARTMENT OF  
**MECHANICAL ENGINEERING**

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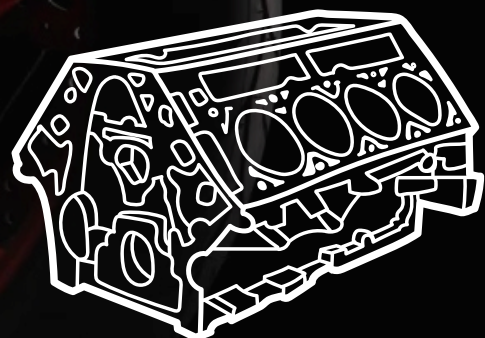
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# About The Department

Mechanical Engineering is one of the most versatile branches of engineering, influencing every aspect of modern life – from the human body to complex machines and advanced industrial systems. Mechanical engineers transform ideas into real-world solutions, playing a crucial role in industries such as automotive, aerospace, robotics, electronics, manufacturing, and energy systems.

Started in 2006, the Mechanical Engineering Department is one of the most dynamic departments of the institute, with an intake of 120 for Undergraduate (UG), 6 for Postgraduate (PG) and 30 for Working Professional (WP). The department provides a strong academic environment supported by well-equipped laboratories, workshops, department library, and modern classrooms designed for an effective learning experience.

With a focus on innovation and practical learning, the department continuously adopts new teaching methodologies to enhance the quality of education. Guided by experienced and dedicated faculty members, students are encouraged to explore their potential both inside and beyond the classroom.

To promote technical exposure and professional development, the department actively supports student participation in co-curricular and technical activities through collaborations with professional bodies such as SAEINDIA, ISHRAE, ASHRAE, and ISTE.

## Vision

“Excellence in Mechanical Engineering for global competency and social welfare”

## Mission

- To develop professional skills through student centric activities and the industry interactions.
- To prepare students for higher education, research and innovation.
- To make globally competent and socially committed Mechanical Engineers with morals and ethical values.



# From The HOD's Desk

It gives me immense pleasure to welcome you to the Department of Mechanical Engineering. Since its inception in 2006, the department is committed to nurture technically competent, socially responsible, and ethically strong engineers. We have Undergraduate (UG), Postgraduate (PG) and Working Professional (WP) programs. Our UG program is accredited twice by the most prestigious academic agency National Board of Accreditation (NBA). We have grown into one of the most vibrant and dynamic departments in the region.

At the core of our academic philosophy lies a strong emphasis on Outcome-Based Education (OBE). We constantly strive to upgrade our teaching-learning methods to meet global standards, incorporating innovative practices and industry-relevant skills. Our students benefit from a unique blend of rigorous academics and hands-on experience through internships, industrial projects, and cutting-edge research exposure.

The department is home to vibrant student chapters such as SAEINDIA (BAJA, Supra, Efficycle), ISHRAE, ASHRAE, IE(I), ISTE, and others, which offer excellent platforms for students to develop their technical and leadership skills. These associations, along with our skill development programs, provide ample opportunities for experiential learning, teamwork, and innovation.



**Dr. Vikas R. Deulgaonkar**  
**Professor & HOD**

We take pride in fostering all-round development of our students-technically, professionally, and personally-preparing them to thrive in a rapidly evolving engineering landscape. With the emergence of new technologies like Artificial Intelligence, Machine Learning, IoT, Data Science, and Electric Vehicles, the traditional boundaries of mechanical engineering are expanding, opening up a diverse array of career paths.

We welcome all aspiring engineers to be a part of our journey of excellence, innovation, and societal impact.



# Meet The Team



Ms. Asma Parkar  
**Faculty Coordinator &  
Chief Editor**

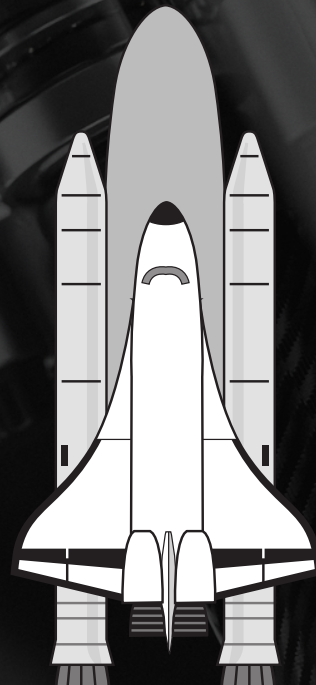
It gives me great pleasure to present the Seventeenth edition of our departmental newsletter, "YANTRADNYA." This publication reflects the collective creativity, dedication, and enthusiasm of our faculty members and students who have contributed their ideas and efforts

The newsletter beautifully captures both the technical and artistic talents of our department. Each section highlights the diverse activities, achievements, and events that were thoughtfully planned and successfully conducted during the year. The overwhelming participation and response from students and faculty alike truly demonstrate the vibrant spirit of our department.

This edition would not have been possible without the determination, creativity, and perseverance of our students, who continuously pushed their boundaries to transform their ideas into reality. Their efforts, combined with the constant guidance and support from our faculty members, have helped uphold and strengthen the legacy of YANTRADNYA.

I sincerely appreciate the invaluable support and encouragement that this newsletter has received from both faculty and students at every stage. I hope our readers enjoy this edition and find inspiration in the stories, achievements, and creativity showcased within its pages.

I extend my best wishes for the continued success of YANTRADNYA and hope that this year's edition receives the same love and support that it has always been blessed with.



It has been an immensely rewarding experience writing, editing, and curating the 17th issue of the YANTRADNYA newsletter. The journey, spanning conceptualization, theme selection, and refinement of each section, has been both challenging and deeply fulfilling.

Every aspect of this publication, including structuring, editing, and final compilation, demanded attention to detail and commitment to quality. This newsletter truly reflects the spirit and dynamism of the Mechanical Engineering Department at MMCOE.

I sincerely hope readers find this issue engaging, insightful, and worth exploring, just as much as it was fulfilling to bring it to life.



**Sumedh Bansode**  
**Student Editor**



**Vaibhavi Pawar**  
**Student Co-Editor**

Contributing to YANTRADNYA newsletter has been a meaningful journey. From refining and editing topics to gathering event memories and organizing them into a cohesive narrative, the entire process was both engaging and enriching.

The selection of photographs and coordination of various elements were carried out throughout the preparation. This process allowed me to support the team while ensuring that the final presentation remained cohesive and well-structured.

Each section reflects the effort to document and present the activities of the Mechanical Department at MMCOE. I hope this edition resonates with readers.





# PEOs, PSOs

## PROGRAM EDUCATIONAL OBJECTIVES ( PEOs )

Graduates from our program will :

- Apply professional skills for solving the problems in mechanical engineering & related fields.
- Demonstrate ethics and concern for society and the environment.
- Embrace lifelong learning through higher studies, research and innovation

## PROGRAM SPECIFIC OUTCOMES ( PSOs )

Graduates from our program will :

- Apply advanced technologies of mechanical and allied engineering to address the challenges faced in Industry 4.0.
- Contribute to the project in the core and associated domain by using add-on skills like CAD, CAM and CAE.
- Develop the ability to innovate socially relevant products and systems by effectively utilizing resources.





# MoUs

SR NO.	INDUSTRY NAME	MOU DATE	OUTCOMES
1	Setco Spindles Pvt. Ltd.	21/12/2025	<ul style="list-style-type: none"> <li>• Industrial Visits</li> <li>• Internships for Students</li> <li>• Expert Lectures</li> <li>• Establishment of a Centre of Excellence</li> <li>• Hands-on Technical Training</li> <li>• Career Guidance &amp; Mentorship</li> <li>• Skill Development Programs</li> </ul>
2	Astute Career Counselling Academy, Pune	17/09/2025	<ul style="list-style-type: none"> <li>• Semester Abroad Program</li> <li>• Research Collaborations</li> <li>• Job-Oriented Programs</li> </ul>
3	ACORN Controls Pvt Ltd, Shivane, Pune	4/9/2025	<ul style="list-style-type: none"> <li>• Capstone Projects for UG Students</li> <li>• PBL Projects for UG Students</li> <li>• Research Proposal Submission</li> </ul>



4	Eleno Energy LLP Pune	20/07/2025	<ul style="list-style-type: none"> <li>• Student Internship</li> <li>• BE Projects</li> <li>• Student Development Program</li> <li>• Faculty Training</li> </ul>
5	Digitech Robotics India Pvt Ltd	22/03/2025	<ul style="list-style-type: none"> <li>• Short Term Industrial Training For Faculty</li> <li>• Industrial Visit</li> </ul>
6	PMS Robotics Research Centre, Pune	11/2/2025	<ul style="list-style-type: none"> <li>• Workshop on Hands-On Training of Integration of Robotic Arms</li> </ul>
7	Athena Automation	1/4/2024	<ul style="list-style-type: none"> <li>• Internship For T.E Students A.Y. 2025-26</li> </ul>



8	Accurate Sales & Services Pvt. Ltd., Pune	26/08/2024	<ul style="list-style-type: none"> <li>•Hands-on Expert Session</li> <li>• Industrial Visit</li> <li>• Faculty Visit</li> <li>•Syllabus Development</li> </ul>
9	Indian Institute of Management Bangalore (IIMB)	8/7/2024	<ul style="list-style-type: none"> <li>•Faculty Training on Lean Management Tools and Technique</li> </ul>
10	Maharashtra State Road Transport Corporation (MSRTC), S.T. Workshop, Dapodi, Pune	6/4/2024	<ul style="list-style-type: none"> <li>• BE Projects</li> <li>• Internships</li> </ul>
11	Mechatol Product Engineering Solutions, Private Limited	1/3/2023	<ul style="list-style-type: none"> <li>•Fully Sponsored Product Development Centre</li> </ul>



# Research and Faculty

## Faculty Publications

- **Dr. A.S. Suryawanshi:** Influential factors on measurements of the tribological properties of dental composite materials in evaluation using a pin-on-disk tribometer: A review, Nanoscience and Technology: An International Journal, Volume-16, Issue-3 June-2025.

Link: <https://www.dl.begellhouse.com/journals/11e12455066dab5d.html>

- **Dr. Rahul Yadav:** Assessing the Impact of Exhaust Gas Recirculation on the Emission Profile of a Diesel Engine Operating on Mohua Oil: An Experimental Study, Journal of Mines, Mines and Metals, Volume 73, Issue 6. June-2025

Link: <https://www.informaticsjournals.co.in/index.php/jmmf>

- **Dr. Rahul Yadav:** Dr. K. R. Patil, Performance Evaluation of Biodiesel Usage in Diesel Engines with Different Combustion Chamber Shapes, International Journal of Vehicle Structures and Systems, Volume 17, Issue 2, July -2025

Link: <https://yanthrika.com/eja/index.php/ijvss>

- **Vikas R. Deulgaonkar:** USTS: a high-sensitivity and stiff torque sensor for advanced robotic joints Mechanics Based Design of Structures and Machines, Taylor and Francis, Oct -2025.

Link: <https://doi.org/10.1080/15397734.2025.2574884>

- **Vikas R. Deulgaonkar:** A comprehensive review of topology optimization for wind turbine structural components: methods, applications, and experimental validations Next Research, Elsevier, Volume 2, Issue 4. Oct -2025,

Link: <https://doi.org/10.1016/j.nexres.2025.100967>



## Patents

Name of Inventors	Patent Title	Application No.	Status
Dr. Yadav Rahul Mhetre Abhijeet Vinayak Kulkarni Shardul Ashish Nikam Omkar Ramesh Pawar Suraj Vijay	Multi Directional Seam Welding Device	202521053215	Published
Krishnarao Rajaram Patil	Sensor Based System For Improving The Efficiency Of Solar Water Heating Assisting In Cold- Water Cons	202521053213	Published
Krishnarao Rajaram Patil	An Autonomous System For Detecting And Removing Plant Diseases	202521071177	Published
Krishnarao Rajaram Patil	Air Purification System For Detecting Carbon- Dioxide (Co2) Level	202521080266	Published



<p>Mr. Avinash Suresh Dhumale  Pathan Irfan Khajakhan  Kadam Sujeet Dayanand  Deshmukh Prasad Shivajirao  Mr. Sachin Shashikant Patil  Dr. Vikas R. Deulgaonkar</p>	<p>Two-Stage Pneumatic Actuation System With Robotic Arm</p>	<p>202521081491</p>	<p>Published</p>
<p>Sakpal Saniya Shreepad  Chinchwade Rajiv Rahul  Anasane Soham Sandip  Gulavani Ved Nilesh  Dr. Gadekar Tushar Dadasaheb  Dr. Deulgaonkar Vikas R.  Dr. Kirpekar Swanand</p>	<p>Helmet-Mounted Indicator System</p>	<p>202521099902</p>	<p>Published</p>
<p>Mr. Sanket Vasudev Manwar  Mr. Sagar Baban Adhude  Mr. Shivling Hawagirao Biradar  Mr. Avinash Samadhan Daud  Dr. Swapnil Lahane  Dr. Swanand Kirpekar</p>	<p>Automatic Fan Speed Regulation System</p>	<p>202521099950</p>	<p>Published</p>



# Department Activities

## Industrial Visit

Class	Industry / Organization	Dates
BE	Air-tech Engineering & Solutions, Bavdhan, Pune, Maharashtra	Tuesday, 04/11/2025
BE	Vadgaon Pumping Station, Vadgaon Bk., Pune, Maharashtra	Tuesday & Wednesday, 23/09/2025 & 24/09/2025
BE	Prabhat Tyres, Kothrud, Pune	Friday, 19/09/2025
BE	Vishwaj Energy Pvt Ltd, Hydro Electric Power Station, Wai, Satara	Saturday, 27/09/2025
TE	Johnson Plastosonic Pvt Ltd, Shivane, Pune, Maharashtra	Monday, 29/09/2025
TE	CARWALA garage, Bavdhan, Pune	Saturday, 27/09/2025
SE	Vighnaharta Technologies, Anant Pankh, Shirval , Satara	Wednesday, 12/11/2025



## Guest Lectures

1	Mr.Rajesh Mandlik, CEO & MD, Setco Spindles India Pvt Ltd, Pune, Expectations of Industry from Freshers, 14/07/2025
2	Mr.Vikas Dangat, Group Director, S. V. Group of Companies, Industry Expectation from Undergraduate Students, 28/07/2025
3	Mr. Nachiket Phadke, Director, ELENO Energy LLP Pune, Applications of Solid Mechanics in Creditworthiness Design, 12/08/2025
4	Mr. Hrushikesh Sathe, Team Leader and CAE Engineer, Cummins India, Pune, Vibration Case Studies, 19/09/2025
5	Mr. Atul Chavan, Technical Head, Onward Technologies Ltd, Pune, Use of MATLAB, Simulink, Simulink Test Toolbox, and Model Based Development Engineering, 01/10/2025
6	Mr. Rohan Prabhu, Technical Specialist, Knorr Bremse Technology Centre Pune, Applications of Machine Design in New Product Development, 07/10/2025



7	Mr. Darshan Shaha, Partner (Sales & Marketing), Zen Engineering Solutions Pune, Opportunities for Mechanical Engineers in HVAC&R Industry, 10/10/2025
8	Mr. Jayesh Chaudhari, Business Head, Tejas Solutions, Pune, Principles of Centrifugal Pump and its Selection, 10/10/2025
9	Mrs. Rushali M. Kakade, Senior Software Developer, Tata Technologies, Pune, Recent Trends in Automated Control Systems, 11/10/2025
10	Ms. Pallavi Patil, Director, CPS Pvt. Ltd., Pune Case studies on Industrial Engineering, 11/10/2025
11	Mr Pravin Jedhe, Process Industry Expert, Chemical Process Industry Consultant, Applications of Heat and Mass Transfer in Process Industries, 14/10/2025



# Dexterity

Dexterity is a National Level Technical event which provides platform for students to showcase their technical skills. This Year Mechanical engineering department had organized three events under "Dexterity 2K25-26" on 24th of January 2026.

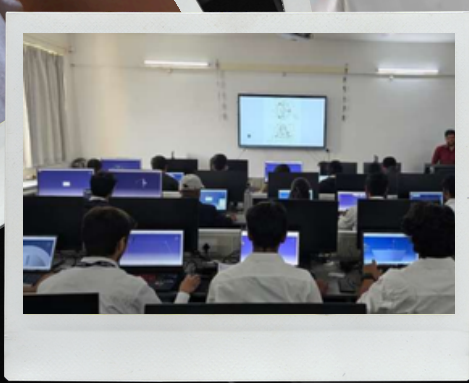
The events hosted by Mechanical engineering department are:

- 1) Mech Mind
- 2) CAD War
- 3) Shark Tank

Name of Event	Winner	Name of Student	Name of College
Mech Mind	1st	Jaanhavi Bopalkar	MMCOE, Pune
		Gauri Patil	MMCOE, Pune
	2nd	Tanmay Dhande	MMCOE, Pune
		Prasad Mahajan	MMCOE, Pune
	3rd	Aditya Mohol	MMCOE, Pune
		Neel Patil	MMCOE, Pune
Shark Tank	1st	Pranav Bhuram	MMCOE, Pune
		Ishan Desai	MMCOE, Pune
	2nd	Bhavesh Kutemate	MMCOE, Pune
		Adhiraj Kale	MMCOE, Pune
	3rd	Vedshree Dangat	MMCOE, Pune
		Yogesh Paliwad	MMCOE, Pune
CAD War	1st	Aakash Nande	MMCOE, Pune
	2nd	Kalpak Patarkar	MMCOE, Pune
	3rd	Nikhil Pendse	MMCOE, Pune



# Dexterity Photo Gallery



# Project Based Learning



Project Based Learning (PBL) exhibition of Mechanical Department was held on 04/11/2025 at 10.00 AM. The Project Exhibition was spread over one day and has a number of students, and teachers participating and collaborating hand in hand to make the event successful. The event started at 10. 00 AM and continued till 02.00 PM. The judging panel had to judge the participants that put up their display and give certificates to them, Industrial Experts are invited to do evaluation of the same. Novelty of this activity is that, the Department through its strong industrial connect undertook the industrial problems for Projects.

To ensure that all the projects are assessed as per industry standards, industry experts were invited as the judges for the exhibition. Industry experts were

- 1.Mr. Vinayak Shinde, Proprietor, Stalwart Technology, Bhosari, Pune
- 2.Mr. Yogesh Ghorpade, AIML Consultant, Pune.

On the 4<sup>th</sup> November, 2025 the event was inaugurated by the Hon. Principal Dr. S. R. Sakhare, Head of department Mechanical Dr. V. R. Deulgaonkar. The event started by the Hon. Principal Dr. S. R. Sakhare by giving the motivational speech. The judges went to each table and meticulously marked them according to their set up.

Total Number of Project Show Cased - 32

Total Number of Students -160



# PBL Photo Gallery



# Student Association

Mechanical Engineering Students Association (MESA) was founded in 2013 under the Department of Mechanical Engineering with the aim of nurturing student growth beyond academics. Throughout the year, MESA actively conducts a wide range of events including community outreach programs, alumni meetups, expert lectures, and engaging quiz competitions.

These initiatives are designed to enhance both technical knowledge and interpersonal skills among students. The association follows a structured recruitment process annually, selecting passionate individuals through interviews. MESA serves as a dynamic platform where students can explore their potential, develop leadership qualities, and showcase their talents, ultimately contributing to their overall personal and professional development.

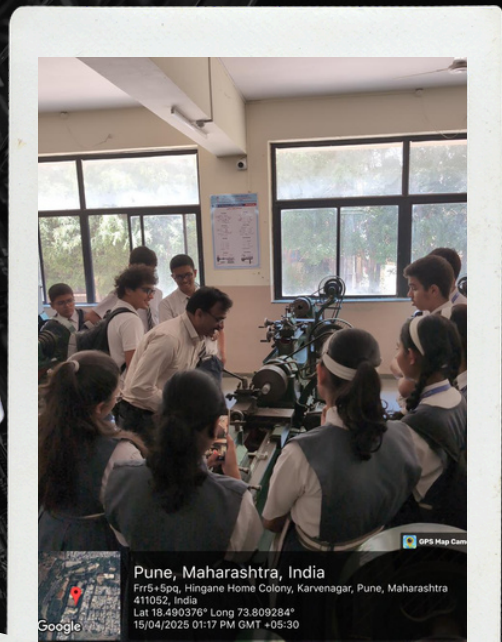
Sr. No.	Designation	Name of Student	Class
1	Mr. Anish Shankar Indulkar	President	BE
2	Mr. Satyajee Sandip Dhumal	Vice-President 1	BE
3	Mr. Parth Abhijit Patake	Vice-President 2	TE
4	Ms. Lakhi Khandelwal	Secretary	TE
5	Mr. Tejas Abhijit Baichwal	Joint Secretary 1	BE
6	Ms. Mansi Bibhishan Shelke	Joint Secretary 2	TE



7	Mr. Tanmay Jagdish Puranik	Technical Head	TE
8	Mr. Atharva Dhananjay Kulkarni	Joint Technical Head	TE
9	Mr. Rushi Kulkarni	Publicity Head	TE
10	Ms. Vaibhavi Rajendra Gaikwad	Joint Publicity Head 1	BE
11	Ms. Riya Dattatray Jori	Joint Publicity Head 2	BE
12	Mr. Om Dalvi	Treasurer	BE
13	Mr. Vipul Sandeep Kadambande	Social Media Head	BE
14	Mr. Saras Prashant Sutrave	Joint Social Media Head	TE
15	Mr. Aryan Arun Khase	Sponsorship Head	BE



# MESA Photo Gallery



# Student Achievements

Sr. No.	Name of student	Name of award	Agency	Date
1	Shravan Londhe	Secured Second Place in Pune City Zone Intercollegiate Fencing Men (EPEE Event)	SPPU Pune City Zone Intercollegiate	11/9/2025
2	Amey Phuse	Secured Second Place in Pune City Zone Intercollegiate Swimming Men ( 50 Meter breast Stroke) competition	SPPU Pune City Zone Intercollegiate	20/09/2025
3	Amey Phuse	Secured Third Place in Pune City Zone Intercollegiate Swimming Men ( 200 Meter breast Stroke)	SPPU Pune City Zone Intercollegiate	20/09/2025



4	Saras Sutrave	Secured Second Place in Pune City Zone Intercollegiate Swimming Men ( 1500 Meter Free Style) competition	SPPU Pune City Zone Intercollegiate	20/09/2025
5	Lakhi Khandelwal	Secured Third Place in Pune City Zone Intercollegiate Swimming Women ( 50 Meter breast Stroke)	SPPU Pune City Zone Intercollegiate	20/09/2025
6	Rushikesh Sonawane	First Place in Pune City Zone Intertcollegiate Kabaddi Men competition	SPPU Pune City Zone Intercollegiate	09/09/2025 to 10/09/2025
7	Abhishek Mulik	held at Savitribai Phule Pune		
8	Atharva Dhavale	University Indoor Games hall on		



9	Ayush Borikar	Third Place in Pune City Zone Intertcollegiate Table Tennis Men competition	SPPU Pune City Zone Intercollegiate	26/09/2025
10	Rushikesh Sonawane	Selected as a team member of Savitribai Phule Pune University Kabaddi Men team	West Zone Inter University Kabaddi competitions to be held at Medicaps University, Indore, Madhya Pradesh	1/10/2025 to 05/10/2025





“Hard work performed in a disciplined manner will in most cases keep the worker fit and also prolong his life.”

-Sir Mokshagundam Visvesvaraya  
(Father of Engineering India)

