

Department of Mechanical Engineering



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Department's Vision and Mission

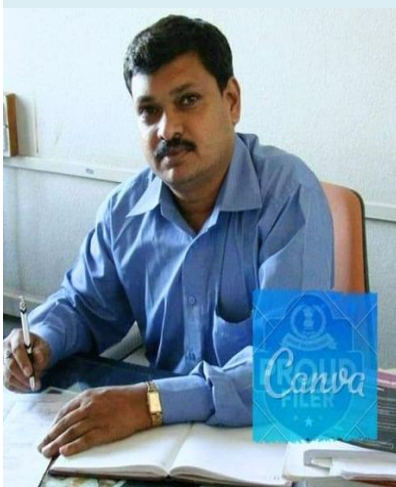
Vision

- **To be the center of excellence that nurtures technologically competent and industry ready mechanical technicians having high values and national concern.**

Mission

- To impart technical education using productive learning resources to develop intellectual competency and life long learning attitude.
- To adopt well coordinated state of art tools and technology to develop technical, ethical and eco-friendly skills.
- To provide advanced practical tools to solve broad based problems and develop motor skills.

HOD's Desk



Greetings to all the readers of this departmental magazine “YANTRIKI”.. Education is the development of individual according to one’s needs and demands of society, and contributes to building socio-economic infrastructure of nation. Our department has been playing a crucial role in the development of academic excellence. Right from its establishment, the department has been contributing to provide the industries, the best Mechanical Technician with smart brains and talents. I sincerely appreciate all the members of staff who have contributed besides their academic activities and those who have taken strenuous efforts in bringing out the departmental magazine successfully. Wish you Good Luck!



Departmental Events

STATE LEVEL PROJECT EXHIBITION & COMPETITION



MSBTE State Level Project Competition (PUNE Region)

30 groups from various colleges participated in this project exhibition, showcasing their projects. The Mechanical Department took the initiative for welcoming the guests and fellow members for the event. The arrangements for program and exhibition was successfully completed by hard work and team spirit of all the members, to make the event grand success.

ENGINEER'S DAY CELEBRATION

The students enthusiastically celebrated Engineers' Day outdoors, embracing the spirit of innovation and teamwork. The event featured a range of activities, including technical games, model exhibitions, and interactive workshops that highlighted the significance of engineering in shaping the world. Students also engaged in a collaborative project-building competition, showcasing their creativity and problem-solving skills. The open-air setting added to the energy and camaraderie, fostering a deeper appreciation for engineering as a profession. The day concluded with a motivating address by faculty, inspiring future engineers to continue striving for excellence.





EXPERT LECTURES



An expert lecture on "The Role of Engineers in Society" was delivered by Mr. Pranav Gurav, a distinguished Design and Development Engineer. With his vast knowledge and practical insights, Mr. Gurav highlighted the pivotal role engineers play in shaping society, driving innovation, and addressing real-world challenges. His engaging session emphasized the importance of ethical practices, creativity, and sustainability in engineering. The lecture was an inspiring experience, motivating students to embrace their responsibilities as future engineers dedicated to societal progress.



Mr. Sandip Soley, a distinguished expert from Dazzle Dynacoates, Sangli, delivered an insightful guest lecture on surface coating technology for mechanical engineering students. His session delved into the fundamentals and advancements in surface coating processes, highlighting their critical role in enhancing material durability, corrosion resistance, and aesthetic appeal. Drawing from his extensive industry experience, Mr. Soley provided practical examples and shared valuable insights into modern coating techniques and their applications in various engineering domains. The lecture was highly engaging and enriched students with a deeper understanding of surface engineering, bridging the gap between academic concepts and industrial practices.





Industrial Visits



VISIT TO WATER PURIFICATION PLANT, MIRAJ

The students of mechanical department visited the water purification plant in Miraj to gain practical insights into water treatment processes. They observed stages like sedimentation, filtration, and chlorination, while the technical team explained the plant's operations and sustainable practices. The visit enhanced their understanding of industrial applications and the importance of water management.

VISIT TO JAGADEESH STEEL AND CASTING INDUSTRY, MIRAJ.

The students of mechanical department visited Jagadeesh Steel and Casting Industry to gain practical exposure to manufacturing processes. They observed operations such as molding, casting, and machining, while the industry experts explained quality control and production techniques. The visit provided valuable insights into the workings of the steel and casting industry, enhancing the students' technical knowledge and understanding of real-world applications.





Top Placements in 2024 Pass out



Name: Sanskar Karav
Company: Spark Minda .Ltd
Stipend Package/ CTC: 4.50/ Annum



Name: Rushikesh Patil
Company: Spark Minda. Ltd
Stipend Package/ CTC: 4.50/ Annum



Name: Sanika Jadhav
Company: Wipro Pari
Stipend Package/ CTC: 4.10/ Annum



Name: Umar Sanade
Company: Gramsim Industries. Ltd (Birla Paints)
Stipend Package/ CTC: 3.3 / Annum



Name: Vrushabh Patil
Company: Knauf Ceiling Solutions
Stipend Package/ CTC: 2.6/ Annum



Name: Harsh Kadam
Company: Bharat Forge
Stipend Package/ CTC: 2.04/ Annum



Achievements by Faculties & Students

Congratulations

Toppers from Mechanical Engineering
2023-24



Ms. Kalyani Phadtare
F. Y. (Mechanical)
82.89 %



Mr. Pandurang Lad
S. Y. (Mechanical)
83.13 %



Mr. Prathmesh Sakhare
T. Y. (Mechanical)
86.40 %

From : Principal, HoD & All Teaching – Nonteaching Staff
Mechanical Engineering Department

TOPPERS OF THE DEPARTMENT

The students of Mechanical Department gracefully achieve good percentage for respective yearly academic performances. All the department members, teaching and non teaching staff heartily congratulates our beloved students.

The boys team of **Mechanical Department** actively participated in many group games, empowering their team and team spirit. The team bagged the **winner's position** for both individual and team sports. This definitely encourages more participation and develops bond among students. Leadership qualities, caring for friends and team members and multiple qualities are enhanced throughout the sports week and make wonderful memories to keep forever.





Student Activities



The students took initiative for cleaning the hostel and surrounding area and conduct a Cleanliness Drive. Taking this opportunity to show the team work and unity for completing given tasks. The students actively participated to clean the environment. It was a great team work.

The students are always at peak of happiness to actively participate at sports events. They enjoyed participating in games like kabaddi, cricket, football, kho-kho and individual games like 200m running, 400m running, javelin throw, disk throw, weight lifting and many more individual and team games.



The students of the Mechanical Engineering Department celebrated Teachers' Day with great enthusiasm and gratitude at the institute. The event commenced with a heartfelt welcome address, followed by vibrant cultural performances and token speeches highlighting the invaluable contributions of teachers. Students presented handmade cards and flowers as a gesture of appreciation for their mentors' dedication and guidance. The celebration fostered a sense of camaraderie and respect, making the day memorable for both students and faculty members. The event concluded with a vote of thanks, leaving everyone inspired and motivated.





Technical Articles by Students 3D Printing Technology

3D printing or additive manufacturing is a process of making three dimensional objects from a digital file. The creation of a 3D printed object is achieved using additive processes. In an additive process an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced cross-section of the object.

There is one exception though, and it's called volumetric 3D printing. With volumetric printing entire structures can be formed at once without the need for layer-by-layer fabrication. It's worth noting, however, that as of now, volumetric technology is primarily in the research phase.

3D printing is the opposite of subtractive manufacturing which is cutting out / hollowing out a block of material with for instance a milling machine. 3D printing enables you to produce complex shapes using less material than traditional manufacturing methods

Working of 3D Printing

It all starts with a 3D model. You can opt to create one from the ground up or download it from a 3D library.

3D Software

There are many different software tools available. It is often recommend beginners to start with Tinkercad. Tinkercad is free and works in browser, there is no need to

on. Tinkercad offers beginner lessons and has a built-in feature to export the model as a printable file e.g. STL or .OBJ. After having a printable file, the next step is to prepare it for available 3D printer. This is called slicing.

Slicing: From file to 3D Printer

Slicing basically means slicing up a 3D model into hundreds or thousands of layers and is done with slicing software. When printable file is sliced, it's ready for use on 3D printer. Feeding the file to printer can be done via USB, SD or Wi-Fi. Sliced file is now ready to be 3D printed **layer by layer**.

3D Printing Industry

Adoption of 3D printing has reached critical mass as those who have yet to integrate additive manufacturing somewhere in their supply chain are now part of an ever-shrinking minority. Where 3D printing was only suitable for prototyping and one-off manufacturing in the early stages, it is now rapidly transforming into a production technology. Most of the current demand for 3D printing is industrial in nature. Acumen Research and Consulting forecasts the global 3D printing market to reach \$41 billion by 2026. As it evolves, 3D printing technology is destined to transform almost every major industry.

Mr. Sagar Arun Patil

TY Mech



Social Article Youth and Social Media

Youth and Social Media: A Double-Edged Sword.

Social media has become an inseparable part of modern life, especially for the youth. Platforms like Instagram, TikTok, Snapchat, and Twitter are not just entertainment hubs; they serve as spaces for self-expression, communication, and exploration of ideas. However, while social media offers numerous benefits, it also comes with challenges that demand attention.

The Positive Impact

1. **Connectivity:** Social media enables young people to stay connected with friends and family, no matter where they are. It fosters a sense of belonging and helps build global networks.
2. **Learning Opportunities:** Platforms offer access to educational content, tutorials, and webinars, empowering youth to learn beyond the classroom.
3. **Awareness and Activism:** Social media has become a tool for raising awareness about social issues, encouraging young people to engage in activism and contribute to positive change.
4. **Creativity and Self-Expression:** Through videos, photos, and writing, youth can showcase their talents and express their unique perspectives

The Negative Impact

1. **Mental Health Concerns:** Excessive use of social media can lead to anxiety, depression, and a distorted self-image due to unrealistic beauty standards and comparisons.
 2. **Addiction:** The constant need to check notifications and scroll feeds can lead to dependency, impacting productivity and real-life relationships.
 3. **Cyberbullying:** Many young people face online harassment, which can have severe psychological consequences.
 4. **Privacy Risks:** Youth often share their personal information without understanding long-term implications, making them vulnerable to data misuse.
- Striking a Balance to maximize the benefits of social media while minimizing its harms, young people should adopt mindful usage habits :Set time limits for daily usage. Follow accounts that inspire positivity and growth. Learn about online privacy and take steps to protect personal data. Parents, educators, and policymakers also play a crucial role in guiding young people to use social media responsibly. With the right balance, social media can be a powerful tool for youth to thrive in a connected world.