MECHANICAL ENGINEERING DEPARTMENT

YASHO TECH MECH

WE ARE GEARS OF TOMORROW

YSPM

Odd Sem 2022-2023

YSPM's Yashoda Technical Campus, Satara

Mechanical Engineering Department

YASHO TECH MECH

Odd Semester **2022-23**

OVERVIEW OF THE DEPARTMENT

The Mechanical Engineering program leading to the bachelor's degree in Mechanical Engineering (B. Tech.) is having a structured curriculum that prepares students for a broad range of career choices in the different areas of Engineering. The Course is intended for students whose career objectives require greater flexibility. Mechanical Engineering deals with material selection, design and production of tools, machines, and all other Mechanical equipment to be used in industries. Our Department prepares the students who are the driving forces behind many of our technologies and industrial processes including innovative products.

The Mechanical Engineering Department has been accredited with institute level accreditation program by National Assessment and Accreditation Council (NAAC) with B+ grade.

Our Departmental faculties are specialized in areas like Thermal Engineering, Design, Materials and Manufacturing & CAD/CAM etc. Our Students have been recruited in many reputed organizations.

Strength of Department

- Good infrastructure.
- Well-equipped laboratories.
- Well-qualified and experienced teaching faculties.
- Departmental Library facility for students.
- Personal Monitoring of Students with the help of Guardian Faculty Members
- Good academic performance
- Good Campus Placement Record
- Faculty Retention

Vision of the Department

To be identified as a department with excellence in academics by synergism of teaching-learning, skill development and research.

Mission of the Department

M1 : To develop state of the art facilities to stimulate faculty, staff and students to create, analyze, apply and disseminate knowledge.

M2 : To hone employability and entrepreneurship skills of the students through industry-institute interaction.

M3 : To create an environment for the students to excel in mechanical engineering field, engage in research and development activity and participate in professional activities.

M4 : To develop an ability to use techniques, skills, modern software and machine tools necessary in the practice of Mechanical Engineering Profession.

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Program Educational Objectives (PEOs)

PEO1 : Graduates should excel in engineering positions in industry and other organizations that emphasize design and implementation of engineering systems and devices.
PEO2 : Graduates should excel in best post-graduate engineering institutes, acquiring advanced degrees in engineering and related disciplines.
PEO3 : Alumni should establish a successful career in an engineering-related field and adapt to changing technologies.
PEO4 : Graduates are expected to continue personal development through professional study and self-learning.
PEO5 : Graduates should be good citizens and cultured human beings, with full appreciation of the importance of professional, ethical and societal responsibilities.

Program Specific Outcomes (PSOs)

PSO1 : Make the students employable in engineering industries.

PSO2 : Motivate the students for higher studies and research.

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Contributors

Faculty Name

Prof. Maner V B

Prof. Rathod M L

Prof. Nimbalkar P P

Prof. Raut S K

Prof. Atpadkar A B

Prof.Shivade A S

All Students of Department

Student coordinaters

1) Sawant Kailesh Somnath

2) Paramane Shivam Narendra

3) Kate Preeti Bapusaheb

4)Sakate Shivraj Mohan

5) Kunal Nandkumar Bagade

6) Kori Sachin Raju

Head of the Department
Dr.Tarang Shinde

Principal
Prof. Dr. D. S. Badkar

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Solid Works Innovation Day 2022

Dassault Systems had organized Solidworks Innovation Day on October 19 2022 at The Westin, Pune to launch the Solidworks 2023 version of the object modeling software Solidworks. Dr. Tarang R. Shinde, Head of the Department of Mechanical Engineering and Dean, Industry-Institute Interaction, MoU & IPR Cell, Faculty of Engineering, Yashoda Technical Campus, Satara, attended the program and discussed regarding installation of Solidworks at the institute with the officials from Solidworks suppliers. Solidworks is widely used by Mechanical and Civil Engineers and the expertise of the students in the same would certainly be beneficial for them to explore the opportunities in the field of modeling and simulation.

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Engineers Day 2022

MESA celebrated "Engineers' Day" on 15/09/22. An expert lecture program was arranged for the same which was presided by two resource persons. The first resource person was Mrs. Varsha Vhotkar who is an Executive Engineer at Wind mill subdivision, MSEDCL, Satara with 15 years' experience. The other resource person was Mrs. Avantika Sameer Yawatkar who is Asst. Engineer at Testing Division in MSEDCL, Satara. She is presently working as a member of Mahila Surksha Samiti, Satara. YTC Director, Dr. V. K. Redasani, felicitated the guests; Prof. Priyanka Yadav anchored the program. Dr. Tarang Shinde expressed vote of thanks.

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Robotics & Automation: The Future of Mechanical Engineering

Mechanical engineering has always been a driving force behind technological advancement, and the fields of robotics and automation are shaping the future of the industry. These technologies are transforming manufacturing, healthcare, logistics, and many other sectors, redefining the role of mechanical engineers in developing the systems and machines of tomorrow.

The Evolution of Robotics and Automation

Initially, robotics and automation were limited to repetitive tasks in manufacturing, such as welding and assembly. Over time, however, both fields have expanded into more complex and varied applications. Robotics is now used in everything from healthcare to space exploration, while automation has become integral to improving efficiency and reducing human error across industries like agriculture and logistics.

Robotics & Automation: A Mechanical Engineer's New Frontier

For mechanical engineers, robotics and automation present exciting opportunities. These technologies combine mechanical, electrical, and computer engineering, pushing the boundaries of what's possible in design, production, and problem-solving.

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Robotics & Automation: The Future of Mechanical Engineering

Impacting the mechanical engineering field:

1. Enhanced Manufacturing

Robots have revolutionized manufacturing by improving productivity, precision, and safety. Engineers are designing robots for tasks ranging from assembly to packaging, with a focus on making these machines adaptable and efficient. As automation becomes more widespread, engineers are also tasked with integrating intelligent systems into production lines, improving overall manufacturing processes.

2. Smart Manufacturing and Industry 4.0

Industry 4.0 is bringing forth a new era of smart manufacturing, where automation, IoT (Internet of Things), and artificial intelligence work together to optimize production. Mechanical engineers are designing interconnected systems that can respond to real-time data and predict maintenance needs, leading to more efficient and cost-effective operations.

3. Robotic Assistants in Healthcare

Robots are increasingly used in healthcare, assisting in surgeries, rehabilitation, and prosthetics. Engineers are developing medical robots that improve precision, reduce human error, and enhance patient outcomes. These innovations open up opportunities for engineers to design robots that are not only functional but also safe and comfortable for human interaction.

4. Automation in Logistics

Automation is transforming logistics with technologies like automated vehicles, drones, and robots. Engineers are designing systems to streamline the sorting, packing, and delivery processes. Automated systems are improving efficiency, reducing errors, and enhancing the speed of supply chains, especially with the rise of e-commerce.

5. Space Exploration

Robotics is critical for space exploration, where robots are used to explore planets, repair satellites, and assist astronauts. Engineers are working on building robots that can operate autonomously in space, enduring extreme conditions while performing complex tasks remotely.

BY
KORI SACHIN RAJU
TY Mech Student