



**VIVEKANAND EDUCATION
SOCIETY'S POLYTECHNIC
CHEMBUR, 400071**

MECHANZIA

2023 - 24

**DEPARTMENT OF MECHANICAL
ENGINEERING
VOLUME - 2**

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ABOUT DEPARTMENT

- The department of Mechanical Engineering started in the year 2018 with the intake of 60 seats. Mechanical engineering is the discipline that applies engineering physics, engineering mathematics, and materials science principles to style, analyze, manufacture, and maintain mechanical systems. It's one among the oldest and broadest of the engineering disciplines.
- The infrastructure and laboratory facilities are developed beyond curriculum to provide conducive environment for students.
- The engineering field requires an understanding of core areas including mechanics, dynamics, thermodynamics, materials science, structural analysis, and electricity. Additionally to those core principles, mechanical engineers use tools like CAD, Computer-Aided Manufacturing (CAM), and life cycle management to style and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, transport systems, aircraft, watercraft, robotics, medical devices, weapons, etc. It's the branch of engineering that involves the planning, production, and operation of machinery.
- To be a successful engineer, one has to be constantly updated with the emerging trends and technologies in the industry. Remember, learning is a lifelong process.

VISION

To produce mechanical engineers with technical competency driven by ethical values.

MISSION

- To impart value based quality education thus enabling students to meet up with the demands of industry as well as society
- To create technically expertise engineers with the desire for lifelong learning
- To provide platform for overall personality development of students

PROGRAM OUTCOME

- PO1-Basic And Discipline Specific Knowledge: Apply Knowledge Of Basic Mathematics, Science And Engineering Fundamentals And Engineering Specialization To Solve The Engineering Problems.
- PO2-Problem Analysis: Identify And Analyse Well-Defined Engineering Problems Using Codified Standard Methods.
- PO3-Design/ Development Of Solutions: Design Solutions For Well-Defined Technical Problems And Assist With The Design Of Systems Components Of Processes To Meet Specified Needs.
- PO4-Engineering Tools, Experimentation And Testing: Apply Modern Engineering Tools And Appropriate Technique To Conduct Standard Tests And Measurements.
- PO5-Engineering Practices For Society, Sustainability And Environment: Apply Appropriate Technology In Context Of Society, Sustainability, Environment And Ethical Practices. "
- PO6-Project Management: Use Engineering Managment Principles Individually, As A Team Member Or A Leader To Manage Projects And Effectively Communicate About Well-Defined Engineering Activities. "
- PO7-Life Long Learning: Ability To Analyse Individual Needs And Engage In Updating In The Context Of Technological Changes.

PROGRAM EDUCATION OUTCOME

- PEO1:- Provide socially responsible, environment friendly solutions to Mechanical Engineering related broad based problems adapting professional ethics.
- PEO2:- Adapt state-of-art Mechanical Engineering broad based technologies to work in multi disciplinary work environment.
- PEO3:- Solve broad based problems individually and as a team member communicating effectively in the world of work

PROGRAM SPECIFIC OUTCOME

- PSO1:-Modern Software Usage: Use latest Mechanical Engineering related software for simple design, drafting, manufacturing, maintenance and documentation of mechanical engineering components and processes.
- PSO2:-Equipment and Instruments: Maintain equipment and instruments related to Mechanical Engineering.
- PSO3:-Mechanical Engineering Processes: Manage Mechanical engineering processes by selecting and scheduling relevant Equipment, subtracts, quality control techniques and operational parameters.



HIGHLIGHTS OF TEACHING STAFF ACHIEVEMENTS

- **Mahesh Zope,,Mangesh Bidkar,Nikhil Shewale,Geetanjali Thakur,Pranit Nigade & Prathamesh Kasar has successefully completed the online course Youth leadership for climate action : Climate Change and water Management organized by Govt of Maharashtra (MYCA).**
- **Mahesh Zope,,Mangesh Bidkar,Nikhil Shewale,Geetanjali Thakur,Pranit Nigade & Prathamesh Kasar has successefully completed the online course Youth leadership for climate action : Energy Management organized by Govt of Maharashtra (MYCA).**
- **Mahesh Zope,,Mangesh Bidkar,Nikhil Shewale,Geetanjali Thakur,Pranit Nigade & Prathamesh Kasar has successefully completed the online course Youth leadership for climate action : Waste Management organized by Govt of Maharashtra (MYCA).**
- **Mahesh Zope,,Mangesh Bidkar,Nikhil Shewale,Geetanjali Thakur,Pranit Nigade & Prathamesh Kasar has successefully completed the online course Youth leadership for climate action :Biodiversity conservation organized by Govt of Maharashtra (MYCA).**
- **Mangesh Bidkar Completed Online course of Python For Mechanical Engg.**

INDUSTRIAL VISIT



Rolex pet plast
Rolex Pet Plast Plot No. L10, Murbad Midc Kudavali,
Murbad, Maharashtra 421401

Swami Vivekanand- You cannot believe in God until you believe in yourself.



**Reliance Energy Rd, Vraj Vihar,
Dahanu, Maharashtra 401601 via NH 48.**

Swami Vivekanand- You cannot believe in God until you believe in yourself.

Students Articals.

Python has become a vital tool in the field of mechanical engineering.

In mechanical engineering, Python helps in designing and analyzing machines and structures. With Python, engineers can write programs to solve complex mathematical equations and simulate how machines work before actually building them. This saves time and money.

Python is also used for data analysis. Engineers can gather data from sensors attached to machines and use Python to analyze this data. For example, they can predict when a machine might need maintenance or detect any faults early on.

Additionally, Python is handy for creating graphical interfaces. Engineers can develop user-friendly interfaces for controlling machines or visualizing data.

Moreover, Python is extensively used in automation. It helps in controlling robots and automated systems used in manufacturing processes.

In essence, Python is like a magic wand for mechanical engineers. It simplifies tasks, enhances efficiency, and opens up new possibilities in the field of mechanical engineering. Learning Python is thus crucial for aspiring engineers to stay ahead in the industry.

-Rohit Kaneri

Swami Vivekanand- You cannot believe in God until you believe in yourself.

Artificial Intelligence (AI) is transforming the automobile industry in amazing ways!

Artificial Intelligence (AI) is making big waves in the automobile industry, changing the way cars are built and driven.

Firstly, AI is improving safety on the roads. With advanced sensors and cameras, cars can now detect obstacles, pedestrians, and other vehicles, helping to prevent accidents. AI-powered systems can even take control of the car in emergency situations, like braking or steering to avoid a crash.

Secondly, AI is enhancing the driving experience. Features like adaptive cruise control and lane-keeping assist use AI algorithms to make driving easier and more comfortable. Some cars can even park themselves using AI technology!

Moreover, AI is revolutionizing vehicle design and manufacturing. AI algorithms analyze huge amounts of data to optimize the design of cars, making them lighter, more fuel-efficient, and safer. In factories, AI-controlled robots assemble cars with precision and speed, reducing production time and costs.

Furthermore, AI is paving the way for autonomous vehicles. These cars can drive themselves without human intervention, using AI to navigate roads and make decisions in real-time.

Overall, AI is transforming the automobile industry, making cars safer, smarter, and more efficient. As technology continues to advance, we can expect even more exciting innovations on the roads ahead!

-Tejas Sheth

Wind Power Water Pump: A Sustainable Solution

Imagine fetching water without relying on electricity or fuel! This dream is becoming a reality with the Wind Power Water Pump project.

Here's how it works: Instead of using traditional power sources, like electricity or diesel, this pump harnesses the power of the wind to lift water from the ground. It consists of a wind turbine, which captures the energy from the wind, and a pump mechanism that draws water from underground sources, like wells or boreholes.

The wind turbine spins when the wind blows, converting its energy into mechanical power. This power is then used to operate the pump, lifting water from the ground to the surface. The pump can be connected to a storage tank or directly to a distribution system, providing water for irrigation, livestock, or even for drinking in remote areas where electricity is scarce.

This project offers several benefits. Firstly, it provides a sustainable and eco-friendly alternative to traditional water pumps, reducing reliance on fossil fuels and lowering carbon emissions. Secondly, it offers a reliable source of water in areas with inconsistent access to electricity, improving livelihoods and agricultural productivity.

Overall, the Wind Power Water Pump project is a shining example of how renewable energy can be harnessed to address pressing challenges like water access in rural areas. By harnessing the power of the wind, we can create a greener and more sustainable future for all.

-Atharva Kharangate

Student Spotlights:-



**Tejas Sheth has been crowned Mr.
VESP 2023-24**



Manepatil Chaytanya Keep the General Secretarial roll for Anvesh 2023–2024.



**Atharva Kharangate has hold the position General
Secretery For Sphurti 2023-24.**

**Oh, life of a teenager, so full of strife,
A time of discovery, of joy and of life.
With each passing day, a new world to explore,
A journey of self-discovery, and so much more.**

**The laughter and tears, the triumphs and fears,
The ups and downs, the highs and the peers.
The pressure to fit in, the need to be me,
The search for identity, the quest to be free.**

**The world outside, a canvas so grand,
A stage for dreams, a place to take a stand.
The thrill of first love, the heart's sweet song,
The pain of loss, the tears that are long.**

**The friends we make, the memories we share,
The moments we cherish, the ones we repair.
The lessons we learn, the growth we gain,
The wisdom we acquire, the joy we obtain.**

**The life of a teenager, a rollercoaster ride,
A time of wonder, a season of pride.
So let us embrace it, let us live it with glee,
For it is a gift, a treasure to be.**

~Spruha Kale

चला जाऊया नव्या युगात

चला जाऊया नव्या युगात,
उन्हाळ्यातील या पावसात.

तंत्र जाणुनी नव्या युगाचे,
यंत्र बनव तू सुखी जीवाचे,
घाबरतोस का असा मुला?
हाती परिस तूझ्या ज्ञानाचे.

कुठे दूर अमेरिका नी?
कुठे आता अंटार्क्टिका?
अवकाश तंत्रज्ञानामुळे,
आपण शोधु लागलो त्रुटिका.

प्रकाशापरि AI हे तंत्र आले,
जनमानसाचे जीवन घडले,
भूत भविष्य लागले ओळखू
असे ज्योतिषबुवा मिळाले.

माणसाच्या बुद्धीची किमया,
करते साऱ्या जगावर माया,
शिकूया आता जोमाने,
नवे आविष्कार घडवूया.

- प्रतिभासुत(पी पी कासार)

DEPARTMENT OF MECHANICAL ENGINEERING

Odd Semester 2023-24

ACADEMIC TOPPERS

FIRST YEAR



AHER OMKAR
ANANT
79.29 %



SAWANT ASHISH
GUNDU
73.65 %



SHRUNGARPURE PRANAV
RAKESH
71.88 %

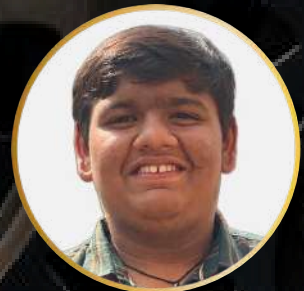
SECOND YEAR



BORADE BHAVESH
HEMANT
79.05 %



SAWANT SHREYANSH
RAMCHANDRA
78.32 %



PARTH VIJAY
MANEPATIL
77.37 %

THIRD YEAR



CHAYTANYA DEVDAS
MANEPATIL
91.62%



HEDAMBA KRISH
RAJESH
91.05%



LAHERWANI ABHISHEK
VINOD
90.38 %



Editor



PRATHAMESH KASAR