UPL UNIVERSITY
OF
SUSTAINABLE TECHNOLOGY

DEC 23 TO JUNE 24 | ISSUE 15

# YANTRAM

BI-ANNUAL E-MAGAZINE OF
MECHANICAL ENGINEERING DEPARTMENT

## AUTOVISTA INDIA: EXPLORING THE FUTURE OF THE INDIAN AUTOMOBILE INDUSTRY


www.upluniversity.ac.in

# CONTENT

# Vision & mission

## MECHANICAL ENGINEERING DEPARTMENT

### VISION:

To play an active role in producing globally competent mechanical engineers to make technologically proficient, innovative, enthusiastic, future leaders and responsible citizen possessing human values to contribute significantly to wards meeting global challenges

### MISSION:

To provide sound basic knowledge of basic principles of engineering by imparting theoretical and practical understanding of various aspects of Mechanical Engineering.

1. To explore Institute Industry linkage for fostering professional skill of students enabling them to become industry ready

2. To bring in good governance ,transparent evaluation system and professional standards for ethical and human values in students

3.To design and organise training programme to offer wide choice to industry and academia for their skills enhancement.

4.To design and organise training programme to offer wide choice to industry and academia for their skills enhancement.

5.To promote faculty and staff members to become resourceful, innovative and through various development programmes.

6. To serve society through innovation and excellence

## YANTRAM

### VISION:

To be a preeminent Instrument that depicts technical and nontechnical matters among the department.

### MISSION:

To be the great resource for the quality reporting and analysis of departmental stuffs.

# HOD'S MESSAGE

***It is with immense pleasure that I address you through "Yantram 2024," centered on the theme "Automobile and Vikshit Bharat" (Developed India). As we envision a progressive India, the role of mechanical engineering in the automobile sector becomes crucial. This industry not only advances mobility but also drives innovation, employment, and sustainable development.***

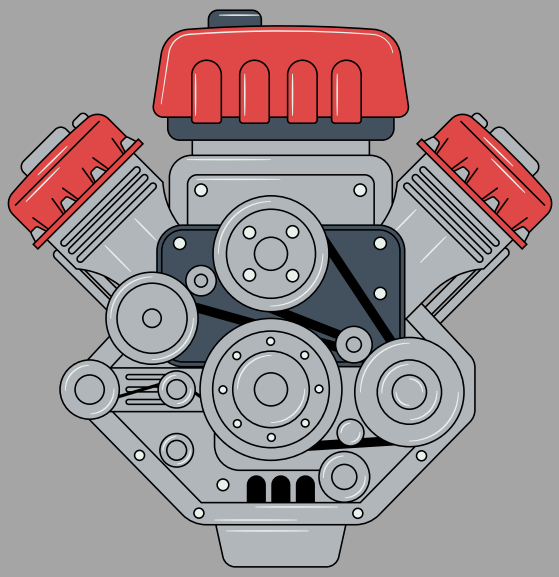
***The shift towards electric vehicles (EVs) exemplifies our commitment to reducing carbon emissions and fossil fuel dependence. Initiatives like the National Electric Mobility Mission Plan (NEMMP) are pivotal in this green transition, offering new opportunities for research and innovation in automotive engineering.***

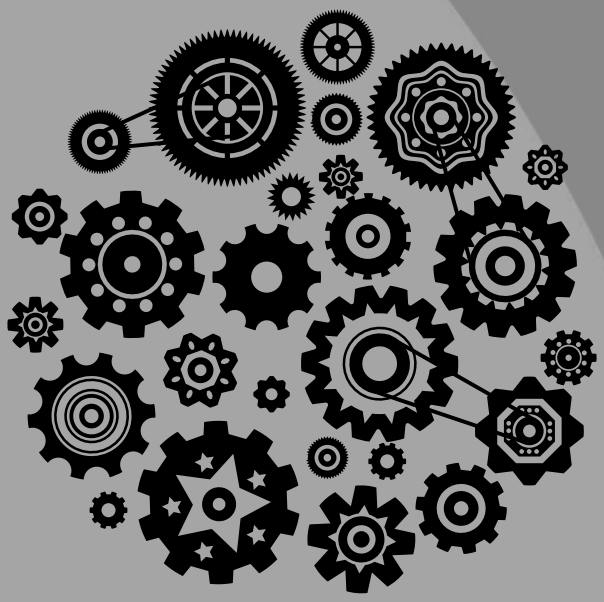
***Collaboration between academia and industry is essential. Through partnerships with leading automotive companies, our students gain hands-on experience, preparing them for future challenges and opportunities.***

***"Automobile and Vikasit Bharat" reminds us of our collective effort towards innovation, sustainability, and inclusivity. Let us strive for excellence, driven by our passion for knowledge and commitment to building a developed India.***

यंत्रम्

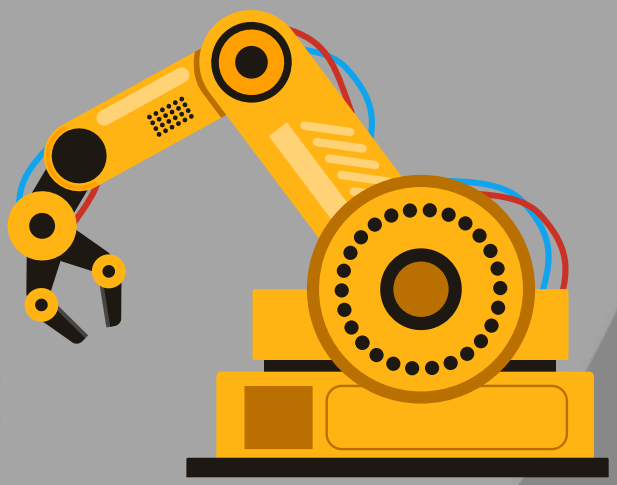
***Mr. Samir D. Jariwala,***
***Head, Department of Mechanical Engineering,***
***Shroff S. R. Rotary Institute of Chemical Technology,***
***UPL University of Sustainable Technology.***





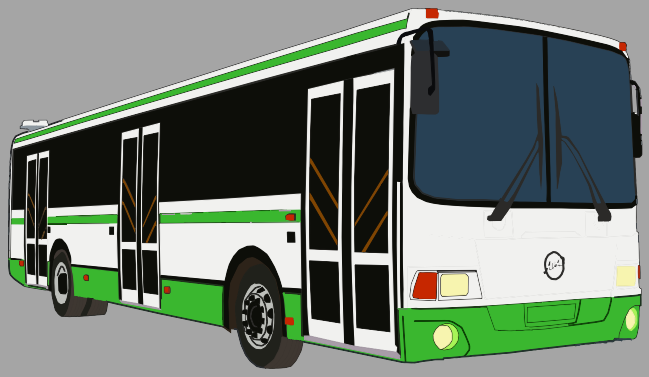
# DEPARTMENTAL

# *Activities*



# INDUSTRY VISIT

| Sr no. | Industry name | Date | semester |
|---|---|---|---|
| 1 | Ankleshwar Industrial Expo. | 19/01/24 | BE and DE (4th and 6th Sem). |
| 2 | Chemcrux Entreprises Ltd. | 21/02/24 | All BE & DE students. |
| 3 | Zentiva, Ankleshwar. | 27/03/24 | All BE & DE students. |



# INDUSTRY VISIT

14th Industrial EXPO™

**On 19/01/2024 at Ankleshwar.**

CHEMCRUX ENTERPRISES LTD.

**On 21/02/2024 at Ankleshwar.**

ZENTIVA

**On 27/03/2024, At Ankleshwar.**

# EXPERT LECTURES

| SR NO | INDUSTRY NAME | NAME OF EXPERT | ADDRESS | SUBJECT |
|---|---|---|---|---|
| 1 | Heubach Colours | Mr. D.K.Rana | Ankleshwar | Manufacturing Challenges |
| 2 | Tokheim India Ltd. | Mr. Pritesh Bare | Mumbai | E-waste management |
| 3 | ISHRAE Bharuch | Mr. Hardik Patel | Bharuch | Cooling Tower |
| 4 | Vastunisth Engineering | Mr. Vatsal Sevak | Ankleshwar | E-waste management |
| 5 | Brakes India Ltd. | Mr. Vishal Prajapati | Jhagadia | Manufacturing Process of Front and Rear Brakes |
| 6 | Brakes India Ltd. | Mr. S Ayyapan | Jhagadia | Manufacturing Process of Front and Rear Brakes |


# EXPERT LECTURES

| | | | | |
|---|---|---|---|---|
| 7 | ISRO | Mr. Rashmin Shah | Ahmedabad | Space Scientist- Face to Face |
| 8 | ISRO | Dr. H M Modi | Ahmedabad | Space Scientist- Face to Face |
| 9 | NPCIL | Mr. R B Patil | Kakrapar | Indian nuclear power program and process of nuclear energy |
| 10 | NPCIL | Dr. Mukesh Jha | Kakrapar | Radiation-A fact of life & DAE-Societal benefit |
| 11 | PROTON Consultancy | Mr. Vineet Chauhan | Surat | Roadmap to Study Abroad |

# PEER LEARNING INITIATIVE

| Sr. No | Enrollment No. of Student | Name of student | Date of PLI | PLI Subject Name | Name of Concerned Faculty |
|---|---|---|---|---|---|
| 1 | 210102106001 | Anjeet Kushwaha | 22/01/24 | OHP | Mr. Satish Verma |
| 2 | 210102106005 | Khurkutiya Vilashbhai | 23/01/24 | OHP | Mr. Satish Verma |
| 3 | 210990119503 | Rana Sandeep Dipakbhai | 02/03/24 | PPE | Mr. Chetan R. Patel |
| 4 | 200990119014 | Dubey Himanshu Suryamani | 02/03/24 | AE | Mr. Chetan R. Patel |
| 5 | 210102106001 | Anjeet Kushwaha | 06/03/24 | HT | Dr. Gunjan Kumar |
| 6 | 210102106001 | Anjeet Kushwaha | 06/03/24 | TE-II | Dr. Gunjan Kumar |
| 7 | 220102306001 | Choksi Jay Lalitkumar | 19/03/24 | MP | Sandhya Shetty |

# PEER LEARNING INITIATIVE

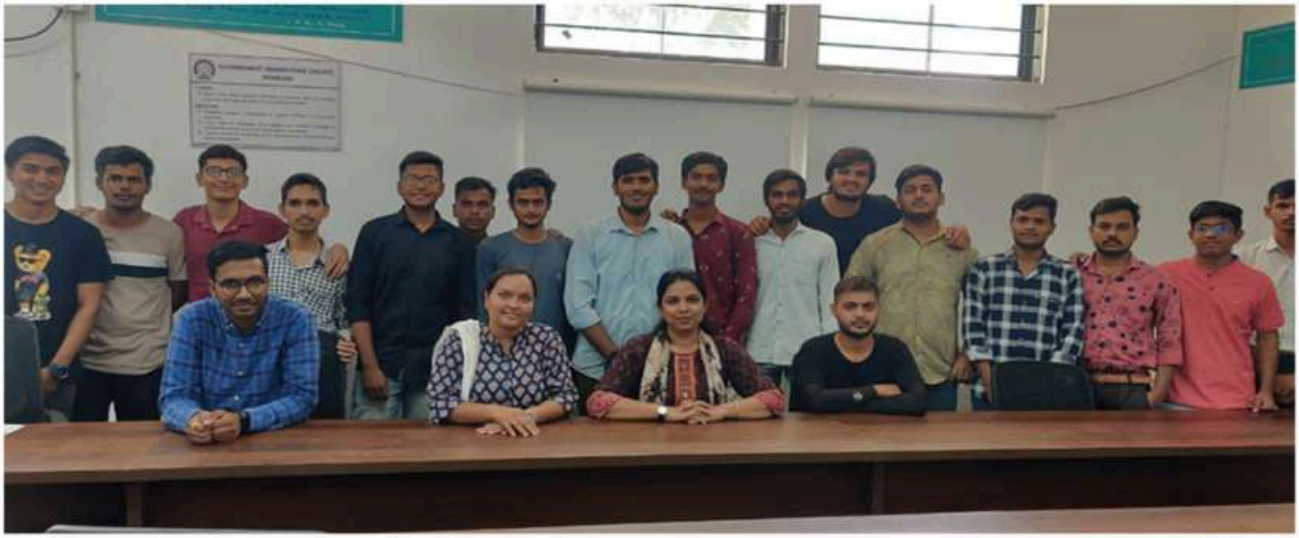
| Sr. No | Enrollment No. of Student | Name of student | Date of PLI | PLI Subject Name | Name of Concerned Faculty |
|---|---|---|---|---|---|
| 8 | 210990119503 | Rana Sandeep Dipakbhai | 12/03/24 | PPE | Mr. Chetan R. Patel |
| 9 | 200990119006 | Ritik Raj Ajit Singh | 12/03/24 | AE | Mr. Chetan R. Patel |
| 10 | 210990119503 | Khurkutiya Vilashbhai | 19/03/24 | MP | Sandhya Shetty |
| 11 | 210102106005 | Dubey Himanshu Suryamani | 06/04/24 | AE | Mr. Chetan R. Patel |
| 12 | 200990119014 | Dubey Himanshu Suryamani | 06/04/24 | PPE | Mr. Chetan R. Patel |
| 13 | 210101106009 | Nilesh Yadav | 18/03/24 | HT | Dr. Gunjan Kumar |

# ISHRAE STUDENT CHAPTER

***On January 20, 2024, Ms. Dhruvi Patel, faculty advisor of the SRICT ISHRAE Student Chapter, attended the national program ACRESERVE 2023-24 with nine students. Organized by ISHRAE Bharuch Sub Chapter at GEC, Bharuch, the event offered valuable insights and collaborative learning opportunities.***



***On January 24, 2024, our SRICT ISHRAE Student Chapter's quiz team represented Bharuch sub-chapter at the West India zone's aQuest quarter-final in Vadodara, showcasing our commitment to academic excellence and competitive spirit.***



***The ISHRAE Bharuch sub-chapter organized a quiz competition at GEC, Bharuch, on April 30th for all ISHRAE students. Five students from the Mechanical Engineering department of UPL University, representing the ISHRAE student chapter, participated in the event and represented the university.***


***Ms. Sandhya Shetty from MED represented UPL University in the "Let's Get Fit Together" webinar by ISHRAE Bharuch on March 12, 2024, focusing on promoting women's fitness and well-being in celebration of Women's Day.***

***Ms. Sandhya Shetty participated in the ISHRAE Bharuch Chapter's CWC member installation ceremony on April 27, 2024, reflecting her dedication to the HVAC industry and commitment to professional growth within ISHRAE.***

# GLIPMSE OF ABHYUDAY

***The "Abhyuday 2024" convocation for B.E. students of the 2020-24 batch was held on 16th July 2024. This momentous event celebrated the academic achievements of graduates, marking the beginning of their professional journeys and future endeavors.***


# GLIPMSE OF ABYUTHHAN

***Abhyutthan 2024, an academic award ceremony, celebrated the outstanding achievements of top 1st-year students on 27th June 2024. This prestigious event recognized and honoured the exceptional academic performance and dedication of the brightest minds, encouraging them to continue striving for excellence in their educational journey.***

# GLIPMSE OF ABYUTHHAN



***Abhyutthan 2024, an esteemed academic award, was presented on 16th July 2024 to top-performing 2nd and 3rd-year students, recognizing their exceptional academic achievements and dedication.***

# FOUNDATION DAY


***Our college proudly celebrates its 13th Foundation Day on 16th July 2024, marking over a decade of excellence in education. The event will be graced by the esteemed presence of Sandra Shroff Ma'am, making this occasion truly special and memorable for everyone involved.***

# SSIP INCUBATION

***On 23rd February 2024, Shri Tushar Shumera, Collector and D.M. of Bharuch District, inaugurated the SSIP Incubation Cell and 3D Printer. During the event, two groups of Mechanical students presented their work under the SSIP initiative, showcasing innovative projects that align with the goals of the incubation cell.***


# GEMI: ONE DAY PROGRAM

***The GEMI-sponsored one-day training program titled "Adopting Good Practices for Conserving Water, Energy, and Reducing E-Waste" was held on 18th January 2024. Coordinated by Dr. Gunjan Kumar and Mr. Samir Jariwala, with speakers Dr. Gunjan Kumar, Mr. Abhiraj Gohil, and Mr. Vatsal Sevak.***


# NPC SPONSORED ONE DAY WORKSHOP

***With 42 participants in attendance, the program focused on enhancing skills related to the efficient operation and maintenance of boilers. Dr. Gunjan Kumar coordinated the event, ensuring that the session was both informative and impactful for all attendees involved.***

***The training program titled "Efficient Operation and Maintenance of Boilers" was conducted on March 16, 2024. Dr. Gunjan Kumar served as the coordinator for this insightful session, which successfully engaged all participants in understanding best practices for boiler management.***

# ONE TO ONE MEETING

***During the 1-2-1 meetings with Panjwani Sir, held on January 30th, 2024, for DE Semester 6 and February 28th, 2024, for BE Semester 6, key academic and personal development areas were discussed. These sessions provided valuable insights and guidance to help students excel in their respective fields of study.***

# EXPERT SESSION DELIVERED IN "CHEMICAL PLANT OPERATOR PROGRAMME"

***The "Chemical Plant Operator Programme" included sessions on essential equipment used in chemical processing. Key topics covered were boilers, pumps, compressors, chillers, thermic fluid heaters, and heat exchangers, providing participants with crucial knowledge for efficient plant operations and maintenance.***

# ISRO SCIENTIST'S VISIT TO UPL UNIVERSITY " INSIGHTS"

***An expert lecture titled "Space Scientists Face 2 Face" was organized for BE 6th semester students of UPL University of Sustainable Technology. Delivered by retired ISRO scientists Mr. R.M. Shah and Dr. H.M. Modi, the session highlighted ISRO's achievements in satellite and launch vehicle design and the development of materials for satellite equipment. They also discussed career opportunities for engineering students. The session was coordinated by Samir Jariwala, with support from Sagar Jani and Dinesh Pandey.uring the 1-2-1 meetings with Panjwani Sir, held on January 30th, 2024, for DE Semester 6 and February 28th, 2024, for BE Semester 6, key academic and personal development areas were discussed. These sessions provided valuable insights and guidance to help students excel in their respective fields of study.***


# TEAM VISIT TO DORMER PRAMET


***Mr. Samir Jariwala and Dr. Hiren Mahida visited Dormer Pramet, formerly known as Miranda Tools, to engage in various activities related to R&D, EL, IV, placements, and student internships. They held a meeting with Mr. Prafullachandra Bhamare, General Manager of HR, and Mr. Sanjay Makwana, Manager of R&D.***


# MEMORENDUM OF UNDERSTANDING


***On 10th January 2024, UPL University of Sustainable Technology signed an MoU with Analpa Industries, represented by Dr. Hiren Mahida, Mr. Girish Bramhakshatriya, and Mr. Nikhil Kulkarni.***


***A Memorandum of Understanding (MoU) was signed with PROTON Consultancy on March 12, 2024, formalizing a collaborative partnership.***

# PROJECT & DISSERTATION REVIEW

***The DE 6th semester internship review took place on 20th March 2024, providing valuable insights and feedback on the progress and performance of the internship project.***

***The BE 8th semester internship review, held on 12/03/2024, provided valuable feedback, highlighting key achievements, challenges faced, and opportunities for further growth in the students.***

***The dissertation review for ME Mechanical (Thermal) Engineering Semester-4 students took place on 30/03/2024, showcasing their research progress and contributions to advanced thermal engineering topics.***

# PROJECT & DISSERTATION REVIEW

***The DE 6th semester internship review took place on 12th April 2024, providing valuable insights and feedback on the progress and performance of the internship project.***

***The BE 8th semester internship review, held on 30/04/2024, provided valuable feedback, highlighting key achievements, challenges faced, and opportunities for further growth in the students.***

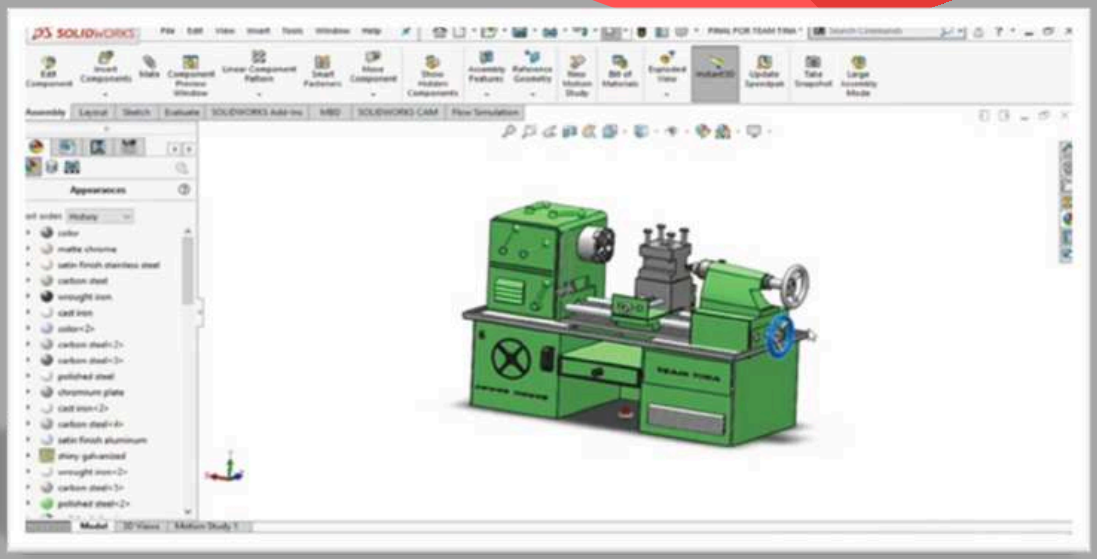
***The dissertation review for ME Mechanical (Thermal) Engineering Semester-4 students took place on 30/04/2024, showcasing their research progress and contributions to advanced thermal engineering topics.***

# TECHNICAL ARTICLE

## Optimizing Lathe Machine Design with SolidWorks for Precision and Real-Time Analysis

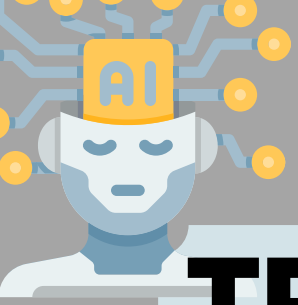
***In modern manufacturing, precision and accuracy are essential. SolidWorks, a leading CAD software, plays a vital role in achieving these goals. This article examines SolidWorks' capabilities in designing a lathe machine, focusing on creating detailed part drawings, assembling components, and simulating real-time functional data. The software's comprehensive tools enable precise modeling and assembly, providing a complete view of the machine.A standout feature of SolidWorks is its ability to simulate the real-time functional behavior of assembled components. This includes analyzing moving parts, stress, and mechanical interactions, ensuring a thorough examination of the design's functionality. During the simulation, designers can identify and rectify issues such as part interferences or structural weaknesses, streamlining the design optimization process. It helps to Perform thermal analysis to evaluate the heat distribution and thermal expansion of the machine parts, ensuring optimal performance under different operating temperatures.***

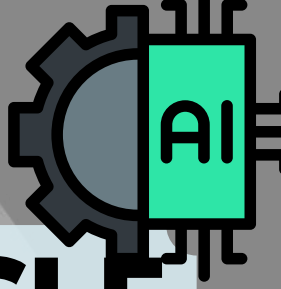
***SolidWorks excels in creating sheet metal drawings and offers rendering capabilities for realistic 3D visualizations. It supports detailed product analysis, including stress, thermal, and motion studies, ensuring designs meet all requirements. The software's versatility allows for generating detailed drawings and specifications, which can be translated into commands for CNC machines, VMCs, and 3D printers, ensuring high precision and accuracy in manufacturing. SolidWorks is an indispensable tool in the modern design and manufacturing landscape. Its ability to create detailed drawings ,simulate real-time operations, and analyze product performance makes it an essential software for ensuring the production of accurate and high-quality products. By leveraging these capabilities, designers can efficiently address design challenges, optimize products, and meet the ever-growing demands of precision in manufacturing. SolidWorks offers a comprehensive platform for designing, simulating, and optimizing lathe machines. By leveraging its advanced tools, designers can achieve high precision, real-time analysis, and efficient manufacturing processes. The result is a well-optimized lathe machine that meets industry standards and delivers superior performance.***



**CHOKSI JAY**

**220102306001**




# TECHNICAL ARTICLE

## AI and the Future of Machine Design

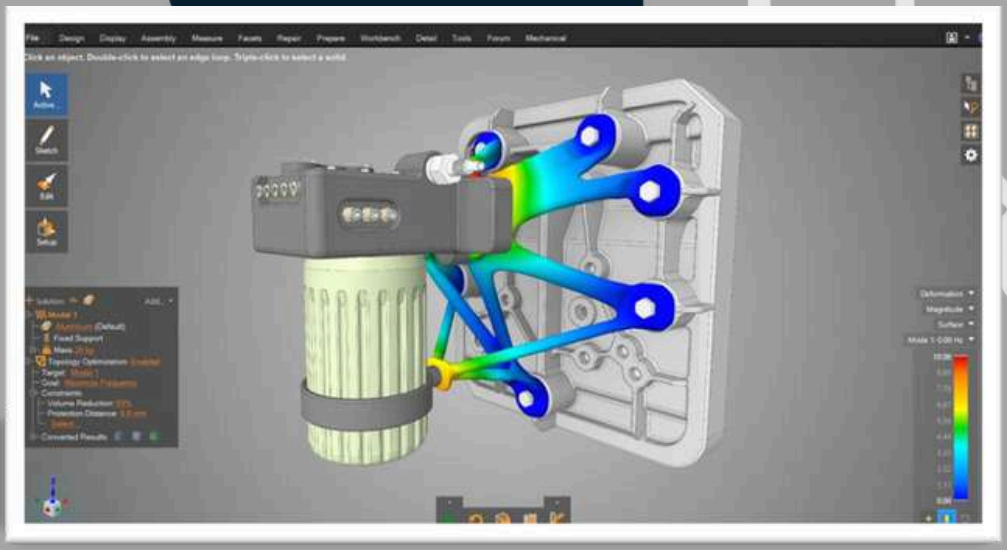
***Artificial Intelligence (AI) is rapidly transforming the landscape of machine design, enabling systems to learn, develop, and optimize new products with unprecedented efficiency. As AI-driven software continues to evolve, it increasingly takes on tasks traditionally performed by engineers, raising the question: what role remains for human designers?***

***AI systems are becoming adept at generating designs based on specified parameters and constraints, optimizing them for performance, cost, and manufacturability. Through machine learning, these systems can analyze vast datasets from previous designs and outcomes, identifying patterns and making informed decisions that often surpass human intuition. This capability allows for the rapid creation of prototypes and the iteration of designs that would typically take much longer if done manually.***

***Moreover, AI can simulate real-world conditions and stress-test designs, ensuring they meet all necessary criteria before any physical prototypes are made. This reduces the risk of errors and accelerates the development process. In many cases, AI can also predict potential issues and suggest modifications, further enhancing the design's reliability and performance.***

***However, the rise of AI in machine design does not render engineers obsolete. Instead, it shifts their role from routine tasks to more strategic and creative endeavors. Engineers are now required to focus on defining the high-level goals, constraints, and specifications that guide AI systems. They are also essential in interpreting AI-generated designs, making critical decisions, and ensuring that the designs align with broader project objectives and ethical considerations.***

***In conclusion, while AI is revolutionizing machine design, engineers remain vital to the process. Their expertise, creativity, and judgment are crucial in guiding AI tools and ensuring that the final products meet the complex demands of modern engineering. The future of machine design lies in the collaboration between AI and human ingenuity, each complementing the other to push the boundaries of what is possible.***



**SINGH ANKIT**

**2301021106028**

# TECHNICAL ARTICLE

## Vikasit Bharat: Engineering the Future of a Developed India

***The vision of "Vikasit Bharat" or "Developed India" represents a collective aspiration to transform India into a global leader in technology, industry, and innovation. For mechanical engineers, this vision is a call to action to contribute to the nation's progress through advanced engineering practices, sustainable development, and technological innovation. This article explores the role of mechanical engineering in realizing the dream of a developed India.***

***Mechanical engineering, as a discipline, lies at the heart of industrial growth and technological advancement. In the context of Vikasit Bharat, mechanical engineers are poised to play a crucial role in the modernization of India's manufacturing sector. The adoption of Industry 4.0 technologies, including automation, robotics, and smart manufacturing, is essential to enhance productivity and competitiveness. By integrating these technologies, India can transition from traditional manufacturing processes to more efficient, flexible, and sustainable production systems.***

***Sustainability is another critical aspect of Vikasit Bharat. As the country progresses, the need for energy-efficient and environmentally friendly technologies becomes paramount. Mechanical engineers are at the forefront of developing renewable energy solutions, such as wind turbines, solar panels, and bioenergy systems.***

***These technologies not only reduce India's reliance on fossil fuels but also contribute to the global fight against climate change. Moreover, advancements in materials science and engineering are enabling the development of lightweight, durable, and sustainable materials for use in various industries, further supporting the vision of a greener and more resilient India.***

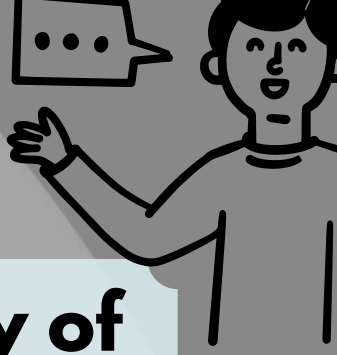
***Infrastructure development is another area where mechanical engineering plays a pivotal role in Vikasit Bharat. The construction of smart cities, high-speed rail networks, and advanced transportation systems requires the expertise of mechanical engineers in designing and maintaining complex machinery and systems. These infrastructure projects are crucial for improving connectivity, enhancing the quality of life, and driving economic growth across the nation.***

***In conclusion, Vikasit Bharat is not just a vision but a roadmap to India's future as a developed nation. Mechanical engineers, with their expertise and innovation, are instrumental in turning this vision into reality. Through sustainable practices, technological advancements, and infrastructure development, they are engineering the future of a prosperous and resilient India.***

विकसित भारत
संकल्प यात्रा

MEET VAGHELA
230102306003

# STUDENT SPEAKS



## My Journey at UPL University of Sustainable Technology

***My name is Nilesh Yadav, and I recently completed my Diploma in Mechanical Engineering from UPL University of Sustainable Technology. The mechanical engineering program at UPL was instrumental in deepening my understanding of technical concepts such as thermodynamics and robotics. The program was both challenging and rewarding, allowing me to apply theoretical knowledge in real-world scenarios, particularly during practical sessions in our well-equipped workshops.***

***Our college is well-resourced, with dedicated labs for each department, a library, and a large playground. It also boasts a 100% placement record. The college regularly organizes expert lectures, industry visits, and one-on-one meetings. Industry professionals share their insights during expert lectures, while industry visits offer practical exposure. One-on-one meetings provide opportunities to discuss academic progress in detail.***

***I had the privilege of leading several Peer Learning Initiative (PLI) sessions, where senior students assist juniors in their studies. Additionally, I am the president of the ISHRAE program at our college.***

***Through the SSIP (Student Startup and Innovation Policy) program, I successfully led a project and received funding of ₹35,000.***

***I am also an active volunteer in the National Service Scheme (NSS) program, participating in various community service activities. Beyond academics, I have eagerly participated in numerous college events, including the Reva Festival, science technovation, sports day, and cultural activities.***

***Thanks to the disciplined and structured environment at UPL University, I maintained a clean academic record throughout my studies, with no backlogs. The support of my faculty and department played a significant role in this achievement. I am grateful to have secured a job at Saint-Gobain through campus placements, and I owe much of my success to the college and its management team.***

***My experience at UPL University has been overwhelmingly positive. The comprehensive education and supportive faculty have laid a solid foundation for my future career in mechanical engineering.***

**NILESH YADAV**
**2021 BATCH (D.E)**

# STUDENT SPEAKS

मशीनों का ये जहा निराला
रखता सदा दबदबा हमारा
करता सदा हल मुश्किलें
इसीलिए सबसे **best mechanical Branch** हमारा।

पुर्जों को जोड़कर दुनियां बदलने का जज़्बा रखते है,
मेहनत और दृढ़ता से सपनो को हकीकत में बदलते हैं।
पूरी दुनियां मे अहम ओहदा हैं हमारा।
इसीलिए सारे जहा में **mechanical ka** जादू निराला।।

पुर्जों की भाषा अजब हैं।
**Robotics ka** ज्ञान गज़ब है।
मशीनों की कहानी निराली हैं।
इसीलिए **mechanical ka** संसार अहम है।।

मशीनों की यादें सताती हैं।
पुर्जों की वैरानी तड़पाती हैं।
मचलते हैं **mechanics ke** अंदाज़ से,
पर फिर भी **mechanical** दुनियां को टिकाए रखी है।।

ये जो सड़को पर गाड़ी दौड़ती हैं।
फिजाओं में प्लेन उड़ता हैं।
और ये समंदर में शिप तैरती है।
इसमें **mechanical branch** का ख़ून भी साथ जलता हैं।।

Umar Rijvi
D.E. batch 21

# STUDENT ACHIEVEMENTS

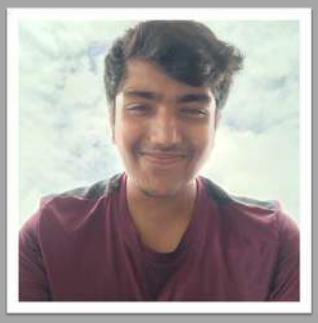

***LCPL. Om Patel, a 4th semester Diploma in Mechanical Engineering student, was honored as the best cadet of NCC in the Senior Division category on January 26th. His dedication and exemplary performance in NCC activities earned him this prestigious recognition.***

# STUDENT ACHIEVEMENTS

## CONGRATUALTIONS TO OUR SHINING STARS

***PRAJAPATI HARSHIL***
***B.E 3rd SEM***
***GOT 9.39 SPI.***

***ALEN SUNNY***
***B.E 3rd SEM***
***GOT 9.09 SPI.***



***PATEL DEVANSH***
***B.E 5th SEM***
***GOT 9.92 SPI.***

***KHURKUTIYA VILASH***
***B.E 7th SEM***
***GOT 9.79 SPI.***

***KUSHWAHA ANJEET***
***B.E 7th SEM***
***GOT 9.33 SPI.***

***PATEL HIREN***
***B.E 7th SEM***
***GOT 8.92 SPI.***

# FACULTY ACHIEVEMENTS

***Dr. Divyang Patel was granted a patent by the Indian Patent Office on January 29, 2024, for his invention titled "A Digital Angle Measuring and Magnetic Field Detecting Device." This innovative device combines precision angle measurement with magnetic field detection, showcasing his significant contribution to technological advancements.***


INTELLECTUAL PROPERTY INDIA

क्रम सं/SL No :022137357

पेटेंट कार्यालय,भारत सरकार — The Patent Office, Government Of India

पेटेंट प्रमाण पत्र | Patent Certificate

(पेटेंट नियमावली का नियम 74) | (Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No. : 504505

आवेदन सं. / Application No. : 201721040071

फाइल करने की तारीख / Date of Filing : 10/11/2017

पेटेंटी / Patentee : 1.Dr. Rakesh B. Patel 2.Dr Divyangkumar D. Patel

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित *A DIGITAL ANGLE MEASURING AND MAGNETIC FIELD DETECTING DEVICE* नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख नवम्बर 2017 के दसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled *A DIGITAL ANGLE MEASURING AND MAGNETIC FIELD DETECTING DEVICE* as disclosed in the above mentioned application for the term of 20 years from the 10th day of November 2017 in accordance with the provisions of the Patents Act,1970.


Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

GUNJAN KUMAR

for successfully completing the course

Steam and Gas Power Systems

with a consolidated score of 73 %

| Online Assignments | 23.75/25 | Proctored Exam | 48.75/75 |
|---|---|---|---|

Total number of candidates certified in this course: 48

Prof. Kaushik Ghosh, Professor(Chemistry) Coordinator CEC

Jan-Mar 2024

(8 week course)

Prof. Ranjana Pathania, Professor (BSBE) Coordinator (NPTEL)

Indian Institute of Technology Roorkee

swayam

Roll No: NPTEL24ME19S545100126 To verify the certificate: No. of credits recommended: 2 or 3


2nd International Conference on

Futuristic Advancements in Materials, Manufacturing and Thermal Sciences (ICFAMMT-24)

Organized by IITRAM, Ahmedabad and SSME, (SAC, ISRO), Ahmedabad

January 19-21, 2024

Development of Linear Fresnel Solar Collector for Heat Generation

Presented by: Dr. Gunjan Kumar

Assistant Professor,

UPL University of Sustainable Technology, Ankleshwar

Date: 21/1/2024

Sponsoring Partners

SM CREATIVE ELECTRONICS LTD

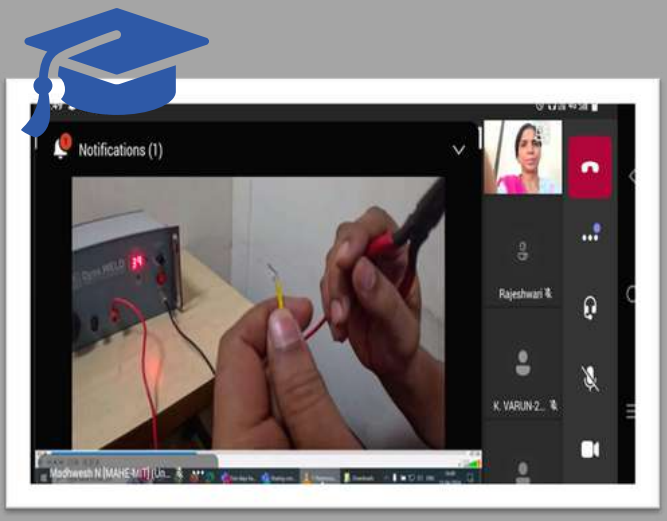
LINSEIS

SUN FIBO TECHNOLOGY PVT LTD

DASSAULT SYSTEMES

***Dr. Gunjan Kumar completed an 8-week NPTEL certification in Steam and Gas Power Systems, enhancing his expertise in power systems engineering. He also presented a research paper on "Development of Linear Fresnel Solar Collector for Heat Generation" at an international conference organized by IITRAM and SSME in January 2024.***


***Dr. Hiren Mahida participated in a one-day seminar titled "STEAM: An Energy Source for the Chemical Industry" on February 27th, 2024, organized by BDMA. The seminar covered key topics, including boilers, steam consumption, and strategies for energy optimization within the chemical sector, emphasizing advancements in sustainable energy practices.***




***Ms. Sandhya Shetty attended a five-day workshop on "Instrumentation and Data Analysis in Solar and Thermal Engineering Research" from April 8-13, 2024. The event, organized by the Department of Mechanical Engineering at MIT Manipal, provided in-depth knowledge and practical skills in advanced techniques relevant to solar and thermal engineering research.***

***Mr. Satish Verma from the Mechanical Engineering Department attended a five-day Faculty Development Training program on "Universal Human Values" held from January 16-20, 2024, at the College of Engineering & Technology, Pune.***


***Mr. Samik Bhatt Felicitated for the 1st rank in India with Gold E-lite Certificate in Product Design and Development, NPTEL Course by IIT-Roorkee.***


***Mr. Girish Bramakshatriya Felicitated for the 81 % Score with E-lite Certificate in Product Design and Development, NPTEL Course by IIT-Roorkee.***


***Mr Satish Verma Felicitated for successful completion of NPTEL course in Advanced Manufacturing Process.***


***Mr. Chetan Patel Felicitated for successful completion of NPTEL course in Design of Heat Exchanger.***

# FACULTY ACTIVITY




***On January 28, 2024, a group of 19 members from the department proudly participated in the Ankleshwar International Marathon held in Ankleshwar. This event marked a significant moment of teamwork and dedication, showcasing the department's commitment to health, fitness, and community spirit. The marathon provided an opportunity for everyone involved to challenge themselves and strengthen their bonds.***

# WIN-SRICT 2024

***UPL University of Sustainable Technology celebrated its sports days, WINSTINCT-2024, on the 15th, 16th, and 17th of February, 2024. The event was organized by the Mechanical Engineering and Electrical Engineering departments, showcasing a range of athletic competitions and activities. Dr. Gunjan Kumar, the department coordinator, played a pivotal role in the successful execution of the event. WINSTINCT-2024 brought together students, faculty, and staff, fostering a spirit of teamwork, sportsmanship, and healthy competition.***

# STUDENT'S CORNER

## SKETCH

TAILOR OM
230102306002

## PHOTOGRAPHY

RAI YASH
230101106026

# PLACEMENTS

# Congratulations

## Achieving 100% Placement









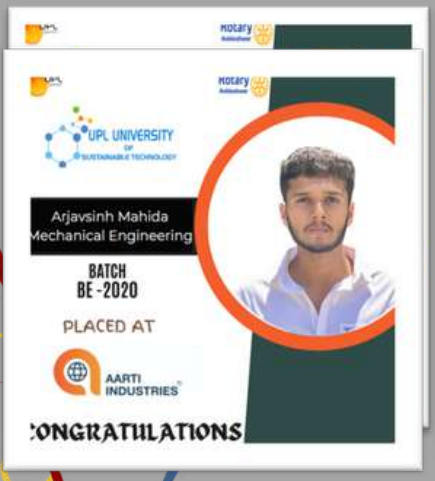
# PLACEMENTS

# Congratulations

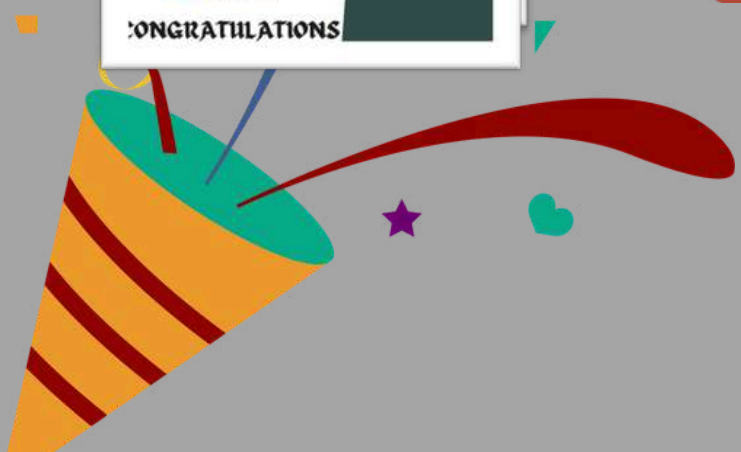
## Achieving 100% Placement









# THEME ARTICLE

## AutoVista India: Exploring the Future of the Indian Automobile Industry

FORD MODEL A
(1927)

FIAT 500
(1936)

HINDUSTAN 10
(1942)

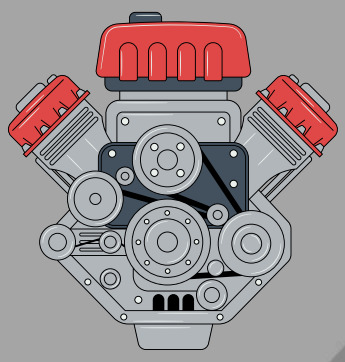
WILLYS JEEP
(1952)

HINDUSTAN
AMBASSADOR
(1957)

STANDARD
HERALD
(1963)

***The Indian automobile industry is undergoing a transformative phase, propelled by advancements in technology, sustainability, and evolving consumer preferences. AutoVista India, a pioneering initiative in this sector, represents a significant leap towards shaping the future of mobility in the country. This article delves into the technical aspects of AutoVista India and its implications for the industry.***

***AutoVista India stands at the intersection of cutting-edge automotive technology and innovative engineering practices. It integrates advanced vehicle design principles, incorporating elements such as electric propulsion, autonomous driving systems, and enhanced safety features. The emphasis on electric vehicles (EVs) is particularly notable, with AutoVista India championing the development of high-efficiency battery systems and regenerative braking technologies. These advancements aim to reduce the carbon footprint and promote environmental sustainability in line with global trends.***



CHEVROLET IMPALA (1970)

HINDUSTAN CONTESSA (1984)

FORD MUSTANG (1986)

BMW 3 SERIES (2007)

HYUNDAI CRETA (2017)


TATA NEXON EV (2020)


TATA TIAGO EV (2022)

***In terms of mechanical engineering, AutoVista India focuses on several key areas. First, the integration of lightweight materials such as carbon fiber composites and aluminum alloys is revolutionizing vehicle design.***

***These materials not only improve fuel efficiency but also enhance performance and safety. Additionally, AutoVista India is exploring innovative cooling systems and heat management solutions to optimize engine performance and extend the lifespan of critical components.***

***Furthermore, AutoVista India is committed to fostering a robust ecosystem for research and development. Collaborations with academic institutions and industry experts are driving innovation and knowledge transfer.***

***AutoVista India represents a dynamic and forward-thinking approach to the Indian automobile industry. By embracing technological advancements and prioritizing sustainability, it sets a new standard for the future of mobility. For mechanical engineers, AutoVista India offers a compelling case study of how innovation and engineering excellence can drive industry transformation.***

MS SANDHYA SHETTY

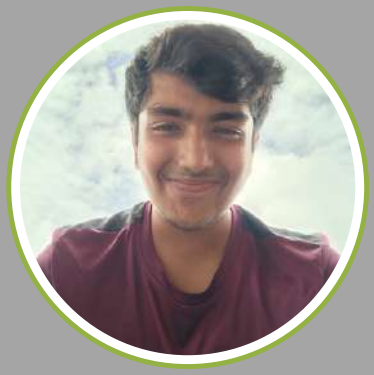
# FROM THE DESK OF THE EDITOR

***Empowering Tomorrow's Innovators and Igniting the Flames of Innovation" A Brief Glimpse into Our Mechanical Engineering Journey, Welcome back to another semester filled with possibilities and promise in this snippet, we're excited to share a glimpse of the incredible journey unfolding within us mechanical engineering department. Our students are forging ahead with passion and determination, pushing boundaries in the pursuit of knowledge. Our faculty members continue to inspire with their expertise and commitment to excellence. Together, we're creating an environment were innovation thrives and the future of mechanical engineering takes shape. Stay tuned for upcoming events, research spotlights, and stories of success that showcase the vibrant spirit of our community. As we navigate this academic adventure together, let's embrace the challenges, celebrate the achievements, and pave the way for a future where our mechanical engineers redefine what's possible. Congratulations to the Editorial Board of this newsletter who have played a wonderful role in accomplishing the task. Heartfelt gratitude to HOD, Faculty, staff members and Students for their fruitful effort during the period.***

## Editorial Team

**Mr Ankit Solanki**
**Faculty co-ordinator**

**Ms Sandhya Shetty**
**Faculty co-ordinator**



**Patel Devansh**
**Student co-ordinator**

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