

NEWSLETTER

WINTER

2024

Volume No. 9 / Issues 1 /
2024-25



ZEAL
INSTITUTES
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ZEAL POLYTECHNIC, PUNE



**DEPARTMENT OF
MECHANICAL ENGINEERING**



ABOUT INSTITUTE ZEAL POLYTECHNIC, NARHE, PUNE

Zeal Education Society (ZES), established in 1996, is driven by the vision to provide education with a difference, under the expert leadership of Hon. Shri. S.M. Katkar, a renowned industrialist. ZES currently operates eight institutes, offering a wide range of educational programs from pre-primary to Ph.D. levels.

Zeal Polytechnic, founded in 2008, is one of the prominent institutions under ZES. It offers diploma courses in various engineering disciplines, including Mechanical Engineering, Civil Engineering, Computer Engineering, Electronics and Telecommunication Engineering, and Electrical Engineering. The institute is dedicated to providing students with state-of-the-art infrastructure, well-equipped laboratories, and a robust faculty team. This commitment to excellence has led to remarkable academic performance over the years.

In recognition of his exceptional contributions to education, the founder director of Zeal Polytechnic was recently honored with the 'Icon of Education' award by the Lokmat media group. The award was presented in the presence of Hon. Smt. Smriti Irani, the former HRD Minister of India, and Hon. Shri. Vinod Tawde, the former Technical Education Minister of Maharashtra.

PRINCIPAL'S MESSAGE

Prof. Ayub A. Tamboli

I am delighted to note that the Department of Mechanical Engineering at Zeal Polytechnic is releasing its newsletter, showcasing the various activities and achievements of its faculty and students. It brings me immense pride to acknowledge the outstanding academic accomplishments of our diploma mechanical engineering students. Your unwavering commitment to excellence and your relentless pursuit of knowledge are truly commendable. The journey you have embarked upon is a testament to your dedication and hard work, and it reflects the value of a polytechnic education in equipping individuals with the knowledge and skills to transform the world we live in.

The students and faculty of the department have consistently demonstrated reactivity in organizing and participating in technical, cultural, and social events. I am confident that this newsletter will not only serve as a reflection of these multifaceted activities but will also inspire others to strive for their best. I extend my heartfelt gratitude to everyone who has contributed to the success of our diploma mechanical engineering program. Your collective efforts have ensured that this first issue of the newsletter is a reality. My sincere congratulations to all the students for their hard work and creativity, and my appreciation to the Head of the Department and the faculty members for their motivation and guidance throughout this journey.

PROF. AYUB A. TAMBOLI

Ph. D (Pursuing), ME (HPE),
BE(Mechanical Engineering)
ASHRAE, AWS, ISHRAE, LMISTE,
IE(I), SESI

PRINCIPAL

ZEAL POLYTECHNIC, PUNE

HOD Message

Prof. Nilesh Kokare

The Department of Mechanical Engineering at Zeal Polytechnic, originally established as Dnyanganga Polytechnic in 2008, offers a comprehensive diploma program in mechanical engineering with an intake capacity of 150 students. Since its inception, the department has pursued its vision of becoming a recognized and innovative leader in mechanical engineering education in the Pune region and beyond. Driven by a mission to provide students with a high-quality education coupled with practical exposure, the department empowers students to contribute meaningfully to society through their skills and expertise. It includes specialized subjects such as CAD/CAM and Automation, Alternative Energy Resources, and Material Handling Systems, delivered through modernized laboratories and cutting-edge infrastructure. A highly qualified and experienced team of faculty members forms the backbone of the department. Their commitment to imparting robust academic knowledge and hands-on experience equips students to tackle real-world challenges with confidence and competence. Through its unwavering dedication to innovation and excellence, the Department of Mechanical Engineering continues to uphold its reputation as a center of academic brilliance. It remains steadfast in its mission to prepare students for professional success and meaningful contributions to the advancement of society.

PROF. NILESH N. KOKARE

Lecturer, ME Mechanical Heat Power

HOD

**Department of Mechanical
Engg.,
Zeal Polytechnic**



NEWSLETTER COMMITTEE

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PROF. MANOJ CHARATE

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MR. ANURAG JADHAV

Dear Readers,

As contributors to this newsletter, we are thrilled to present a glimpse into our experiences, achievements, and reflections. This edition represents the collective spirit and vibrant energy that define our academic community. Amidst lectures, assignments, and exams, we've discovered moments of inspiration, collaboration, and personal growth. Our journey extends far beyond textbooks – it's about the friendships forged, the challenges embraced, and the victories celebrated together. This newsletter serves as a canvas where our voices, ideas, and aspirations come alive. It's not just a showcase of our achievements but also a platform to share the invaluable lessons we've learned along the way. As we navigate the dynamic landscape of student life, we invite you to be a part of this narrative. Your stories, insights, and perspectives enrich the shared tapestry of our experiences. Let this newsletter stand as a reflection of our collective journey, a celebration of our milestones, and a testament to the vibrant community we are privileged to belong to.

Warm Regards,

The Editorial Team

Mechanical Engineering Students

DEPARTMENTAL VISION AND MISSION

VISION

To impart technical knowledge and professional skills through academic excellence and industry interaction for developing socially and industrially responsible mechanical engineers.

MISSION

- ❖ M1:- To cultivate technical expertise and professional ethics through high-quality education and industry engagement.
- ❖ M2:- To offer practical training, enriching courses, and lifelong learning skills for success in diverse, interdisciplinary social and industrial environment.
- ❖ M3:- To promote problem-solving, communication and entrepreneurial skills while working as individual or member of team.

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1: Provide socially responsible, environment friendly solutions to Mechanical engineering related broad-based problems adapting professional ethics.

PEO 2: Adapt state-of-the-art Mechanical engineering broad-based technologies to work in multidisciplinary work environments

PEO3: Solve broad-based problems individually and as a team member communicating effectively in the world of work.



FACULTY PROFILE**Department of Mechanical Engineering**

NAME OF THE FACULTY: PROF. TAMBOLI AYUB ALAMSO
QUALIFICATION: ME MECHANICAL HEAT POWER
DESIGNATION: PRINCIPAL
EXPERIENCE: 24 YEARS
AREA OF INTEREST: THERMAL ENGINEERING,
MAIL ID: AYUYB.TAMBOLI@ZEALEDUCATION.COM
YEAR – 2024-25



NAME OF THE FACULTY: PROF. KOKARE NILESH NAVNATH
QUALIFICATION: ME MECHANICAL HEAT POWER
DESIGNATION: HOD & SR.LECTURER
EXPERIENCE: 11 YEARS
AREA OF INTEREST: THERMAL ENGINEERING, DESIGN
ENGINEERING.
MAIL ID: NILESH.KOKARE@ZEALEDUCATION.COM
YEAR – 2024-25



NAME OF THE FACULTY: PROF. KHORANE RAMESHWAR
QUALIFICATION: ME MECHANICAL HEAT POWER
DESIGNATION: SR.LECTURER
EXPERIENCE: 23 YEARS
AREA OF INTEREST: THERMAL ENGINEERING, CAD, CAM
DESIGN ENGINEERING.
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YEAR – 2024-25



NAME OF THE FACULTY: PROF. SHINDE BALAJI PRABHU
QUALIFICATION: ME MECHANICAL DESIGN ENGINEERING.
DESIGNATION: SR.LECTURER
EXPERIENCE: 11 YEARS
AREA OF INTEREST: ENGINEERING DRAWING , POWER
ENGINEERING, MANUFACTURING PROCESSSES
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YEAR – 2024-25



NAME OF THE FACULTY: PROF. PATHAK SHRIRAM
QUALIFICATION : ME MECHANICAL HEAT POWER
DESIGNATION: SR.LECTURER
EXPERIENCE: 11 YEARS
AREA OF INTEREST: THERMAL ENGINEERING, CAD, CAM
DESIGN ENGINEERING.
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YEAR – 2024-25



NAME OF THE FACULTY : PROF. PATHAK DEVIDAS M.
QUALIFICATION: M.E. (DESIGN), B.E. (PRODUCTION)
DESIGNATION: SR.LECTURER
EXPERIENCE: 17 YEARS, INDUSTRIAL: 4.5 YEARS
AREA OF INTEREST: MECHANICAL DRAWING, DESIGN
MAIL ID: DEVIDAS.PATHAK@ZEALEDUCATION.COM
YEAR – 2024-25



NAME OF THE FACULTY : PROF. YENKAR RAVI GOPAL
QUALIFICATION: M.E. (MECHANICAL)
DESIGNATION: HOD (A&R) & LECTURER
EXPERIENCE: 14 YEARS
AREA OF INTEREST: THERMODYNAMICS, HEAT TRANSFER,
MECHATRONICS
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YEAR – 2024-25



NAME OF THE FACULTY: PROF. AGHOR SHASHIKANT
GAJANAN
QUALIFICATION: ME MECHANICAL DESIGN ENGINEERING
DESIGNATION: SR.LECTURER
EXPERIENCE: 20 YEARS , 6 MONTH INDUSTRY
AREA OF INTEREST: METROLOGY, INDUSTRIAL ENGINEERING
& QUALITY CONTROL THEORY OF MACHINE
MAIL ID: SHASHIKANT.AGHOR@ZEALEDUCATION.COM
YEAR – 2024-25



NAME OF THE FACULTY: PROF.CHANDANE AMOL MANIK
QUALIFICATION: M. E. (THERMAL ENGINEERING)
DESIGNATION: LECTURER
EXPERIENCE: 10 YEARS
AREA OF INTEREST: THERMODYNAMICS, RAC, IC ENGINE, FLUID MECHANICS,
MAIL ID: AMOL.CHANDANE@ZEALEDUCATION.COM
YEAR – 2024-25



NAME OF THE FACULTY - PROF. SHAKIL RAJJAK SHAIKH
QUALIFICATION: M.E. (MECHANICAL)
DESIGNATION: LECTURER
EXPERIENCE: TEACHING- 9 YEARS, INDUSTRY- 1 YEARS
AREA OF INTEREST: ENGINEERING DRAWING, MECHANICAL WORKING DRAWING, APPLIED MECHANICS, MANAGEMENT
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YEAR – 2024-25



NAME OF THE FACULTY - PROF. MANOJ MANIK CHARATE
QUALIFICATION: B.E. (MECHANICAL ENGINEERING)
DESIGNATION: LECTURER
EXPERIENCE: 10 YEARS, 2 MONTHS
AREA OF INTEREST: ENGINEERING METROLOGY, THERMAL ENGINEERING, FLUID MECHANICS & MACHINERY
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YEAR – 2024-25



NAME OF THE FACULTY - PROF. WAGHMARE KAVITA ASHOK
QUALIFICATION: LECTURER, M.A. (ENGLISH) B.ED.
DESIGNATION: LECTURER
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AREA OF INTEREST: English
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YEAR – 2024-25



NAME OF THE FACULTY: PROF SABALE BHAGYASHREE VISHAL

QUALIFICATION: ME DESIGN,

DESIGNATION: LECTURER

EXPERIENCE: 08 YEARS

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YEAR – 2024-25



NAME OF THE FACULTY PROF. GORE MITALI BHARAT

QUALIFICATION: PHD PURSUING, ME DESIGN

DESIGNATION: LECTURER

EXPERIENCE: 07 YEARS

AREA OF INTEREST: CAD, CAM DESIGN ENGINEERING.

MAIL ID: MITALI.GORE@ZEALEDUCATION.COM

YEAR – 2024-25



NAME OF THE FACULTY - PROF. GURAV SHRIDHAR SUBHASH

QUALIFICATION: BE, LECTURER

DESIGNATION: LECTURER

EXPERIENCE: 10 YEARS

AREA OF INTEREST: Design Engineering, Manufacturing engg.

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YEAR – 2024-25

Guest Lecture

1. RECENT ADVANCEMENTS IN THERMAL GENERATION TECHNOLOGY

The Department of Mechanical Engineering organized an expert lecture on "Recent Advancements in Thermal Generation Technology," conducted on 05/09/2024, provided valuable insights into the latest developments in the thermal power industry. **Mr. Basawraj Sidramappa Racheti**, a retired Executive Engineer from **MAHAGENCO, Mumbai**, discussed the challenges faced by the sector, particularly in reducing emissions and enhancing efficiency. He highlighted key advancements, such as improvements in turbine efficiency through innovative materials and design, and the increasing importance of integrating renewable energy sources like solar and wind with thermal power plants. Furthermore, Mr. Racheti emphasized the role of carbon capture and storage (CCS) technologies in mitigating emissions and the growing influence of digitalization and IoT in optimizing plant operations and maintenance.

The lecture also explored emerging trends such as hydrogen fuel combustion and advanced steam cycles, which offer potential solutions to reduce carbon footprints while maintaining power generation efficiency. The session aimed to update participants on the latest advancements in thermal generation technology, discuss the benefits and challenges of implementing these innovations, and explore their potential to improve sustainability in power generation. By providing insights into the future direction of thermal power, the lecture offered a comprehensive overview of how these advancements could transform the energy sector, addressing both efficiency and environmental concerns.



2. ARTIFICIAL INTELLIGENCE

The Department of Mechanical Engineering organized an expert lecture on 21st August 2024, from 10:00 AM to 12:00 PM, an expert session on "**Artificial Intelligence**" was conducted, led by Mrs. Surbhi Kakkad, Director of NeuAI Labs. The session focused on the transformative impact of Artificial Intelligence (AI) on the field of mechanical engineering, particularly in the context of Industry 4.0, which is revolutionizing the way engineers approach design, simulation, and optimization. Mrs. Kakkad highlighted the growing need for mechanical engineers to acquire new interdisciplinary skills, including programming, data analysis, and domain expertise, to effectively implement AI technologies. As AI continues to influence the mechanical engineering sector, it is enabling innovative solutions and significantly improving operational efficiency across various applications.

The session covered key applications of AI in mechanical engineering, including predictive maintenance, quality control, design optimization, and robotics. Predictive maintenance powered by AI helps reduce downtime and increase productivity by forecasting equipment failures before they occur, while quality control benefits from AI's ability to detect flaws and inconsistencies in real-time. AI-driven design optimization allows engineers to enhance product performance, reduce costs, and streamline the design process. Robotics and automation are also being greatly enhanced by AI, providing greater precision and efficiency in manufacturing processes.

Machine learning algorithms, both supervised and unsupervised, play a vital role in driving these advancements. Mrs. Kakkad also emphasized the increasing importance of AI integration with IoT (Internet of Things) and its potential to further automate and optimize mechanical systems. In addition to the technical aspects, the session also touched upon the ethical considerations of AI in mechanical engineering and explored future directions of AI development in the field. By offering hands-on experience with AI tools, the session inspired students to explore AI-driven projects and research, motivating them to stay at the forefront of this rapidly evolving technological landscape.



Expert's Talk

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ZEAL POLYTECHNIC, PUNE
Department of Mechanical Engineering

Mrs. Surbhi Kakkad
Director,
NewAI Labs, Pune.

"Artificial Intelligence"
For TYME B

21st August 2024 10 am to 2 pm
E building ,E1-01

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3. CAREER GUIDANCE: INDUSTRY 4.0

The Department of Mechanical Engineering organized an expert lecture On 21st August 2024, from 10:00 AM to 12:00 PM, a career guidance session focused on "Industry 4.0" was conducted by Mr. Kishor More, Managing Director of Infinite Graphics Technologies. The session aimed to provide students with valuable insights into the emerging career opportunities in mechanical engineering driven by the advancements of Industry 4.0. Mr. More emphasized how the landscape of mechanical engineering is rapidly evolving due to the integration of new technologies, requiring engineers to adapt by acquiring new skills and competencies. Industry 4.0, which involves the use of AI, robotics, data analytics, and cyber security, is creating a wealth of career prospects, but it also demands interdisciplinary skills, including programming, data analysis, and effective communication.

The expert session covered key takeaways, including the importance of lifelong learning, upskilling, and reskilling for success in the fast-changing job market. As new technologies reshape the job market, networking and building professional connections with Industry 4.0 leaders was also emphasized as crucial for career growth. The session further discussed how collaboration between engineers, data scientists, and IT professionals is essential for success in Industry 4.0. The objective of the session was to raise awareness among students about the evolving job market, identify key skills required for success, and explore various roles and responsibilities in the emerging landscape of Industry 4.0. By providing insights into the trends, technologies, and innovations that define this new era, Mr. More motivated students to continuously learn and stay prepared for the evolving demands of the mechanical engineering industry.

Expert's Talk

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ZPE 25

ZEAL POLYTECHNIC, PUNE
Department of Mechanical Engineering

Mr. Kishor B. More
Managing Director
Infinite Graphix Technologies Pvt. Ltd.

"Career guidance industry 4.0"
For TYME A

21st August 2024 10 am to 12 pm
E building, E1-15

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4. ENTREPRENEURIAL VENTURES IN BOILER INSPECTION & MAINTENANCE

The Department of Mechanical Engineering organized an expert lecture On 14th September 2024, from 10:00 AM to 12:00 PM, an expert lecture on “**Entrepreneurial Ventures in Boiler Inspection & Maintenance**” was conducted by Mr. C.G. Pawar, Deputy Director of Steam Boilers, Pune. The session focused on the entrepreneurial potential within the boiler inspection and maintenance sector, shedding light on how innovation, compliance, and customer focus can drive successful business ventures. Mr. Pawar emphasized the importance of understanding the industry's challenges and opportunities, and how entrepreneurs can build businesses that address real needs and create value. The lecture provided a comprehensive overview of the boiler inspection and maintenance industry, its regulatory landscape, and the emerging trends that shape the sector.

The session highlighted several key takeaways, including the opportunities for entrepreneurship within the boiler industry, with a particular focus on the importance of safety, compliance with regulations, and the role of new technologies in driving efficiency and innovation. Entrepreneurs in this field face specific challenges, such as ensuring adherence to safety standards and addressing the evolving demands of customers. Mr. Pawar also shared success stories of entrepreneurial ventures that have thrived in the boiler inspection and

maintenance industry, illustrating how strategic thinking, innovation, and customer service play pivotal roles in business success. Additionally, the session discussed the essential skills and qualities required for success, including technical expertise, business acumen, and the ability to adapt to changing industry trends. Moreover, Mr. Pawar provided valuable insights on how to develop a business plan, secure funding, build a team, and implement effective marketing strategies for a boiler-related business. The session also stressed the importance of understanding the regulatory environment and industry standards, ensuring that students are well-prepared to venture into this field with a comprehensive understanding of the operational and legal requirements. Through this expert session, students were encouraged to think creatively, consider entrepreneurial careers in the boiler industry, and innovate solutions that could shape the future of boiler inspection and maintenance.



Expert's Talk
on the occasion of
Engineers Day

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ZEAL POLYTECHNIC, PUNE
Department of Mechanical Engineering

Mr. C. G. Pawar
Dy. Director, Steam Boilers, Pune

**"Entrepreneurial Ventures in Boiler
inspection & Maintenance"**
For SY ME (A & B)

14th September 2024 10 am to 12 pm
B building , B-411

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5. ESSENCE OF THE INDIAN CONSTITUTION

The Department of Mechanical Engineering organized an expert lecture on 28th September 2024, from 10:00 AM to 12:00 PM, an expert lecture on "**Essence of the Indian Constitution**" was conducted by Mr. Mahesh Narhar Kulkarni, an Advocate from Pune. The session aimed to provide students with a deeper understanding of the fundamental principles and values enshrined in the Indian Constitution. Mr. Kulkarni guided the participants through the key features of the Constitution, discussing its amendments, preamble, and its enduring significance in shaping India's democracy. The lecture emphasized the Constitution's core values, including justice, equality, and liberty, and how these values continue to guide India's political and social systems.

The lecture covered several critical components of the Indian Constitution, including the Preamble, Fundamental Rights, Directive Principles of State Policy, and Fundamental Duties. Mr. Kulkarni explained how the Preamble outlines the purpose and guiding principles of the Constitution, establishing the goals of justice, liberty, equality, and fraternity. He also highlighted the significance of Fundamental Rights, which guarantee basic rights to all citizens irrespective of their background. Additionally, the session delved into the Directive Principles of State Policy, which outline the state's responsibilities toward citizens' welfare, and the importance of Fundamental Duties in fostering patriotism and unity among citizens. Mr. Kulkarni also addressed the historical context of the Constitution, explaining how it evolved and the critical role it plays in promoting social justice, equality, and secularism. The lecture encouraged students to engage in critical thinking and debate on constitutional issues, exploring the challenges faced by the Constitution today and the potential reforms required to ensure its continued relevance in a changing society. Through this session, students gained a deeper appreciation for the Indian Constitution's role in shaping governance and securing the rights and freedoms of all citizens.





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ZEAL POLYTECHNIC

Department of Mechanical Engineering
Expert Session on
Essences of
INDIAN CONSTITUTION

For SSY ME (A & B) students
Organized by : Department of Mechanical Engineering



Speaker
MAHESH NARHAR KULKARNI
Advocate

 **Date- 28th September 2024**
Time -9:30 am To 12:00 pm | **Venue :**
Venue - B Building B-411

Vision
"To become a premier institute in technical education by imparting vibrant knowledge and skill-based quality education with ethical values to cater the industrial and societal needs."

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6. INDUCTION OF MECHANICAL ENGINEERS: A VIRTUAL TOUR, OPPORTUNITIES, ROLES, & RESPONSIBILITIES

The Department of Mechanical Engineering organized an expert lecture on On 9th September 2024, an expert lecture titled "Induction of Mechanical Engineers: A Virtual Tour, Opportunities, Roles, & Responsibilities" was held from 2:00 PM to 4:00 PM, facilitated by Mr. D.K. Mohan, General Manager (Retired) from NTB Hi-tech Ceramics, Chakan, Pune. The session provided a comprehensive introduction to the organization's operations, the role of mechanical engineers, and the professional opportunities and challenges they encounter. Mr. Mohan highlighted the expectations from newly inducted engineers, emphasizing their responsibility to uphold high standards of professionalism and contribute to organizational growth.

The session began with an overview of the organization and its operations, followed by a virtual tour showcasing the facilities, including workshops, laboratories, and key projects. The discussion delved into the functions of the mechanical engineering department and provided clarity on the roles and responsibilities engineers are expected to undertake. Mr. Mohan emphasized the importance of critical skills such as teamwork,

communication, and problem-solving in achieving organizational goals. He outlined the challenges mechanical engineers face in the dynamic industry landscape and provided insights into career growth opportunities and professional development pathways. The session also shed light on performance expectations, emphasizing safety, quality, and innovation.

The program achieved its objectives by acquainting newly inducted engineers with the organization's culture, projects, and facilities while addressing their queries and concerns. It also motivated participants to actively engage in professional development and adapt to the evolving demands of the industry. This enriching experience equipped the participants with a clear understanding of their roles, responsibilities, and the potential for growth in their mechanical engineering careers.

 **Expert's Talk**

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Department of Mechanical Engineering



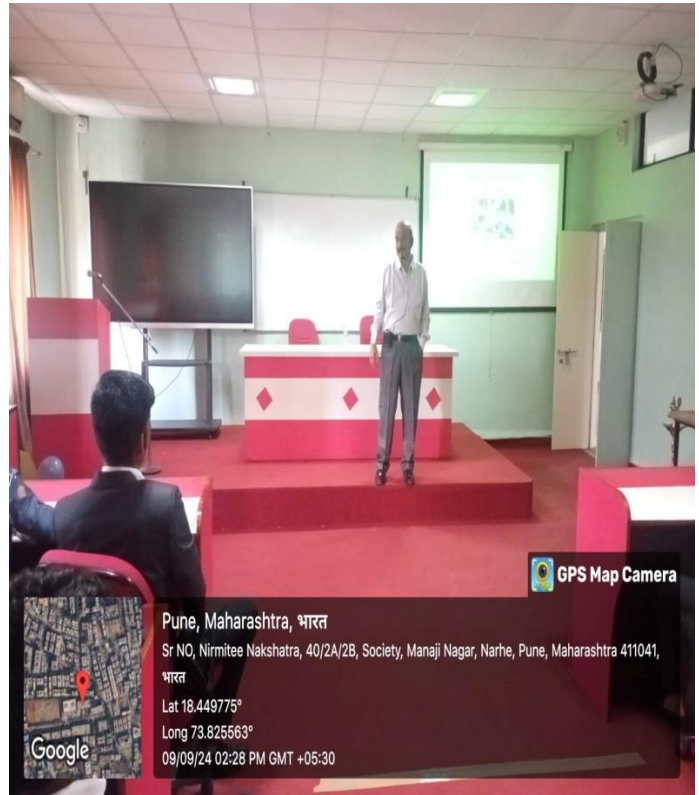
D. K. Mohan
General Manager (Retired)
NTB Hitech Ceramics, Chakan, Pune, Maharashtra

**"Induction of Mechanical Engineers,
A Virtual Tour, Opportunities, Role & Responsibility"
For FYME (A & B)**

 **9th September 2024**  **2 pm to 4 pm**

 **B building , B-411**

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7. CAREER OPPORTUNITIES IN SOLAR INDUSTRIES


The Department of Mechanical Engineering organized an expert lecture on On 9th October 2024, Mr. Pratik A. Amnaji, Proprietor of Akshay Solar, Pune, delivered an insightful lecture on “Career Opportunities in Solar Industries” to the students of Zeal Polytechnic. With over a decade of industrial experience and expertise in solar photovoltaic projects and engineering material exports, Mr. Amnaji shared valuable perspectives on the rapid growth of the solar sector. He highlighted how mechanical engineers play a crucial role in areas such as design and development of solar panels, manufacturing processes, project management, and research & development. The session underscored the industry's diverse career pathways, emphasizing the importance of regulatory knowledge, innovative thinking, and problem-solving abilities for engineers aspiring to succeed in this field.

Mr. Amnaji also discussed the global opportunities the solar industry offers, driven by increasing demand for renewable energy and government incentives. He stressed the significant social impact of working in solar industries, as engineers contribute to reducing carbon footprints and promoting sustainability. Students were encouraged to develop technical and soft skills, such as analytical thinking and effective communication, to

stay competitive in this rapidly expanding field. By inspiring students to explore impactful careers in renewable energy, the session aligned with the department's mission to cultivate socially and industrially responsible engineers.




Expert's Talk




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ZEAL POLYTECHNIC, PUNE
Department of Mechanical Engineering




Mr. Pratik A. Amnaji
Proprietor, Akshay Solar. Pune.



"Career Opportunities in Solar Industries"
For TY ME (A & B)

📅 09th October 2024 ⌚ 2:45 pm to 4:45 pm

📍 B building , B-411

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DEPARTMENTAL ACTIVITIES

ISHRAE ACTIVITIES

A. ISHRAE CHAPTER INSTALLATION

The Mechanical Engineering Department at Zeal Polytechnic proudly established the Indian Society of Heating, Refrigeration, and Air Conditioning Engineers (ISHRAE) Student Chapter for the academic year 2024-25. The installation ceremony took place on November 11, 2024, at the Chatrapati Shivaji Maharaj Auditorium (CSMA), Zeal Institute, Pune, and was graced by the presence of dignitaries, including Prof. Sachin Surywanshi (Faculty Advisor), Prof. Balaji Shinde, and Prof. Devidas Pathak. Esteemed Chief Guests included Mr. Vishal Pawar, Director of Vision System and V Cube Systems LLP; Mr. Pramod CG Jain, Founder of Parshwa Refrigeration and Air Conditioning; and Dr. Niyaz Shikalgar, Student Chair of ISHRAE Pune Chapter.

The event commenced with a traditional Saraswati Pujan performed by the dignitaries, followed by the introduction of guests by student anchors Tejas Jagtap and Parth Chavan. The dignitaries were felicitated, after which Dr. Niyaz Shikalgar provided an insightful overview of the ISHRAE Pune Chapter, emphasizing its membership benefits and career advancement opportunities. Chief Guests Mr. Vishal Pawar and Mr. Pramod CG Jain shared their perspectives on ISHRAE's role in fostering leadership, offering certifications, and facilitating collaborations between students and the industry.

The ceremony's highlight was the Oath Taking Ceremony conducted by Dr. Niyaz Shikalgar, during which the Student Chapter office bearers were formally inducted. Vaijunath Raut was sworn in as President, Ajay Choudhari as Secretary, and Amruta Mane as Treasurer, along with other CWC members. The event concluded with a heartfelt vote of thanks delivered by Prof. Sachin Surywanshi, who also coordinated the ceremony. The successful establishment of the ISHRAE Student Chapter marks a significant milestone for Zeal Polytechnic, reflecting its commitment to student development and professional growth.

ISHRAE
Pune Chapter

MA-RG **IST**

STUDENT CHAPTER INSTALLATION

**STUDENTS
ISHRAE**

@ Zeal Polytechnic, Narhe, Pune

along with Technical talk

Date : 11th November, 2024 | Time : 10.00 am

Venue : Zeal Polytechnic, Narhe, Pune



Mr. Vishal Pawar
Director, Vision Systems &
V Cube Systems LLP
Topic : Opportunities in HVAC
for ISHRAE Student Members

Mr. Vishal has done B.E. Electrical from Government College of Engineering Pune. He is having industrial experience of more than 15 years. He has worked for Wika, Testo & Siemens. He is ISHRAE Pune CWC member, Rata Pune treasurer, FSAI Pune Member. He is Director of Vision Systems & V Cube Systems LLP. Manufacturer of Various Electrical and Control Panels, PCC, MCC, Ventilation Panels, VFD & Starter panels. He has vast experience in measuring instruments, Sensors, Valves, BMS.



Mr. Pramod CG. JAIN
Founder, Parshwa Refrigeration
And Air Conditioning
Topic : Benefits for Students
in ISHRAE

Pramod CG. JAIN, done MBA, Marketing and finance from OU, Hyderabad, having industry experience of 25years, started career with Fedders Loyd and Voltas Ltd as business development manager. Presently founder of parshwa refrigeration and air conditioning in the year 2004. Currently distributor of MIDDLEBLY CELFROST in commercial kitchen equipments and bakery equipments, viz Refrigeration and hot products, in food, pharma and HORECA industry.



Dr. Shikalgar Niyaj
Student Chair,
ISHRAE Student Chapter



Mr. Chetan Thakur
President Elect,
ISHRAE Pune Chapter



Mr. Ashutosh Joshi
President,
ISHRAE Pune Chapter



Prof. S. S. Suryawanshi
Faculty Advisor,
Zeal, Polytechnic



Prof. N. N. Kokare
Head, Mech. Engrg.,
Zeal, Polytechnic



Prof. A. A. Tamboli
Rector,
Zeal Polytechnic

RSVP : Dr. Niyaj Shikalgar (Student Chair) : 9823286386 | Mr. Nilesh Gaikwad (Student Co-Chair) : 9604700437
Mr. Amit Gulwade (Secretary) : 9890969271 | Mr. Subhash Khanade (Treasurer) : 9822641492
Mr. Chetan Thakur (President Elect.) : 9923080800 | Mr. Ashutosh Joshi (President) : 9850042130

ISHRAE Pune Chapter Society Year Partners



ISHRAE Pune Chapter | Office No. 90/91/92, D-Wing, 4th Floor, K. K. Market, Pune-Satara Road, Dhankawadi, Pune - 411 043



B. TECHNICAL TALK- BENEFITS FOR STUDENTS IN ISHRAE

The ZEAL Polytechnic ISHRAE Student Chapter organized a Technical Talk titled "Benefits for Students in ISHRAE" on Monday, 11th November 2024. The session was conducted by the distinguished Mr. Pramod CG Jain, a seasoned professional with over 25 years of experience in the HVAC and allied industries. Holding an MBA in Marketing and Finance from Osmania University, Hyderabad, Mr. Jain began his career with Fedders Loya and Voltas Ltd as a Business Development Manager before founding Parshwa Refrigeration and Air Conditioning in 2004. Currently, he serves as a distributor of Middleby Celfrost, specializing in commercial kitchen and bakery equipment catering to food, pharma, and HORECA industries.

The session aimed to emphasize the benefits of ISHRAE membership for students in the HVAC field. It attracted an audience of 240 participants, including diploma students and ISHRAE members. The event began with an introduction of dignitaries by student anchor Parth Chavan, followed by the felicitation of the guest speaker by Mr. Devidas Pathak, Academic Coordinator. During the 30-minute session, Mr. Jain shared valuable insights into ISHRAE's role in fostering students' professional growth and highlighted opportunities in the HVAC industry.

Faculty members from the Mechanical Engineering Department oversaw the event, ensuring a smooth execution. The program concluded with a vote of thanks by Prof. Sachin Surywanshi, ISHRAE Faculty Advisor. The talk received excellent feedback, providing students with a deeper understanding of ISHRAE's significance and its potential to influence their career paths. The successful event reflected the coordinated efforts of the Mechanical Engineering Department and the ISHRAE Student Chapter team.



C. TECHNICAL TALK- OPPORTUNITY IN HVAC FOR ISHRAE STUDENT MEMBERS

The The ZEAL Polytechnic ISHRAE Student Chapter organized a Technical Talk on Monday, 11th November 2024, titled "Opportunity in HVAC for ISHRAE Student Members." Delivered by the esteemed Mr. Vishal Pawar, Director of Vision Systems and V Cube Systems LLP, the session aimed to create awareness about the HVAC industry and the benefits of ISHRAE membership. Mr. Pawar, with a B.E. in Electrical Engineering from Government College of Engineering, Pune, and over 15 years of industrial experience, shared his expertise. He is also an ISHRAE Pune CWC Member, RATA Pune Treasurer, and FSAI Pune Member.

The session saw participation from 240 students of the Mechanical Engineering Department, including diploma and ISHRAE student members. It began with an introduction of dignitaries by Tejas Jagtap and the felicitation of Mr. Pawar by Balaji Shinde and Academic Coordinator Devidas Pathak. During his 30-minute talk, Mr. Pawar highlighted career opportunities, industry trends, and essential skills in the HVAC sector.

The event concluded with a vote of thanks by Prof. Sachin Surywanshi, ISHRAE Faculty Advisor. Students found the session insightful and beneficial for understanding professional opportunities in the HVAC industry. Special acknowledgment was extended to the Mechanical Engineering Department and the ISHRAE Student Chapter team for their efforts in organizing this successful event.



MESA ACTIVITIES**MESA 2024-25****(MECHANICAL ENGINEERING STUDENTS ASSOCIATION)****OFFICIAL ORDER**

As per the meeting conducted for the MESA (Mechanical Engineering Students Association) Committee Membership, the following candidates have been appointed to ensure the smooth and effective organization of MESA events for the academic year 2024-25.

The selected members have demonstrated exceptional skills, enthusiasm, and commitment during the selection process. They will take on various responsibilities to ensure the successful execution of MESA activities and events.

This team is expected to uphold the values of collaboration and innovation, fostering a vibrant and engaging environment for all Mechanical Engineering students. Best wishes to the newly appointed MESA Committee members for a successful academic year!

SR NO.	DESIGNATION	NAME OF STUDENT	CONTACT NUMBER	CLASS
1	PRESIDENT	JAGTAP TEJAS VISHNU	9702472555	TYME
2	SECRETARY	JADHAV ANURAG YOGESH	9156189117	TYME
3	JOINT SECREATORY	SINGH YUVRAJ SANJAY	8767252985	SYME
4	TREASURER	BENKAR MUGDHA DEEPAK	8623064865	TYME
5	JOINT TREASURER	CHAVAN PARTH GANESH	9860660423	FYME
6	EVENT COORDINATOR	HATAGALE ROHIT ANKUSH	9769727633	TYME
7	SOCIAL MEDIA COORDINATOR	BADAME ATHARV ANIL	8308893269	FYME
8	EVENT PUBLICITY COORDINATOR	MADHURA SARAF	9309446207	SYME
9	STUDENT SPORTS COORDINATOR	MOTE TUSHAR SHARAD	9356819916	TYME

MESA Chairman – Prof. N. N. Kokare**MESA Coordinator – Prof. Sachin Surywanshi (8669900048)****MESA Mentor- Prof. Manoj Charate (9975588412)**

D. MESA – GUEST LECTURE - ENTREPRENEURIAL VENTURES IN BOILER INSPECTION & MAINTENANCE

On 14th September 2024, the Mechanical Engineering Department at Zeal Polytechnic hosted an expert lecture on behalf of titled "Entrepreneurial Ventures in Boiler Inspection & Maintenance", delivered by Mr. C. G. Pawar, Deputy Director of Steam Boilers, Pune. The session, attended by students and faculty, focused on the entrepreneurial opportunities in the boiler inspection and maintenance sector. Mr. Pawar highlighted key aspects of the industry, including its challenges, emerging technologies, and the importance of compliance with safety regulations. He shared success stories and emphasized the role of innovation, customer focus, and technical expertise in establishing thriving businesses in this field.

The session aimed to inspire students to explore entrepreneurial careers by offering insights into building and sustaining a boiler-related business. Mr. Pawar discussed critical topics such as industry trends, regulatory requirements, marketing strategies, and essential skills for success. He also elaborated on the role of innovation and technology in transforming boiler maintenance practices. The session concluded with an interactive Q&A segment, leaving participants motivated and well-informed about potential career paths and opportunities in this niche industry.

The poster is a vertical rectangular graphic with a dark blue and white color scheme. At the top left, it features the MESA logo and the text "Expert's Talk on the occasion of Engineers Day". The top center displays the Zeal Institutes logo, including the text "ZEAL INSTITUTES", "www.zealeducation.com", "ESTD-1996", and "NARHE | PUNE | INDIA". A gold "25" anniversary badge is on the top right. Below the logos is a circular portrait of Mr. C. G. Pawar, with his name and title "Dy. Director, Steam Boilers, Pune" underneath. The background of the poster shows industrial boiler equipment. The main title "ZEAL POLYTECHNIC, PUNE" is in large yellow letters, followed by "Department of Mechanical Engineering". The lecture title "Entrepreneurial Ventures in Boiler Inspection & Maintenance" is in white, with "For SY ME (A & B)" below it. The date and time "14th September 2024 10 am to 12 pm" are listed, along with the location "B building, B-411". At the bottom, it says "Follow us at : zealinstitutes" with social media icons for Facebook, Instagram, Twitter, YouTube, and LinkedIn.





E. MESA – INDUSTRIAL VISIT - MEENERGY

On **22nd August 2024**, students from the Mechanical Engineering Department at Zeal Polytechnic visited **MEENERGY**, a leading company in thermal engineering and energy efficiency. The visit provided students with a hands-on understanding of manufacturing processes and innovative technologies in energy-saving systems, heat exchangers, and pressure vessels. Key resource persons, including **Mr. Vijay Kharta (Managing Director)**, **Mrs. Rajashri Bhandare (HR Manager)**, and other department heads, shared valuable insights into the company's operations and achievements. Students explored MEENERGY's specialized offerings, such as waste heat recovery systems, thermic fluid heaters, and pressure vessels, witnessing cutting-edge processes like welding, machining, and quality control in action.

The visit emphasized practical exposure and technical knowledge, connecting theoretical concepts to real-world applications. Students learned about the challenges and innovations in thermal system design and manufacturing while gaining awareness of industry practices and career opportunities. Networking sessions with professionals provided guidance on future career paths. The experience highlighted the importance of safety protocols, quality assurance, and research-driven innovation in delivering sustainable solutions for global industries, leaving students inspired and better equipped for their professional journeys.



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Department of Mechanical Engineering



SECOND YEAR MECHANICAL ENGINEERING STUDENTS

INDUSTRIAL VISIT AT

MEENERGY

Gate No. 1083/1B, Off Alandi-Markal Road,
Markal, Tal. Khed, Pune - 412105.

22nd August 2024

09.15 am to 03.00 pm

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MESA – TEACHERS DAY CELEBRATIONS

The **Teacher's Day Celebration** at ZEAL Polytechnic was organized with great enthusiasm on **5th September 2024** to honor and appreciate the dedication and guidance of the teaching faculty. The event, organized by the **MESA Committee**, was a grand success, bringing together students and staff for a heartfelt tribute.

The program began with a warm welcome and engaging anchoring by **Anurag Jadhav**, who set a lively tone for the event. Students expressed their respect and admiration for their teachers through heartfelt speeches and cultural performances that resonated with the theme of gratitude.

A special highlight of the program was the speech delivered by **HOD, Mr. Nilesh Kokare**, who commended the efforts of the faculty and students. He emphasized the pivotal role of teachers in shaping young minds and encouraged students to actively pursue their goals with the guidance of their mentors.

The **felicitation ceremony** was a significant moment, where the **MESA Committee members** presented each faculty member with greeting cards and roses as a token of appreciation. This thoughtful gesture was warmly received by the faculty, adding a personal touch to the celebration.

The event coordinators, **Mr. Rohit Hatagale** and **Miss Mughda Benkar**, ensured the smooth execution of the program. Their meticulous planning and teamwork, along with the dedication of the MESA Committee, contributed to the event's success.

The celebration concluded on a high note, leaving a lasting impression of respect and camaraderie between students and teachers.

Special thanks to all the **MESA Committee members** for their efforts in organizing this memorable event.



PARENTS MEETING-

The Department of Mechanical Engineering conducted a Parents' Meeting for FY, SY, and TY students 16TH NOVEMBER from 2024. The meeting focused on Unit Test 1 result analysis, student attendance, and the importance of Unit Test 2. Hosted by **Prof. Nilesh Kokare**, Head of the Department, the session included interactions between class teachers and parents. Over 200 parents actively participated, expressing appreciation for the department's transparency and raising inquiries about internships, skill development, and industry preparedness. The meeting fostered collaboration and received positive feedback for promoting student well-being and academic progress.



INDUSTRIAL VISIT

1. INDUSTRIAL VISIT TO GLOBAL TOOLING, PUNE: A HANDS-ON LEARNING OPPORTUNITY

On 13th and 14th September 2024, students from Zeal Polytechnic had the opportunity to visit **Global Tooling**, a leader in precision tooling and machining solutions. Over its 25-year history, Global Tooling has built a reputation for providing high-quality knives, cutter heads, and custom tooling solutions to millwork producers worldwide. During the visit, students interacted with key industry professionals, including **Mr. Chandrakant Hodge (Operations Head)** and **Mr. Dev Barma (Plant Head)**, gaining invaluable insights into the company's innovative approaches to meeting the needs of diverse industries, from automotive to aerospace. The visit showcased the company's wide range of products, such as moulder tooling, shaper tooling, planer heads, and grinding equipment. Students observed real-world applications of these tools, along with advanced manufacturing techniques. They also gained an understanding of the company's commitment to precision, innovation, and customer-centric practices, which drive their success in a competitive global market. This experience provided an excellent platform for students to connect theoretical knowledge with industrial practices, explore career opportunities, and understand the critical role of quality, efficiency, and continuous improvement in manufacturing processes.





2. INDUSTRIAL VISIT TO PROVITECH SOLUTIONS CNC & VMC: A COMPREHENSIVE LEARNING EXPERIENCE

On **3rd September 2024**, students from Zeal Polytechnic visited **Provitech Solutions**, a dynamic and innovative firm specializing in CNC and VMC services, located in Chikhali Pradhikaran, Pune. Founded in 2021, Provitech Solutions has rapidly established itself in the market by offering services including CNC and VMC machining training, custom programming, machine operation, and maintenance. The visit was facilitated by **Mr. Kishor Kadam (Proprietor)**, **Mr. Umakant Desale (Technical Supervisor)**, and **Mr. Bhushan Golap (Technical Supervisor)**, who provided in-depth insights into the firm's operations and technical offerings.

Students had the opportunity to engage in hands-on learning, observing CNC and VMC machine operations, and understanding the intricacies of programming, machine maintenance, and troubleshooting. Provitech Solutions also emphasized the importance of safe and efficient operations, fostering a deeper understanding of the real-world applications of CNC and VMC technology in industries. The visit not only

enhanced students' technical knowledge but also introduced them to the emerging trends in CNC and VMC services, helping them connect theoretical concepts with practical applications in the manufacturing sector.



3. INDUSTRIAL VISIT TO SHRI SANT TUKARAM SUGAR FACTORY

On **30th July 2024**, students from Zeal Polytechnic visited the **Shri Sant Tukaram Sahakari Sakhar Karkhana Ltd.**, a leading sugar factory in Pune district. The visit, guided by **Mr. Kalokhe S.B. (General Manager)** and **Mr. Bhale S.R. (Sr. Engineer)**, provided students with an in-depth understanding of the sugar production process, from juice extraction to crystallization. The factory, which operates with a capacity of 3500 TCD and a co-generation unit that produces 15 MW of electricity, utilizes bagasse as a fuel source for generating steam and electricity. The tour also covered other processes, such as ethanol production through distillation of molasses, and the use of by-products like bagasse and press mud in various applications such as bio-fuel and composting.

The primary objectives of the visit were to expose students to real-world applications of thermal engineering principles and energy efficiency measures. Students learned about steam boiler operations, turbine function, and heat transfer processes used in the factory. They also observed the implementation of waste heat recovery systems and gained practical knowledge of industrial safety practices. Overall, the visit helped students connect theoretical concepts with practical industry operations, enhancing their understanding of thermal engineering and sustainable energy practices in the sugar industry.



ACADEMIC ACHIVEMENTS OF STUDENTS**1. Topper List First Year Mechanical Engineering Students Summer 2024**

Summer 2024	Sem II	Enrollment Number	Candidates Name	Total marks	Total marks obtained	present	Result (Class)
		23252271228	GIRI KIRAN RAVI	900	776	86.22	DISTINCTION
		23252271300	SHINDE SAIRAJ SUNIL	900	736	81.78	DISTINCTION
		23252271279	NITESH PRAMOD PAWAR	900	728	80.89	DISTINCTION

2. Topper List Second Year Mechanical Engineering Students Summer 2024

Summer 2024	Sem IV	Enrollment Number	Candidates Name	Total marks	Total marks obtained	present	Result (Class)
		2209880531	JALGEKAR SUMIT MANJUNATH	800	669	83.63	DISTINCTION
		2209880552	KHADE SWAYAM DEEPAK	800	663	82.88	DISTINCTION
		2209880593	BHALSHANKAR NISHANT RAMCHANDRA	800	662	82.75	DISTINCTION

3. Topper List Third Year Mechanical Engineering Students Summer 2024

Summer 2024	SEM VI	Enrollment Number	Candidates Name	Total marks	Total marks obtained	present	Result (Class)
		2109880591	JADHAV YASH UTTAM	900	846	93.9	DISTINCTION
		2109880583	HARSH ARUN KHUTEKAR	900	820	89.74	DISTINCTION
		2109880597	JOGLEKAR RUSHIKESH VINAY	900	814	89.69	DISTINCTION



**THANK
YOU!**

ZEAL POLYTECHNIC, NARHE, PUNE
DEPARTMENT OF MECHANICAL ENGINEERING

ZEAL MECHANICAL DEPARTMENT