2021



## ZEAL POLYTECHNIC, PUNE





## ABOUT INSTITUTE ZEAL POLYTECHNIC, NARHE, PUNE

Zeal Education Society was established in 1996 with the vision to offer education with a difference, the expert guidance of Hon. Shri. S.M. Katkar, a distinguished industrialist. ZES hosts eight institutes that provide quality education to students from pre- primary to Ph.D. courses.

Zeal Polytechnic started in 2008 and offers Diploma Courses in Mechanical Engineering, Civil Engineering, Computer Engineering, Electronics and Telecommunication Engineering & Electrical Engineering.

The institute aims at providing the students with excellent Infrastructure, state of the art facilities, well-equipped laboratories and a strong force of faculty members. This has resulted in incredible performance of the students continually throughout the years. Recently, our Founder director has been conferred with the 'Icon of Education 'award by Lokmat media group in the presence of Hon. Smt. Smriti Irani, Former HRD Minister, Government of India from Hon. Shri. Vinod Tawde, former Technical Education Minister, Maharashtra State.

### **Principal's Message**

#### Prof. Ayub A. Tamboli

I am very happy to note that the department of Mechanical Engineering of Zeal Polytechnic is releasing its newsletter enumerating the various activities and achievements of their faculty and students. I take immense pride in acknowledging the outstanding academic achievements of our diploma mechanical engineering students. Your commitment to excellence and the pursuit of knowledge has been commendable. Your academic journey is a testament to the dedication and hard work you have invested in your education. Polytechnic education provides the knowledge and skills required to help revolutionize the world in which we live. The students and faculty of department are proactive in taking initiatives in technical, cultural and social events. I hope this newsletter will serve the purpose of reflecting all activities of this department and it will inspire others to do their best. I express my gratitude to each one of you for your contributions to the success of our diploma mechanical engineering program. Together, let us continue to strive for excellence and innovation I congratulate all the students who have put their efforts in bringing this first issue of newsletter and also appreciate HOD and all faculty members for motivating the students towards this fulfillment. I wish each one of them in the department success in all their endeavors.



## **HOD Massage**

#### **Prof. Rameshwar Khorane**

The Department was established as Dnyanganga Polytechnic in 2008. It offers a diploma in mechanical engineering and can accommodate 150 students We function with the vision that the Department should get recognized as an innovative and leading Mechanical department in Pune region and afar. The department aims at offering students with the high-quality education clubbed with practical exposure that empowers them with the ability to aid the society by their services in the future. The Department aims at making superior diploma engineering professionals through academic brilliance and excellent education. The syllabus in Mechanical Engineering is steered with an extraordinary approach that helps students to meet the modern requirements of industries. To cater to the current advancement in technology, new subjects such as CAD / CAM and Automation, alternative Energy Resources, Material Handling System are also conducted using modernized laboratories and the required infrastructure. A team of well qualified and experienced faculty members forms the backbone of the Department. This team is determined to empower students with sound academic knowledge and practical experience which in turn makes the students ready to face the industry challenges.



Prof. Rameshwar Khorane **HOD**, **B.E.** (**Production**)

### **NEWSLETTER COMMITTE**

**CHIEF EDITORIAL** 

**EDITORIAL TEAM** 

PROF. SACHIN SURYWANNSHI PROF. BALAJI SHINDE MR. KALE VAIBHAV DATTA
MR. HAGAWANE SHUBHAM VIKAS
MR. BHALERAO CHINMAY SACHIN
MR. OMKAR JOSHI

Dear Readers,

As the students contributing to this newsletter, we are excited to bring you a snapshot of our experiences, achievements, and reflections. This edition is a testament to the collective spirit that defines our academic community. Amidst lectures, assignments, and exams, we've found moments of inspiration, collaboration, and growth. Our journey goes beyond textbooks — it's about the friendships formed, the challenges faced, and the victories celebrated together. This newsletter is a canvas where our voices, ideas, and aspirations come to life. It's a platform to share not just our achievements but also the lessons learned along the way. As we navigate the diverse tapestry of student life, we invite you to join us in this narrative. Your stories, insights, and perspectives are vital to the richness of our shared experiences. Let this newsletter be a reflection of our collective journey, a celebration of our achievements, and a reminder of the vibrant community we are privileged to be a part of.

Warm Regards,

The Editorial Team

Mechanical Engineering Students

WINTER-2021

## **FACULTY PROFILE**

## **Department of Mechanical Engineering**



NAME - Prof.Tamboli Ayub Almso
DEGREE - ME PhD Pursuing
EXPERIENCE - 21 Years
SUBJECTS - Thermal, Heat Transfer, Fluid Mechanics
MAIL ID - ayub.tamboli@zealeducation.com
YEAR - 2021-22



NAME - Mr.Aghor Shashikant Gajanan DEGREE - M.E. Design EXPERIENCE - 18 Years SUBJECTS - SOM, TOM, Design, Drawing, Graphics MAIL ID -YEAR - 2021-22



NAME - Mr.Khorane Rameshwar Shankar

DEGREE - ME Heat Power

EXPERIENCE - 20 Years

SUBJECTS - Thermal, Heat Transfer, Fluid Mechanics

MAIL ID - rameshwar.khorane@zealeducation.com

YEAR - 2021-22



NAME - Mr.GadadeTulshiramYashwant
DEGREE - ME Design
EXPERIENCE - 9 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - tulashiram.gadade@zealeducation.com
YEAR - 2021-22



NAME - Mr.Chandane Amol Manik
DEGREE - ME Thermal
EXPERIENCE - 6 Years
SUBJECTS - Thermal, Heat Transfer, Fluid Mechanics
MAIL ID YEAR - 2021-22

#### **MECHANICAL ENGINEERING DEPARTMENT**

WINTER-2021



NAME - Mr.Pathak Shriram Rameshrao
DEGREE - M.Sc. Chemistry
EXPERIENCE - 9 Years
SUBJECTS - Chemistry
MAIL ID - shriram.pathak@zealeducation.com
YEAR - 2021-22



NAME - Mr.Kokare Nilesh Navanath
DEGREE - ME Thermal
EXPERIENCE - 8 Years
SUBJECTS - Thermal, Heat Transfer, Fluid Mechanics
MAIL ID - nilesh.kokare@zealeducation.com
YEAR - 2021-22



NAME - Mr.Kale Shrihari Bapuraoji
DEGREE - ME Design Pursuing
EXPERIENCE - 6 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - shrihari.kale@zealeducation.com
YEAR - 2021-22



NAME - Mr.Shrivas Shubham Jagdish
DEGREE - BE Mechanical
EXPERIENCE - 2 Years
SUBJECTS - CAD, Graphics, Som, Manufacturing
MAIL ID - shubham.shrivas@zealeducation.com
YEAR - 2021-22



NAME - Mr.Shinde Balaji Prabhu
DEGREE - ME Design Pursuing
EXPERIENCE - 8 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - balaji.shinde@zealeducation.com
YEAR - 2021-22



NAME - Mr.Deoghare Mrunal Mohanrao
DEGREE - ME Design
EXPERIENCE - 6 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - mrunal.marne@zealeducation.com
YEAR - 2021-22

#### MECHANICAL ENGINEERING DEPARTMENT

#### WINTER-2021



NAME - Mr.Chaudhari Swapnil Machhindra DEGREE - M.Tech (IMWCA), Bsc. B.Ed EXPERIENCE - 4.6 Years SUBJECTS - maths

MAIL ID - swapnil.chaudhari@zealeducation.com

YEAR - 2021-22



NAME - Mr.Kulkarni Onkar Vitthalrao
DEGREE - M Tech Design
EXPERIENCE - 4 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - onkar.kulkarni@zealeducation.com
YEAR - 2021-22



NAME - Mr.Pathak Devidas Madhukarrao
DEGREE - ME Design
EXPERIENCE - 18.5 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - devidas.pathak@zealeducation.com
YEAR - 2021-22



NAME - Mr. Varghe Akshay Prakash
DEGREE - M Tech Design
EXPERIENCE - 3 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - akshay.varghe@zealeducation.com
YEAR - 2021-22



NAME - Mr.Akale Sugam Bapusaheb

DEGREE - BE Mechanical

EXPERIENCE - 5 Years

SUBJECTS - CAD, Graphics, Som, Manufacturing

MAIL ID - sugam.akale@zealeducation.com

YEAR - 2021-22



NAME - Mr.Yenkar Ravi Gopal
DEGREE - ME Mechanical
EXPERIENCE - 11 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - ravi.yenkar@zealeducation.com
YEAR - 2021-22

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#### MECHANICAL ENGINEERING DEPARTMENT



NAME - Dr.Aitavade Eknath Nivrutti
DEGREE - Phd Pursuing
EXPERIENCE - 28 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - eknath.aitavade@zealeducation.com
YEAR - 2021-22



NAME - Mr.Limaye Shridhar Dattatraya

DEGREE - M.Tech Heat Power

EXPERIENCE - 27 Years

SUBJECTS - Thermal, Heat Transfer, Fluid Mechanics

MAIL ID - shridhar.limaye@zealeducation.com

YEAR - 2021-22



NAME - Mr.Waghmode Shekhar Sukhdev
DEGREE - ME DESIGN
EXPERIENCE - 5 Years
SUBJECTS - SOM, TOM, Design, Drawing, Graphics
MAIL ID - shekhar.waghmode@zealeducation.com
YEAR - 2021-22

NAME - Mr. Naik Ganesh Gorakh



DEGREE - ME Heat Power

EXPERIENCE - Years

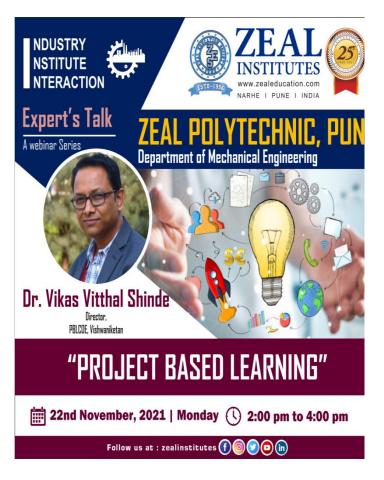
SUBJECTS - Thermal, Heat Transfer, Fluid Mechanics

MAIL ID - ganesh.naik@zealeducation.com

YEAR - 2021-22

WINTER-2021

## **Expert Talk**



The Department of Mechanical Engineering organized an Expert webinar. Expert talk given by Dr. Vikas Victual Shinde on 22<sup>nd</sup> November 2021, Project-Based Learning (PBL) has gained significant recognition as an effective pedagogical approach, fostering active learning and practical skill development. This expert explores the integration of PBL into guest lectures, aiming to enhance student engagement and deepen their understanding of real-world applications.

#### Objectives:

Evaluate the effectiveness of incorporating PBL into guest lectures.

Measure the impact on student engagement and participation.

Assess the development of practical skills and knowledge application.



## Webinar

#### 1. WEBINAR ON - PLASTIC TECHNOLOGY

The Department of Mechanical Engineering organized an Expert webinar on "Plastic Technology" on 25<sup>th</sup> Sept 2021 on google meet link Mr. Allhad Lele, Director, Bhosari Pune. was invited to interact with Second Year and third Year Mechanical Engineering students, to create awareness about waste management. The webinar was Conducted in the presence of the Head of the Department, Prof. Rameshwar Khorane, and the Subject Teacher Prof. R. G. Yenkar. Prof. Prof. R. G. Yenkar welcomed the guest, give introductory speech and importance of webinar on behalf of Department and Mr. Allhad lele started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 200 students and was coordinated successfully by Prof. R. G. Yenkar.

#### 2. WEBINAR ON – INDUSTRY DEMANDS FROM ENGINEERING STUDENTS

The Department of Mechanical Engineering organized an Expert webinar on "INDUSTRY DEMANDS FROM ENGINEERING STUDENTS" on 25<sup>th</sup> Sept 2021 on google meet link Mr. ARJUN GHULE, Director, RBG Group, Pune. was invited to interact with Second Year and third Year Mechanical Engineering students, to create awareness about Placements, Various Mechanical filed and Various opportunity after diploma. The webinar was Conducted in the presence of the Head of the Department, Prof. Rameshwar Khorane, and the coordinator Prof. Ganesh Naik.

**Prof. Ganesh Naik** welcomed the guest, give introductory speech and importance of webinar on behalf of Department and **Mr. Arjun Ghule** started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 200 students and was coordinated successfully by **Prof. Ganesh Naik.** 

#### 3. WEBINAR ON – PROCESS OF INNVOTAIONS AND ENTERPRENERSHIPS

The Department of Mechanical Engineering organized an Expert webinar on "PROCESS OF INNVOTAIONS AND ENTERPRENERSHIPS" on 29<sup>th</sup> Sept 2021 on google meet link Dr. Sanjay Hawaldar, Entrepreneur, Pune. was invited to interact with Second Year and third Year Mechanical Engineering students, to create awareness about Basic of industries in India and latest developments in automations. The webinar was Conducted in the presence of the Head of the Department, Prof. Rameshwar Khorane, and the coordinator Prof. Ganesh Naik.

**Prof. Ganesh Naik** welcomed the guest, give introductory speech and importance of webinar on behalf of Department and **Dr. Sanjay Hawaldar** started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 200 students and was coordinated successfully by **Prof. Ganesh Naik**.

#### 4. WEBINAR ON – Introductions to Manufacturing Industry

The Department of Mechanical Engineering organized an Expert webinar on "Introductions to Manufacturing Industry" on 2<sup>nd</sup> Oct 2021 on google meet link Dr. D K Mohan, Pune. was invited to interact with Second Year and third Year Mechanical Engineering students, to create awareness about Basic of industries in India and latest developments in automations. The webinar was Conducted in the presence of the Head of the Department, Prof. Rameshwar Khorane, and the coordinator Prof. Ganesh Naik.

**Prof. Ganesh Naik** welcomed the guest, give introductory speech and importance of webinar on behalf of Department and **Dr. D. K. Mohan** started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 200 students and was coordinated successfully by **Prof. Ganesh Naik**.

#### 5. WEBINAR ON – INDUSTRIAL WASTE MANAGEMENT

The Department of Mechanical Engineering organized an Expert webinar on "INDUSTRIAL WASTE MANAGEMENT" on 9<sup>th</sup> Oct 2021 on google meet link Mr. Abhijeet Wagh, Abhinav Product, Pune. was invited to interact with Second Year and third Year Mechanical Engineering students, to create awareness about Basic of industries in India and latest developments in automations. The webinar was Conducted in the presence of the Head of the Department, Prof. Rameshwar Khorane, and the coordinator Prof. Ganesh Naik.

**Prof. Ganesh Naik** welcomed the guest, give introductory speech and importance of webinar on behalf of Department and **Mr. Abhijeet Wagh** started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 200 students and was coordinated successfully by **Prof. Ganesh Naik.** 

#### 6. WEBINAR ON – ADVANCEMENT IN IC ENGINES

The Department of Mechanical Engineering organized an Expert webinar on "ADVANCEMENT IN IC ENGINES" on 9<sup>TH</sup> OCT 2021 on google meet link Mr. SUNJAY HARIP, Sr. Faculty, Government Polytechnic, Pune was invited to interact with third Year Mechanical Engineering students, to create awareness about Advance technology in IC Engine. The webinar was Conducted in the presence of the Head of the Department, Prof. Rameshwar Khorane, and the Subject Teacher Prof. R. G. Yenkar.

**Prof. Prof. R. G. Yenkar** welcomed the guest, give introductory speech and importance of webinar on behalf of Department and **Mr. SUNJAY HARIP** started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 100 students and was coordinated successfully by **Prof. R. G. Yenkar.** 

#### 7. WEBINAR ON – BASIC SUPPLY CHAIN MANAGEMENT

The Department of Mechanical Engineering organized an Expert webinar on "BASIC SUPPLY CHAIN MANAGEMENT" on 16<sup>th</sup> oct 2021 on google meet link Miss. Sonali Shitole, Sr. Product Specialist, SAP Ariba. was invited to interact with Second Year and third Year Mechanical Engineering students, to create awareness about Placements, Various Mechanical filed and Various opportunity after diploma. The webinar was Conducted in the presence of the Head of the Department, Prof. Rameshwar Khorane, and the coordinator Prof. Ganesh Naik.

**Prof. Ganesh Naik** welcomed the guest, give introductory speech and importance of webinar on behalf of Department and **Miss. Sonali Shitole** started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 200 students and was coordinated successfully by **Prof. Ganesh Naik.** 

### 8. WEBINAR ON – Opportunities For Mechanical Engineers in IT Technology

The Department of Mechanical Engineering organized an Expert webinar on "Opportunities For Mechanical Engineers in IT Technology" on 30<sup>th</sup> oct 2021 on google meet link Mr. Umesh Kulkarni, Consultant, HCL technologies. was invited to interact with Second Year and third Year Mechanical Engineering students, to create awareness about Various industries in India ,Placements, latest developments in information's technology sector.

The webinar was Conducted in the presence of the Head of the Department, **Prof. Rameshwar Khorane**, and the coordinator **Prof. Ganesh Naik**.

**Prof. Ganesh Naik** welcomed the guest, give introductory speech and importance of webinar on behalf of Department and **Mr. Umesh Kulkarni** started the session. Session was conducted for 2 hrs. He managed the webinar effectively. All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 200 students and was coordinated successfully by **Prof. Ganesh Naik.** 

# DEPARTMENTAL ACTIVITES

#### 1. INDUCTION PROGRAME:-



The Department of Mechanical Engineering organized an Induction Programme for First Year Mechanical Engineering Students on Microsoft Teams. Durations of this induction programme was 3 Days which was 1<sup>st</sup> sept 2021 to 3<sup>rd</sup> sept 2021to create awareness about zeal college, various labs, facilities, policies and rules-regulations.

The Induction Programme was Conducted in the presence of the Head of the Department, **Prof.** Rameshwar Khorane, All faculty members of the Mechanical Engineering Department were present online for the session. The lecture was attended by 300 students and was coordinated successfully by coordinator **Prof.** Sachin Surywanshi, Prof. Balaji Shinde Prof. Shubham Shriyas



## ECHNIC, PUNE

#### **Department of Mechanical Engineering**

#### INDUCTION PROGRAMME PLAN

| Day 1                | Plane   |  |  |  |
|----------------------|---|--|--|--|
| 9:00 AM to 10:00 AM  | AM to 10:00 AM    Welcome Program & College Information- Facilities & Resources   |  |  |  |
| 10:00 AM to 11:00 AM | <ul> <li>Department Information: Faculty, Facilities, Laboratories, initiatives,</li> <li>College norms, rules and regulations etc.</li> </ul>                                      | Prof. R.S. Khorane   |  |  |
| 11:30 AM to 12:30 PM | :30 AM to 12:30 PM  • Awareness & Imprtance of Global Certification & Industrial Training/<br>T&P, Internship, PBL etc.   |  |  |  |
| 12:30 PM to 1:30 PM  | Virtual Industrial Visit  | Prof. D.M. Pathak  |  |  |
| 2:00 PM to 3:00 PM   | 00 PM • Expert Talk on Diploma Program: importance & future prospects   |  |  |  |
| 3:00 PM to 4:00 PM   | Motivational Talk     STER  | Mr. Raghwan Koli<br>Motivational Speeker                               |  |  |
| Day 2                | Date : 02/09/2021   | Plane  |  |  |
| 9:00 AM to 10:00 AM  | Prof. Ekta S. Mehta &<br>Prof. Komal Sawant   |  |  |  |
| 10:00 AM to 11:00 AM | <ul> <li>Student Support Systems: IIIC, IPR, EDC, Higher Education,<br/>Student Chapters &amp; Clubs</li> </ul>   | Prof. Eknath N. Aitavade   |  |  |
| 11:30 AM to 12:30 PM | to 12:30 PM  • Encouragement & Motivation for participation in curricular, co-curricular and extracurricular activities for all-round and holistic development.                     |  |  |  |
| 12:30 PM to 1:30 PM  | GFM: Student Profile, Career Inclination & Student expectation:     Counseling & Mentoring Mechanism  | Prof. N. N. Kokare   |  |  |
| 2:00 PM to 3:00 PM   | Lecture by eminent people: Industry   | Mr. Atul Bhagat,Director<br>(Xbotic Automation, Pune)                  |  |  |
| 3:00 PM to 4:00 PM   | Lecture by eminent people: Industry   | Mr. Atul Bhagat, Director<br>(Xbotic Automation, Pune)                 |  |  |
| Day 3                | Date : 03/09/2021   | Plane  |  |  |
| 9:00 AM to 10:00 AM  | Alumni Talk: Guidance, Opportunities  | Mr. Vikramaditya More<br>Mr. Pratik Joshi<br>(Alumini Zeal Polytechnic |  |  |
| 10:00 AM to 11:00 AM | <ul> <li>Library: Physical &amp; online/e-resources available at Library &amp; its usage</li> </ul>   | Mrs. Usha Poman  |  |  |
| 11:30 AM to 12:30 PM | <ul> <li>Personality Development: Soft Skills, Communication Skills and<br/>interpersonal skills, Life skills</li> </ul>  | Mr. Kaustubh Jadhav  |  |  |
| 12:30 PM to 1:30 PM  | <ul> <li>Student Section, Account section, Scholarship Section, Exam Section:<br/>Services from office, facilities like scholarship, extracurricular<br/>activities etc.</li> </ul> | Mr. Suhas Shewale &<br>Mr. Amol Batte                                  |  |  |
| 2:00 PM to 3:00 PM   | Awareness & Motivational Talk on Entrepreneurship   | Mr. Anand Bhise,Director<br>(Mechatol Engineering<br>Solution, Pune)   |  |  |
| 3:00 PM to 4:00 PM   | • Feedback of Induction Program & Craetive Arts   | Prof. Ekta S. Mehta  |  |  |

Transforming dreams into reality by developing an individual's potential through spread of knowledge and wisdom in healthy environment.

#### Institute Mission:

- Implement comprehensive teaching learning processes to create competent students. Focus on character building through a range of curricular and extra-curricular activities. Motivate students to identify social needs and provide engineering solutions.
- Department Vision:"To develop Electronic & Telecommunication Engineering graduates with excellent academics, knowledge, leadership skills & ethics."
- 🕿 020 67206021 🥽 www.zealpolytechnic.com 💌 admission.poly@zealeducation.com
- 🕈 Zeal Education Society, Narhe Campus S. No.39, Narhe-Dhayari Road, Narhe, Pune-41



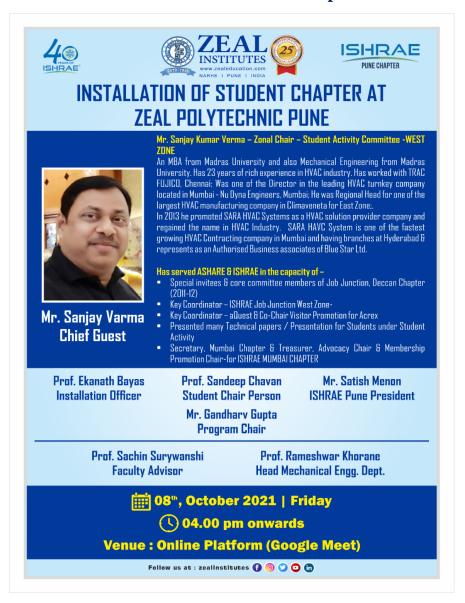






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#### 2. ISHRAE Student Chapter-



The department of Mechanical Engineering established the Indian Society of and Air Conditioning Engineers Students Chapter (ISHRAE) for the society year 2021-22 on October 8<sup>th</sup> 2021. The ceremony was conducted in presence of Prof Rameshwar khorane (HOD), Prof. Sachin Surywanshi (Faculty Advisor), Prof. Shashikant Aghor, Prof. Balaji Shinde, Chief Guest Mr. Sanjay Varma – Zonal Chair Person ISHRAE, Mr. Satish Menon, President ISHRAE Pune, Prof. Eknath Bayas- Installation Officer and all dignitaries

#### 3. ISHRAE Guest Lecture



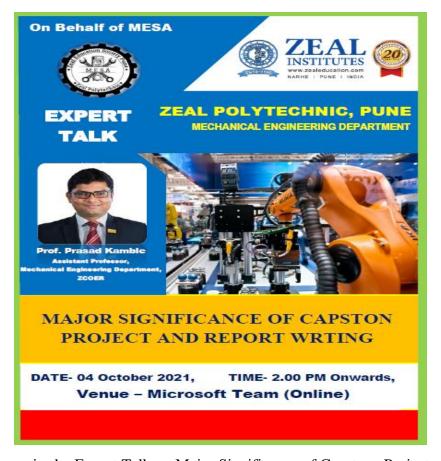
Subject: Report of ZEAL-ISHRAE student expert talk on "Career Opportunity in HVAC field and understanding the technology" dated on Saturday, 13 th November 2021.

As per above mention subject ZEAL Poly- ISHRAE student chapter organized technical talk by Mr. Mahesh Shinde on "Career Opportunity in HVAC field and understanding the technology" dated on Saturday, 13 th November 2021. The more details report is enclosed herewith.

This expert lecture was organized for ISHRAE members, HVAC subject students and Mechanical Department students and faculties of Mechanical Engineering Department. Number of participants in expert talk is 127. The introduction and felicitation of keynote speaker Mr. Mahesh Shinde sir is done Prof. S. S Surywanshi and Vote of thanks given by Prof S. D. Limaye

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#### 4. MESA GUEST LECTURE



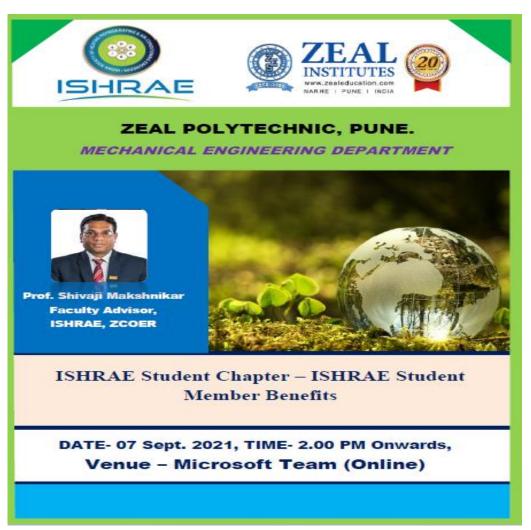
The MESA organised a Expert Talk on Major Significance of Capstone Project and report writing on 4<sup>th</sup> Oct 2021. The significance of a Capstone Project report cannot be overstated, as it represents the culmination of a student's academic journey and demonstrates their comprehensive understanding of the subject matter. Recognizing the paramount importance of effective Capstone Project report writing, our institution was honoured to host a guest lecture on this critical aspect of academic achievement. The guest lecturer, a seasoned professional in the field, shared invaluable insights into the major significance of Capstone Project report writing. Emphasizing the role of the report as a showcase of academic prowess, the speaker highlighted how it provides students with the opportunity to integrate and apply the knowledge gained throughout their academic tenure.

The lecture underscored the importance of clarity, structure, and professionalism in presenting findings and recommendations. Furthermore, the guest speaker shed light on the real-world implications of a well-crafted Capstone Project report. In many instances, these reports serve as tangible evidence of a student's ability to analyze complex issues, propose solutions, and communicate effectively – skills highly coveted in the

### WINTER-2021

professional realm. The lecture, therefore, aimed not only to impart technical writing skills but also to instill a sense of pride and confidence in students as they embark on the transition from academia to the workforce. The guest lecture served as a catalyst for students, equipping them with the knowledge and skills needed to produce high-quality Capstone Project reports. By elucidating the major significance of this culminating academic task, the lecture empowered students to approach their projects with a newfound appreciation for the impact and legacy that a well-executed Capstone Project can have on both their academic and professional trajectories.

#### 5. ISHRAE GUEST LECTURE



On 7<sup>th</sup> Sept, 2021, our institution had the privilege of hosting a transformative guest lecture that cantered around the ISHRAE (Indian Society of Heating, Refrigerating and Air Conditioning Engineers)

#### **MECHANICAL ENGINEERING DEPARTMENT**

## NEWSLETTER WINTER-2021

Student Membership. The event brought together students, faculty, and industry professionals, creating a vibrant space for exploration and enlightenment. The distinguished speaker, an expert in HVAC&R (Heating, Ventilation, Air Conditioning, and Refrigeration), illuminated the numerous advantages and opportunities that the ISHRAE Student Membership holds for aspiring engineers. The lecture commenced with an overview of the dynamic landscape of HVAC&R and the pivotal role that ISHRAE plays in shaping the industry. The speaker emphasized how a student membership with ISHRAE can be a game-changer, providing access to a wealth of resources, industry insights, and a network of professionals passionate about advancing the field. Attendees gained valuable insights into how the membership could complement their academic journey, offering a bridge between classroom learning and real-world applications.

Moreover, the guest lecture underscored the collaborative and knowledge-sharing culture embedded within ISHRAE. Students were encouraged to actively engage with the organization, participate in events, and leverage the platform to stay abreast of the latest industry trends. The event concluded with an interactive Q&A session, allowing students to seek personalized advice and clarify any queries related to the ISHRAE Student Membership. This enlightening guest lecture not only broadened the horizons of our students but also inspired a greater appreciation for the significance of industry affiliations. It marked a pivotal moment for those aspiring to make a mark in HVAC&R, providing them with the tools, insights, and connections needed to embark on a promising professional journey.

#### 6. ONLINE PARENTS MEETING-

The Department of Mechanical Engineering organized an Parents Meeting of the semester on 15<sup>th</sup> Nov 2021 on ,Microsoft team link for All Mechanical Engineering Students FY, SY, TY. Objective of the meeting is Result Analysis of UNIT TEST 1, Attendance of Students and Importance of UNIT TEST 2 and Attendance. Parents actively participated in the interactive session, expressing their appreciation for the detailed academic progress report. Several inquiries were made about internship opportunities, skill development programs, and the overall preparedness of students for the industry. Positive feedback was received regarding the school's emphasis on student well-being and the efforts to foster a conducive learning environment. Parents Meeting hosted by departmental head Prof. Rameshwar Khorane. Hope and Class Teacher interacts with parents. Meeting held at 2.00 pm onwards. More than 200 student's parents attended this meeting

#### WINTER-2021

### **WORKSHOPS**

#### 1. TWO DAYS ONLINE WORKSHOP ON MACHINING TECHNOLOGY



The Mechanical engineering department organised On December 4, 2021, a comprehensive two-day online workshop on Machining Technology, aimed providing participants with a profound understanding of the latest advancements in the field. The workshop, conducted through virtual platforms, attracted from attendees academic and professional backgrounds, creating a collaborative environment for learning and knowledge exchange.

The first day of the workshop commenced with an in-depth exploration of fundamental machining processes, including turning, milling, and drilling. Seasoned experts in the field delved into the intricacies of tool selection, material considerations, and machining parameters. Attendees actively engaged in virtual demonstrations, gaining practical insights into the application of various machining techniques.

The second day of the workshop focused on emerging trends and technologies in machining. Expert speakers discussed the integration of Industry 4.0 in machining processes, the role of computer numerical control (CNC) machining, and the implementation of smart machining systems. Participants had the opportunity to explore cutting-edge tools and software applications that are transforming the landscape of machining technology. The interactive nature of the online platform allowed participants to pose questions, share their experiences, and engage in discussions with the speakers and fellow attendees. The workshop provided a platform for networking and collaboration, fostering a sense of community among individuals passionate about machining technology.

In conclusion, the two-day online workshop on Machining Technology proved to be a valuable and enriching experience for all participants. It not only deepened their understanding of the subject but also exposed them to the latest trends and technologies that are shaping the future of machining. The success of the workshop highlighted the adaptability of virtual platforms in facilitating meaning Learning

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#### 2. ONE DAY ONLINE WORKSHOP ON SOFT SKILL AND PERSONALITY DEVELOPMENTS

The Mechanical engineering department organised On December 4, 2021, our institution organized a highly impactful one-day online workshop focused on Soft Skills and Personality Development. Attended by students, professionals, enthusiasts alike, the workshop aimed to enhance participants' personal and professional competencies, emphasizing the importance of soft skills in today's dynamic work environment. The workshop commenced with an insightful session on communication skills, covering verbal and nonverbal communication, effective listening, and interpersonal communication. Participants engaged in interactive activities and role-playing exercises to hone their communication abilities. The second part of the workshop delved into the nuances of personality development. Expert speakers shared valuable insights on self-awareness, emotional intelligence, and building a positive personal brand. Attendees were encouraged to reflect on their strengths and areas for improvement, fostering a holistic approach to personal growth. The practical aspect of the workshop included modules on time management, stress management, and teamwork. Participants learned strategies to prioritize tasks, cope with pressure, and collaborate effectively in team setting.



The dynamic online platform allowed for real-time interaction, enabling participants to ask questions and share their own experiences. The workshop concluded with a session on resume building, interview skills, and professional etiquette. Practical tips were provided on crafting an impactful resume, preparing for interviews, and navigating professional settings with confidence. Feedback from participants reflected a high level of satisfaction, with many expressing gratitude for the practical and relevant insights gained during

#### WINTER-2021

the workshop. The success of the one-day online workshop on Soft Skills and Personality Development underscored the growing recognition of the importance of these skills in personal and professional success. Participants left the virtual event equipped with tangible tools to navigate the challenges of the modern workplace and enhance their overall effectiveness.

## FACULTY DEVELOPMENT PROGRAMME (FDP)

## THREE DAYS FACULTY DEVELOPMENT POROGRAME ON "RECENT TRENDS IN MECHANICAL ENGINEERING"



A THREE DAY FACULTY DEVELOPMENT PROGRAMME (FDP)

ON

"RECENT TRENDS IN MECHANICAL ENGINEERING - 2021 (RTIME-21)"

> (13 DEC 2021 to 15 DEC 2021) Organized by

#### DEPARTMENT OF MECHANICAL ENGINEERING

#### WHO SHOULD ATTEND

Participation in this FDP is open to the postgraduate students, research scholars, and faculty members of the AICTE approved institutions of Mechanical engineering. It is also open to the Mathematicians, Scientists and Engineers who are working in the R&D organizations, industry and who wish to gain a basic understanding of the concepts involved in Mechanical engineering.

ABOUT COLLEGE

Zeal Education Society was established in 1996 with the vision to offer education with a difference, the expert guidance of Hon. Shri. S.M. Katkar, a distinguished industrialist. ZES hosts eight institutes that provide quality education to students from preprimary to Ph.D. courses. Zeal Polytechnic started in 2008 and offers Diploma Courses in Mechanical Engineering, Civil Engineering, Computer Engineering, Electronics and Telecommunication Engineering & Electronical Engineering.

Recently, our Founder director has been conferred with the 'lcon of Education 'award by Lokmat media group in the presence of Hon. Smt. Smriti Irani, Former HRD Minister, Government of India from Hon. Shri. Vinod Tawde, former Technical Education Minister, Maharashtra State



ABOUT DEPARTMENT OF MECHANICAL ENGINEERING:

The Department was established as Dnyanganga Polytechnic in 2008. The department aims at offering students with the high quality education clubbed with practical exposure that empowers them with the ability to aid the society by their services in the future. The Department aims at making superior diploma engineering professionals through academic brilliance and excellent education.

Vision

Inculcate foundational and experimental knowledge with entrepreneurial skills that prepares students to succeed in the field of mechanical engineering.

#### Mission

- Enlightening the students with fundamental concepts of mechanical engineering.
- Providing practical training through upgrading department resources and industry interaction.
- Inculcating entrepreneurial qualities by arranging cocurricular and extra-curricular activities.
- 4. Nurturing ethical values among students.

#### Program Educational Objectives (PEOs)

- Graduates will have core competency in diversified areas.
- Graduates will be able to work individually/in team to solve engineering problems
- Graduates will practice ethical responsibilities and services towards their employers and society
- 4. Graduates will be able to continue life-long learning

#### Program Outcomes (POs)

- Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- Problem analysis: Identify and analyse welldefined engineering problems using codified standard methods.
- Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
- Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- Engineering practices for society, sustainability and environment: Apply appropriate technology in

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The mechanical engineering department organized FDP from December 13 to December 15, 2021; Zeal Polytechnic's Three Days Faculty Development Program on "Recent Trends in Mechanical Engineering." This program aimed to update faculty members with the latest advancements and emerging technologies in the field, ensuring that they stay abreast of current trends to provide students with a cutting-edge education. The inaugural day set the tone for the program with an overview of the evolving landscape of mechanical engineering. Renowned experts and industry professionals delivered insightful sessions on topics ranging from Industry 4.0 and smart manufacturing to renewable energy and sustainable design practices.

Over the subsequent days, the program delved into specialized areas within mechanical engineering, including additive manufacturing, robotics, artificial intelligence in manufacturing processes, and materials engineering. Workshops and hands-on sessions were integral components, allowing faculty members to gain practical experience and explore the application of these trends in both educational and industrial contexts.

An engaging aspect of the program was the inclusion of case studies and success stories from the industry, providing valuable insights into how these recent trends have been successfully implemented in real-world scenarios. This practical orientation enabled faculty members to connect theoretical knowledge with practical applications, enhancing

### **INDUSTRIAL VISIT**

#### 1. Virtual Visit – KAKDE LASER



The department of mechanical engineering organised virtual industry visit during the challenging times of the COVID-19 pandemic, Students had the opportunity to virtually embark on an industrial visit to Kakde Laser Pvt Ltd, located in Pune. The digital format of the visit allowed me to gain valuable insights into the company's operations despite the limitations imposed by the pandemic. Kakde Laser Pvt Ltd, a leading player in the industrial sector, showcased remarkable resilience and adaptability during this period. The online visit provided a comprehensive overview of the company's state-of-the-art laser technology and its applications in various industries. Despite the distance, the virtual tour effectively highlighted the company's commitment to maintaining high standards of safety and hygiene in its production processes. The management at Kakde Laser Pvt Ltd demonstrated a commendable dedication to employee well-being and business continuity during these unprecedented times. Overall, the online industrial visit to Kakde Laser Pvt Ltd served as an enlightening experience, demonstrating how businesses can navigate challenges and continue to thrive even in the face of a global crisis.

## 2. Virtual Visit to 120KW SOLAR PHOTOVOLTIC SOLAR PANEL AT ZCCOER, PUNE



The department of mechanical engineering organised virtual industry visit during the challenging times of the COVID-19 pandemic. Amidst the challenges posed by the COVID-19 pandemic, on the 18<sup>th</sup> Nov 2021, third-year students of ZEAL POLYTECHNIC, PUNE had the unique opportunity to undertake a virtual industrial visit to the 120KW Solar Photovoltaic Solar Panel facility at ZCCOER, Pune. This online experience proved to be an enlightening exploration of sustainable energy practices, even in the midst of global adversity. The solar panel installation, with its capacity of 120KW, showcased the cutting-edge technology and innovation employed to harness solar energy for power generation. Despite the limitations imposed by the pandemic, the virtual tour provided an in-depth understanding of the solar panel's functioning, its contribution to renewable energy goals, and the environmental benefits associated with solar power. The faculty and experts at ZCCOER effectively conveyed the importance of renewable energy sources, especially during the challenging times when sustainability has become increasingly paramount.

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The online industrial visit served as an educational platform, allowing students to grasp the practical applications of solar technology while highlighting the resilience and adaptability of the industry even in the face of a global crisis.



#### **ACADEMIC ACHIVEMENTS OF STUDENTS**

### 1. Topper List First Year Mechanical Engineering Students 2021- Summer

| Summer<br>2021 | SEM<br>II | Enrollment<br>Number | Candidates Name         | Total<br>marks | Total marks obtained | percent | Result<br>(Class) |
|----------------|-----------|----------------------|-------------------------|----------------|----------------------|---------|-------------------|
| Summer<br>2021 | SEM<br>II | 2009880282           | SUTAR AMAR<br>SHANTARAM | 750            | 610                  | 81.333  | DISTINCTION       |
|                |           | 2009880139           | BAGDE KUNAL<br>RAJENDRA | 750            | 598                  | 79.733  | DISTINCTION       |
|                |           | 2009880131           | JAIN BHAVESH<br>SANTOSH | 750            | 592                  | 78.933  | DISTINCTION       |

### 2. Topper List Second Year Mechanical Engineering Students 2021- Summer

| Summer<br>2021   | SEM<br>IV | Enrollment<br>Number | Candidates Name            | Total<br>marks | Total marks obtained | percent | Result (Class) |
|------------------|-----------|----------------------|----------------------------|----------------|----------------------|---------|----------------|
| Summer S<br>2021 |           | 1909880389           | KALE VAIBHAV DATTA         | 800            | 735                  | 91.875  | DISTINCTION    |
|                  | SEM<br>IV | 1909880367           | HAGAWANE SHUBHAM<br>VIKAS  | 800            | 711                  | 88.875  | DISTINCTION    |
|                  |           | 1909880424           | BHALERAO CHINMAY<br>SACHIN | 800            | 710                  | 88.75   | DISTINCTION    |

### 3. Topper List Third Year Mechanical Engineering Students 2021- Summer

| Summer<br>2021   | SEM<br>VI | Enrollment<br>Number | Candidates Name          | Total<br>marks | Total marks obtained | percent | Result<br>(Class) |
|------------------|-----------|----------------------|--------------------------|----------------|----------------------|---------|-------------------|
| Summer S<br>2021 |           | 1809880506           | BURTE RUTVIK<br>MAHENDRA | 900            | 803                  | 89.222  | DISTINCTION       |
|                  | SEM<br>VI | 1809880430           | ZADE PRITESH<br>PRASAD   | 900            | 802                  | 89.111  | DISTINCTION       |
|                  |           | 1809880489           | OMKAR JOSHI              | 900            | 794                  | 88.222  | DISTINCTION       |





TEAL MECHANICAL DEPARENTEM