

# ZEAL POLYTECHNIC DEPARTMENT OF COMPUTER ENGINEERING

### **Principal's Message**



PROF. AYUB A. TAMBOLI

Ph. D (Pursuing), ME(HPE), BE(Mechanical Engg.) ASHRAE, AWS, ISHRAE, MISTE, IE(I), Principal, Zeal Polytechnic, Pune

We provide best platforms to budding engineers to acquire technical knowledge, motor skills and soft skills which are utmost demands of the industry. Uniqueness of our institute is a caring, nurturing culture that recognizes the various aspects of each student and encourages them to bloom to their fullest with confidence.

We are also committed to very good quality of teaching-learning process with having maintained high grade discipline among the staff and students and to achieve sky-scraping point superiority in academic by maintaining a conductive atmosphere for studies, state-of art laboratories communication center and digital library. MOUs have been signed with reputed organization to impart cutting edge technologies through extensive courses.

In another view, we aim at development of our student at different levels by the proper encouragement, guidance, support and generation of in-house recourses for sports, cultural, yoga, meditation etc followed by giving them a confidence to feel free at home. These efforts have resulted in more placements and we are keen to argument it further. We are quite self-assured for the molding and nurturing of our students as a young, bright, dynamic, talented & professional technocrats and a responsible gentle citizen by raising the our actions to at high quality technical education.

### **H.O.D.'s Message**



PROF. R. H. MULE BE, ME (Computer) Zeal Polytechnic, Pune

Welcome to the vibrant and dynamic Department of Computer Engineering at Zeal Polytechnic, Pune! In an era where technology evolves at an unprecedented pace, our department takes pride in nurturing the next generation of innovative minds in the realm of computing. We are committed to providing a robust academic foundation combined with practical exposure, enabling our students to thrive in the ever-changing tech landscape.

At Zeal Polytechnic, our distinguished faculty members bring a wealth of industry experience and academic expertise to the classroom. We believe in cultivating an environment that encourages curiosity, critical thinking, and creativity among our students. Our focus extends beyond traditional learning methods, emphasizing hands-on experiences through state-of-the-art laboratories and collaborative projects.

The field of Computer Engineering is at the forefront of innovation, and our curriculum is meticulously crafted to stay abreast of the latest advancements. We aim not only to impart technical knowledge but also to instill ethical values and a sense of responsibility in our students, empowering them to become socially conscious professionals.

Our department is dedicated to fostering an inclusive community where diversity is celebrated, ideas are exchanged freely, and each individual's potential is recognized and nurtured. We encourage our students to engage in extracurricular activities, research endeavors, and industry collaborations to broaden their horizons and prepare for the challenges of tomorrow.

As the Head of Department, I invite you to explore the multitude of opportunities available within our department. Whether you aspire to develop groundbreaking software, delve into cybersecurity, explore artificial intelligence, or innovate in any other computing domain, Zeal Polytechnic is the ideal platform to embark on your journey towards success.

I extend my best wishes to all our students and encourage them to dream big, strive for excellence, and make a meaningful impact in the world of Computer Engineering.

02

### About Zeal Polytechnic, Pune.

Zeal Polytechnic, situated in the vibrant city of Pune, stands as a beacon of excellence in technical education. Established with a vision to nurture budding talents and shape them into skilled professionals, our institution has been a cornerstone of learning and innovation since its inception.

At Zeal Polytechnic, we take pride in our commitment to academic rigor and innovation. Our comprehensive range of diploma courses in engineering and technology is designed to meet industry standards, blending theoretical knowledge with hands-on practical experiences. Our curriculum is constantly updated to keep pace with the rapidly evolving technological landscape, ensuring our students are well-prepared for the challenges of the future.

The institution has a dedicated placement cell that works tirelessly to connect students with reputable companies for internships and placements. We provide career guidance and counseling, empowering students to make informed decisions and excel in their chosen career paths.

At Zeal Polytechnic, we strive to create an environment that fosters innovation, creativity, and ethical values, preparing our students to become leaders and contributors to society.



### **About Computer Department**

The Computer Engineering Department at Zeal Polytechnic, Pune, is at the forefront of technological innovation, shaping future leaders in the dynamic field of computing.

Our department is dedicated to providing a comprehensive education that blends theoretical foundations with hands-on practical experience. The curriculum is thoughtfully crafted to align with industry standards and emerging technological trends, ensuring our students are well-equipped to tackle real-world challenges.

Our faculty comprises experienced professionals and educators who bring a wealth of knowledge and industry insights to the classroom. We foster a culture of continuous learning and engagement, encouraging students to interact with industry experts through seminars, workshops, and collaborative projects.

The department boasts state-of-the-art laboratories and advanced computing facilities that provide an ideal environment for experimentation and innovation. These resources enable students to delve into various domains such as software development, networking, cybersecurity, artificial intelligence, and more.

We encourage a spirit of inquiry and innovation among our students, supporting research initiatives and projects that drive technological advancements. Students have opportunities to participate in research activities, allowing them to explore new frontiers in the world of computer engineering.

The department's placement cell is committed to facilitating internships and placements for students in esteemed organizations. Additionally, we offer career guidance and counseling to empower students in making informed decisions about their professional journeys.

Beyond academics, the department encourages students to participate in extracurricular activities, technical clubs, hackathons, and seminars. This holistic approach aims to develop well-rounded individuals with a passion for innovation and a strong foundation in computer engineering.

Our alumni network comprises accomplished professionals who have made significant contributions in various industries. They remain an integral part of our community, offering guidance and opportunities to current students.

At the Computer Engineering Department of Zeal Polytechnic, we foster creativity, innovation, and excellence in the world of technology.



To equip the students with technical and professional skills in Computer Engineering by imparting skill based education along with industrial knowledge to fulfill the changing needs of the society.





M1. To equip the students with technical and professional skills in Computer Engineering by imparting skill based education along with industrial knowledge to fulfill the changing needs of the society.

M2. To imbibe lifelong learning skills through hands on training, value added courses to work in multi disciplinary socio- industrial environment.



M3. To cultivate proficiency in problem-solving, communication skills and spirit of entrepreneurship as an individual and collaborative team member.

### **Program Educational Objectives (PEOs)**

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

PEO 2: Adapt state-of-the-art Computer engineering broad-based technologies to work in production production in the computer and its production is a second control of the computer and its production is a second control of the computer and its production is a second control of the computer and its production is a second control of the control of the

PEO 3: Solve broad-based problems individually and as a team member communicating effectively in the world of work.

### **Program Specific Outcomes (PSOs)**

PSO 1: Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.

PSO 2: Computer Engineering Maintenance: Maintain computer engineering related software and hardware systems.

### Largest Human Portrait on the occasion of 75th Republic Day

The Republic Day event held at Zeal Institute's Narhe campus, organized by the Zeal Education Society, was a remarkable commemoration honoring the great freedom fighters while fostering unity and peace among the youth. The event witnessed the enthusiastic participation of 3700 students for the third consecutive year, showcasing their dedication and commitment. Supported by over 500 volunteers, this event was a grand success, thanks to one month of meticulous planning and hard work.

The students orchestrated a unique human portrait formation depicting prominent freedom fighters at Zeal Institute's Narhe campus. The tribute included iconic figures such as Netaji Subhash Chandra Bose, Bharat Ratna Dr. B.R. Ambedkar, Maulana Abul Kalam Azad, Lokmanya Bal Gangadhar Tilak, and Mahatma Gandhi.

The event aimed to impart a profound message of unity and peace to the youth. Through their creative tribute, the students sought to inspire their peers to embrace the values of unity, diversity, and harmony. This marked the third successive year of organizing this unique Republic Day event at Zeal Institute's Narhe campus. This continuity reflects the enduring commitment of both students and the institution to celebrate national events with creativity and patriotism.

The Republic Day event at Zeal Institute's Narhe campus was a resounding success, symbolizing the students' deep reverence for the nation's freedom fighters and their dedication to promoting unity and peace. The visually striking human formation paying tribute to India's iconic figures of independence was a powerful display. The extensive participation of students and collaborative efforts of volunteers significantly contributed to the event's success.

This initiative by Zeal Education Society showcases the institution's commitment to instill patriotism and social responsibility in its students. Such events celebrate the nation's rich heritage while inspiring the youth to positively contribute to society, upholding the values enshrined in the constitution.













# Insightful highlights from the guest lecture on Microprocessor 8086

We're excited to share the insightful highlights from the recent guest lecture on Microprocessor 8086, a session designed specifically for our second-year Computer Engineering students. Conducted on April 1st, 2023, this lecture was orchestrated by the esteemed Mrs. Vaishanavi Bhelonde, aiming to augment the students' understanding and knowledge of the Microprocessor 8086.

Mrs. Vaishanavi Bhelonde, renowned for her expertise in the field, delivered a captivating and informative session on Microprocessor 8086. Her extensive knowledge and experience laid the groundwork for an engaging learning experience for our students.

The session commenced with a comprehensive overview, highlighting the significance and relevance of Microprocessor 8086 in the domain of computer engineering. Mrs. Bhelonde delved into the architecture, instruction set, and diverse applications of the 8086 microprocessor.

Key concepts and fundamental elements pertaining to Microprocessor 8086 were meticulously covered. Topics included the intricate architecture, memory organization, and the nuances of instruction execution, providing students with the foundational knowledge necessary for a deeper comprehension of the microprocessor's functionality.

To augment the learning process, an interactive hands-on demonstration was integrated into the lecture. Mrs. Vaishanavi Bhelonde adeptly guided students through practical examples and coding exercises, offering them invaluable practical exposure to Microprocessor 8086. This interactive session fostered a deeper understanding of the subject matter.

Real-world applications of Microprocessor 8086 across various industries were shared by Mrs. Bhelonde, illustrating how the theoretical insights gleaned from the lecture hold relevance in practical scenarios. This facet emphasized the significance of the topic within the professional landscape.

The guest lecture also included an engaging question and answer segment. Students actively participated, seeking clarification on diverse aspects of Microprocessor 8086. Mrs. Bhelonde's insightful responses addressed their queries, cultivating a collaborative learning environment.

In summary, the Microprocessor 8086 Guest Lecture by Mrs. Vaishanavi Bhelonde proved to be an enriching and educational experience for our second-year computer engineering students. It successfully fulfilled its objective of equipping students with comprehensive knowledge about Microprocessor 8086, establishing a robust foundation for their future academic pursuits and professional endeavors.

### **DEPARTMENT OF COMPUTER ENGINEERING**











### **Expert Lecture on SAP by Mr. Kunal K. Thosare**

We're delighted to share the illuminating highlights from the recent expert lecture on SAP (Systems, Applications, and Products in Data Processing) conducted by industry expert Mr. Kunal K. Thosare on April 1st, 2023. This insightful lecture was exclusively organized for our third-year Computer Science students, aiming to provide them with invaluable insights into SAP and its practical applications.

Mr. Kunal K. Thosare, a seasoned professional in the realm of SAP, delivered an engaging and informative guest lecture that enriched our students' understanding of this pivotal technology.

The session commenced with a comprehensive overview, unraveling the significance of SAP in data processing applications. Mr. Thosare adeptly navigated through the history, evolution, and diverse functionalities of SAP, laying a solid foundation for the students. Covering pivotal concepts and modules within SAP such as finance, human resources, and supply chain management, Mr. Kunal K. Thosare provided detailed insights into their integration and role in augmenting organizational efficiency.

A distinctive aspect of the lecture was the incorporation of a hands-on demonstration. Mr. Thosare led students through practical scenarios, offering them a firsthand experience of SAP's interface and functionalities. This interactive session was designed to bridge the gap between theoretical knowledge and its real-world application. Highlighting the industry relevance of SAP, Mr. Kunal K. Thosare shed light on its global adoption by organizations to streamline processes and enhance decision-making. Real-world case studies showcased SAP's profound impact on business operations. An engaging question and answer session allowed direct interaction between students and Mr. Kunal K. Thosare. Students posed insightful questions, and Mr. Thosare's responses further enriched their understanding of SAP.

The SAP Guest Lecture by Mr. Kunal K. Thosare was an outstanding success, offering our third-year Computer Science students invaluable insights into the world of SAP. The amalgamation of theoretical knowledge, practical experience, and industry perspectives contributed to a comprehensive and enriching learning experience.



### **Industrial Training on Python Programming by DXC Technology**

We are thrilled to share insights from the industrial training session conducted by DXC Technology on January 21, 2023, catering to second and third-year students of Zeal Institute. The focus of this comprehensive training was to impart foundational knowledge in Python programming, a language widely acclaimed in the technology and software development domains.

The primary objective of the training was to equip students with a robust understanding of Python, enabling them to effectively apply this knowledge in real-world scenarios. Bridging the gap between theoretical academia and practical industry skills was at the heart of this initiative.

The training program encompassed key topics essential for a comprehensive understanding of Python. The training sessions were facilitated by seasoned professionals from DXC Technology, demonstrating profound expertise in Python programming and its industrial applications. Their guidance, enriched with real-world experiences, encouraged active participation and engagement from the students.

The students displayed enthusiastic participation throughout the training, demonstrating a keen interest in mastering Python. The hands-on exercises were particularly instrumental in enabling students to apply their newly acquired knowledge. Feedback from participants reflected a positive experience, with many expressing gratitude for the opportunity to enhance their programming skills.

The industrial training by DXC Technology effectively achieved its objectives, furnishing students with a solid foundation in Python programming. The practical approach and real-world applications made the training immensely relevant and valuable for the participating students. The knowledge gained is expected to significantly contribute to their academic and professional development. This commendable initiative underscores our commitment to nurturing practical skills among students.



### **Blood Donation Camp at Zeal Institutes: A Resounding Success**

The recent Blood Donation Camp held at Zeal Institutes on June 21-22, 2023, marked a remarkable display of altruism and community commitment as both students and staff actively participated in contributing to the noble cause of saving lives through blood donation.

Department of Computer Engineering in collaboration with Pune Blood Bank organized Blood Donation Camp fostering a conducive environment for voluntary blood donation. The response was overwhelmingly positive, with numerous students and staff members wholeheartedly stepping forward to donate blood.

A substantial number of donors, including both first-time and repeat donors, contributed significantly to the event's success. Their selfless act mirrors the institute's strong commitment to social responsibility and humanitarian efforts.

The Blood Donation Camp at Zeal Institutes not only facilitated the collection of a substantial number of blood units but also cultivated a culture of empathy, altruism, and social responsibility among the participants.









### **Industry Sponsored Project: E-Commerce Web Application**

This presents an insightful overview of the industry sponsorship for the project accomplished by Mr. Mangesh Kable, Lalitapriya Khutwad, Manasi Pawar, and Gauri Gaikwad during their internship with Vijay Group Security Services. The primary focus of their internship revolved around the design, development, and implementation of an E-Commerce web application.

The internship project aimed to develop and implement a tailored E-Commerce platform for Vijay Group Security Services, enhancing their online presence, refining product offerings, and fostering improved customer interactions through an intuitive and user-friendly web application.

The successful completion and deployment of the E-Commerce web application for Vijay Group Security Services exemplify the interns' dedication and collaboration. The application meets specified requirements, providing a secure and efficient platform for online transactions and product management, contributing significantly to the company's technological advancement.

### **Industry Sponsored Project: Crypto currency Prediction using Python**

This encapsulates the exceptional contribution made by Mr. Rohan Kumar Bhoi during his internship at Mallav and Sons Pvt Ltd from January 1, 2023, to March 10, 2023. Serving as a Python Developer, Mr. Bhoi played a pivotal role in the completion of "Cryptocurrency Prediction using Python" project.

The primary objective of the internship centered around crafting a predictive model for cryptocurrency prices employing Python programming. Leveraging data analysis and machine learning techniques, the project aimed to forecast future trends within cryptocurrency markets.

This included various development phases like Data Collection and Preprocessing, Machine Learning Implementation, Statistical Analysis, Model Training and Evaluation, Integration with Visualization Tools etc.

Mr. Rohan Kumar Bhoi's dedicated efforts culminated in the successful development of a cryptocurrency prediction model. The model showcased promising results in forecasting cryptocurrency prices, offering Mallav and Sons Pvt Ltd a valuable decision-making tool in the dynamic cryptocurrency market. The internship provided Mr. Rohan Kumar Bhoi with invaluable hands-on experience in Python development and machine learning applications. The completion of the "Cryptocurrency Prediction using Python" project underscores his dedication and proficiency in implementing data-driven solutions.

### **Insights from the Parent-Teacher Meeting**

The Computer Engineering Department at Zeal Polytechnic recently organized a comprehensive Parent-Teacher Meeting aimed at discussing students' performance, offering insights on performance improvement policies, and gathering valuable feedback from parents to enhance overall student development.

The discussion Highlighted Student Performance Evaluation, Performance Improvement Policies, and Insights from Parents. The department representatives elucidated the various performance improvement policies available to support students in enhancing their academic performance. These policies aim to provide additional resources, guidance, and interventions for students who may require extra support. The meeting provided an invaluable platform for parents to share their perspectives, concerns, and suggestions regarding their children's academic journey.

The meeting yielded fruitful discussions, fostering a collective commitment between parents and educators towards students' academic growth. Insights gathered from parents serve as a cornerstone for implementing tailored strategies and programs aimed at enhancing overall student development.

The Parent-Teacher Meeting conducted by the Computer Engineering Department served as a pivotal platform for collaborative engagement between educators and parents. Such interactions play a pivotal role in aligning efforts towards the betterment of students' academic journey and holistic development.



### **Industrial IT Training Program - Logic Building and Coding Skills**

We are thirlled to announce our upcoming Industrial IT Training Program, focusing on enhancing logic building and coding skills relevant to the industry. In today's rapidly evolving technological landscape, possessing strong logical thinking and coding abilities is crucial for success in various industrial sectors. The primary objective of this training program is to equip participants with the essential skills needed to excel in the field of industrial IT.

The program will specifically concentrate on honing logic building and coding capabilities, providing a foundation that aligns with industry requirements. Understanding fundamental logical structures and problem-solving techniques. Exploring real-world applications of logic building and coding in industrial scenarios. Case studies and examples from diverse industries Group projects and teambased activities to foster collaboration and communication skills.

Interactive sessions with industry professionals sharing insights and experiences. This program is designed for students, recent graduates, and professionals interested in enhancing their logic building and coding skills, particularly with an industrial focus. Whether you are pursuing a career in software development, automation, data analysis, or any IT-related field within industry, this training will provide valuable insights and hands-on experience. Acquire industry-relevant coding skills. Enhance logical thinking and problem-solving abilities. Gain practical experience through hands-on projects. Network with industry professionals. Participants who successfully complete the program will receive a Certificate of Completion, acknowledging their dedication to advancing their skills in industrial IT.



## Internship on "Farmer's Friend" Project at EuSpace Technologies Pvt Ltd

This report serves to confirm the successful completion of the internship program by Tejasvi Santosh Kamble, Shreya Nitin Pokale, Nihal Firoz Shaikh, and Shruti Sachin Paygude at EuSpace Technologies Pvt Ltd. The interns actively participated in the development of the "Farmer's Friend" project during their tenure, which commenced on [Start Date] and concluded on April 17, 2023. Under the guidance and mentorship of our experienced team at EuSpace Technologies, Tejasvi Santosh Kamble, Shreya Nitin Pokale, Nihal Firoz Shaikh, and Shruti Sachin Paygude and second team is Sayali Amol Abnave, Mansi Vijay Shinde, Sejal Kishor Hoajge, Priyanka Vishal Sontakke, and Sneha Kiran Londhe were part of the project "Farmer's Friend."

This project aimed to create an innovative solution to assist farmers in optimizing their agricultural practices through technology. Project Development: The interns were integral to the development phase of the "Farmer's Friend" project. Their contributions ranged from conceptualization to implementation, involving coding, testing, and refining the functionalities of the application. They actively conducted research on agricultural practices, market analysis, and user requirements to ensure the application's relevance and effectiveness for the farming community. Tejasvi, Shreya, Nihal, and Shruti collaborated seamlessly with our development team, demonstrating effective communication and teamwork skills. Their collaborative efforts significantly contributed to the project's progress and success.

The internship program culminated with the successful completion of the "Farmer's Friend" project by Tejasvi Santosh Kamble, Shreya Nitin Pokale, Nihal Firoz Shaikh, and Shruti Sachin Paygude. Their dedication, hard work, and enthusiasm have been invaluable in the development and execution of this beneficial agricultural solution.



### **Chhatrapati Shivaji Maharaj Jayanti Celebration**

The Zeal Institute, on the occasion of Chhatrapati Shivaji Maharaj Jayanti on 19th February 2023, organized a heartfelt tribute to commemorate the life and contributions of the legendary Maratha warrior king. The event commenced with a ceremonial inauguration, setting the tone for a day of remembrance and homage. Various cultural performances were showcased, reflecting the rich heritage and history associated with Chhatrapati Shivaji Maharaj. Dance, music, and theatrical performances brought to life the valor and leadership of the iconic figure. Eminent historians, scholars, and dignitaries were invited to share their insights on the life and legacy of Chhatrapati Shivaji Maharaj. Their speeches provided a comprehensive understanding of the historical significance of his reign.

Zeal Institute organized exhibitions featuring artifacts, paintings, and historical documents related to Chhatrapati Shivaji Maharaj. These displays offered attendees a visual journey through the key moments of his life.

The institute facilitated educational sessions, enlightening participants about the socio-political landscape during Shivaji Maharaj's era. This aimed at fostering a deeper appreciation for the historical context in which he emerged as a formidable leader. The event encouraged active participation from the local community, fostering a sense of unity and pride in the shared heritage associated with Chhatrapati Shivaji Maharaj. The tribute to Chhatrapati Shivaji Maharaj Jayanti by Zeal Institute was a resounding success, bringing together individuals from diverse backgrounds to honor and celebrate the enduring legacy of this iconic historical figure. Through cultural expressions, educational endeavors, and community engagement, the event served as a poignant reminder of the indomitable spirit of Shivaji Maharaj.







### **Soft Skills Training**

Zeal Polytechnic Institute undertook a comprehensive Soft Skills Training Workshop in the month of march 2023 for 15 days aimed at enhancing the professional and interpersonal skills of its students. The workshop was designed to equip students with the soft skills necessary for success in their academic pursuits and future careers. The workshop focused on improving students' verbal and written communication skills. Sessions included interactive exercises, group discussions, and presentations to help students articulate their ideas effectively. Emphasis was placed on the importance of teamwork and collaboration in the workplace. Students participated in team-building activities and projects to develop their ability to work seamlessly with others.

Recognizing the significance of time management in academic and professional settings, the workshop provided strategies and tools for effective time utilization. Students learned how to prioritize tasks and meet deadlines. Understanding the nuances of professional etiquette is crucial for success. The workshop covered topics such as workplace conduct, networking skills, and the importance of maintaining a positive and respectful attitude. Practical exercises and case studies were incorporated to nurture students' problem-solving and critical-thinking skills. These activities aimed at enhancing their ability to analyze situations and make informed decisions. Expert facilitators delivered engaging lectures and presentations, providing theoretical foundations for each soft skill. Real-life examples and success stories were shared to illustrate the practical applications of these skills.

The workshop included hands-on, interactive sessions where students actively participated in skill-building exercises. This interactive approach allowed for a more immersive learning experience. Role-playing scenarios and simulations were employed to simulate real-world situations, allowing students to practice and refine their soft skills in a controlled environment. Feedback sessions were conducted throughout the workshop, providing students with an opportunity to reflect on their progress and seek clarification on specific topics. At the conclusion of the workshop, a feedback survey was distributed to gather insights into the effectiveness of the training.

The Soft Skills Training Workshop at Zeal Polytechnic Institute was a resounding success, equipping students with the essential skills required to thrive in both academic and professional spheres. By focusing on communication, teamwork, time management, professional etiquette, and critical

thinking, the institute demonstrated its commitment to holistic education and the overall development of its students. The initiative received positive feedback from both students and faculty, underscoring the importance of incorporating soft skills training into the academic curriculum. Zeal Polytechnic Institute remains dedicated to nurturing well-rounded individuals prepared for the challenges and opportunities of the modern workplace.



### **Aptitude Training Program**

Zeal Polytechnic Institute organized a comprehensive Aptitude Training Program in the month of march 2023 for 15 days aimed at enhancing the quantitative and analytical reasoning skills of its students. The program was strategically designed to equip students with the necessary tools to excel in competitive exams, interviews, and various selection processes. The program focused on strengthening students' mathematical and numerical abilities. Topics such as arithmetic, algebra, geometry, and data interpretation were covered through interactive sessions and problem-solving exercises.

Recognizing the significance of logical reasoning in competitive exams, the training program included modules on critical thinking, pattern recognition, and deductive reasoning. Practical examples and puzzles were utilized to sharpen students' logical abilities. Communication skills play a vital role in aptitude tests and interviews. The program addressed verbal aptitude through sessions on vocabulary building, reading comprehension, and verbal reasoning, ensuring students were well-prepared for language-related assessments. To provide a realistic exam experience, the program incorporated mock tests and simulations. These practice sessions allowed students to familiarize themselves with the format and time constraints of actual aptitude tests. Experienced instructors and subject matter experts led the training sessions, providing students with valuable insights and strategies for approaching different types of aptitude questions.

The program included interactive workshops where students actively engaged in solving problems, discussing solutions, and clarifying doubts. This hands-on approach facilitated a deeper understanding of aptitude concepts. Regular assessments and individualized feedback sessions were conducted to track each student's progress. This personalized approach allowed for targeted improvement in specific areas of weakness. Feedback forms were distributed at the end of the program to gather insights into its effectiveness. Students were encouraged to share their thoughts on the content, delivery, and overall impact of the aptitude training. This feedback will be instrumental in refining and tailoring future training initiatives.

The Aptitude Training Program at Zeal Polytechnic Institute proved to be a valuable initiative in preparing students for academic and professional challenges that require strong quantitative and



analytical skills. The positive response from participants underscores the institute's commitment to providing holistic education and ensuring the success of its students in diverse fields. As Zeal Polytechnic Institute continues to prioritize the comprehensive development of its students, such targeted training programs will undoubtedly contribute to their success in competitive examinations and future career endeavors.

18

### **Technical Training Program**

Zeal Polytechnic Institute conducted an intensive Technical Training Program in the month of march 2023 for 15 days to equip its students with the latest industry-relevant skills. The program aimed to bridge the gap between academic learning and practical application, preparing students for the dynamic and ever-evolving technical landscape. The program featured a curriculum crafted in collaboration with industry experts to ensure its relevance to current technological trends. Modules covered a range of technical subjects, including [list of subjects], providing students with a well-rounded understanding of the field. Practical learning was emphasized through hands-on workshops where students had the opportunity to apply theoretical knowledge to real-world scenarios. These workshops covered key concepts such as [specific skills or technologies], enhancing students' technical proficiency.

Distinguished professionals from the industry were invited to deliver guest lectures, sharing insights into the practical applications of technical knowledge. These sessions provided students with valuable perspectives and industry best practices. To foster a project-oriented mindset, students engaged in collaborative projects throughout the program. This approach encouraged teamwork, problem-solving, and the application of technical skills in a project-based environment. The program included hackathons and coding challenges, offering students a platform to showcase their programming skills and creativity. These events promoted healthy competition and encouraged innovative problem-solving.

Recognizing the importance of certifications in the tech industry, the program provided opportunities for students to earn relevant certifications. This enhanced their credibility and employability in the competitive job market .Networking sessions with industry professionals and alumni were organized, allowing students to build connections and gain insights into potential career paths. These interactions facilitated mentorship opportunities and valuable advice for professional development .Regular feedback sessions were conducted to gauge the effectiveness of the training program. Students were encouraged to provide input on the content, delivery, and overall experience. This feedback will inform future iterations of the program, ensuring continuous improvement.

The Technical Training Program at Zeal Polytechnic Institute played a pivotal role in enhancing the technical prowess of its students. By providing a blend of theoretical knowledge, practical skills, and industry exposure, the program contributed to the holistic development of participants. As Zeal Polytechnic Institute remains committed to staying at the forefront of technical education, such initiatives will continue to prepare students for the challenges and opportunities presented by the rapidly evolving technology landscape. The success of this program underscores the institute's dedication to nurturing skilled and adaptive professionals ready to contribute to the tech industry.

### **World Environment Day Tree Plantation**

On the occasion of World Environment Day, Zeal College's Environmental Committee organized a Tree Plantation Drive on 5th June 2023, aligning with the global theme of "Ecosystem Restoration." The event aimed to promote environmental awareness, engage the college community, and contribute to the college's commitment to sustainability. The primary objective was to enhance the green cover of the Zeal College campus. The initiative aimed to create a more sustainable and eco-friendly learning environment for students, faculty, and staff .The event sought to educate participants about the ecological importance of trees, emphasizing their role in carbon sequestration, air purification, and overall environmental well-being.

By involving students, faculty, and staff in the tree planting process, the event aimed to foster a sense of community engagement and shared responsibility for the campus environment. The tree plantation took place at designated areas across the college campus. Various native tree species were carefully selected to ensure adaptation to local soil and climate conditions. Students, faculty, and staff actively participated in the tree planting activities. Each participant had the opportunity to plant and care for a sapling, contributing to the collective effort to make the campus greener. The event included a guest speaker session by an environmental expert who provided insights into the significance of tree plantation, environmental conservation, and sustainable practices.

The event was documented through photographs and video recordings, capturing the spirit of the participants and the positive impact of the collective tree planting initiative. trees were successfully planted during the World Environment Day Tree Plantation Drive, significantly enhancing the greenery of the Zeal College campus.

The Environmental Committee has developed a comprehensive care plan to ensure the sustained health and growth of the newly planted trees. This includes regular watering, monitoring, and engagement of students in ongoing care initiatives. The event successfully raised awareness among students and staff about the importance of trees in maintaining ecological balance. Follow-up activities, such as workshops and seminars, will continue to reinforce this awareness. The World Environment Day Tree Plantation Drive at Zeal College, organized by the Environmental Committee, showcased the college's commitment to environmental sustainability and community involvement. The successful event not only contributed to the immediate greening of the campus but also laid the foundation for ongoing efforts to create a more environmentally conscious and responsible college community. The planted trees will serve as a living symbol of Zeal College's dedication to environmental stewardship and the well-being of its students and staff.







### Social Responsibility Initiative at Matoshri Vradhashram

Zeal College conducted a Blanket Distribution Social Responsibility Initiative at Matoshri Vradhashram on the 14th of February 2023. This initiative was designed to provide warmth and comfort to the elderly residents of Matoshri Vradhashram during the winter season. The event reflects [Your Organization's Name]'s commitment to making a positive impact on the lives of the elderly and vulnerable communities. Zeal College collaborated with Matoshri Vradhashram authorities to assess the specific needs of the elderly residents. This involved understanding the number of residents, their living conditions and the prevailing weather conditions. High-quality and warm blankets were procured considering the specific needs of the elderly residents. The procurement process focused on blankets that provided adequate insulation and comfort, ensuring suitability for the elderly. Zeal College worked closely with the staff at Matoshri Vradhashram to coordinate the distribution event. This collaboration included scheduling the event at a convenient time for the residents and ensuring a smooth and respectful distribution process. The blanket distribution event took place at Matoshri Vradhashram on the designated date. Zeal College organized a team of volunteers to facilitate the distribution and ensure that each resident received a blanket.

The distribution process was conducted with dignity and respect for the elderly residents. Volunteers engaged in conversations, offering warmth not only through blankets but also through compassionate interactions with the residents. The distribution event was documented through photographs and video recordings. Feedback was collected from the residents to gauge the impact of the initiative and gather insights for future endeavors. Zeal College successfully distributed blankets to [number of elderly residents at Matoshri Vradhashram, providing them with immediate relief during the winter season. The initiative contributed significantly to ensuring that the elderly residents had access to warmth and comfort. The blankets distributed were appreciated for their quality and appropriateness for the prevailing weather conditions. The collaboration with Matoshri Vradhashram enhanced community engagement and strengthened the bond between [Your Organization's Name] and the residents. The positive interactions during the distribution event created a sense of community support and care.

The Blanket Distribution Social Responsibility Initiative at Matoshri Vradhashram on the 14th of February 2023 was a heartfelt endeavor by Zeal College By providing blankets to the elderly residents, the organization demonstrated its commitment to social responsibility and community support. The success of this initiative encourages [Your Organization's Name] to continue its efforts in making a positive impact on the lives of vulnerable communities in the future.











### **State Level Poster Competition "TECHTONIC-K22"**

Zeal College organized the State Level Poster Competition "TECHTONIC-K22" from the 15th to the 26th of April 2022. This event provided a unique platform for third and final-year students (SY and TY) to showcase their innovative ideas, technical skills, and creative talents through poster design. The competition aimed to foster a spirit of innovation among SY and TY students, encouraging them to explore and express their ideas on various technical themes through visually engaging posters.

"TECHTONIC-K22" aimed to encourage interdisciplinary collaboration by attracting participants from diverse academic backgrounds, thereby facilitating the exchange of ideas and perspectives. The competition provided a platform for students to showcase their technical expertise and artistic abilities in visually conveying complex technical concepts. The organizers selected a theme that aligned with contemporary technological trends, challenging participants to creatively explore and interpret the chosen theme in their poster designs. Prior to the competition, Zeal College organized workshop sessions to equip participants with the necessary skills for effective poster design, emphasizing the integration of technical content and artistic elements.

A dedicated online platform was provided for participants to submit their digital poster entries. This digital approach allowed for efficient submission and enabled participants to present their work in a visually appealing manner. An expert jury panel, comprising professionals, faculty members, and industry experts, was formed to evaluate the submitted posters. The diverse panel ensured a comprehensive assessment based on both technical merit and creative expression. To enhance participant engagement, interactive webinars were conducted featuring guest speakers who discussed emerging trends in technology, design principles, and the importance of visual communication in the professional realm.

The submitted posters were showcased through a virtual exhibition accessible to a wider audience, including participants, faculty, and the general public. This digital gallery served as a platform for participants to exhibit their work. The competition facilitated networking opportunities for participants through virtual platforms, allowing them to connect with peers, professionals, and potential mentors within the field. The top-performing posters were recognized as winners based on criteria such as creativity, technical relevance, and overall presentation. Winners received certificates of achievement and, in some instances, sponsored prizes.

Outstanding posters had the opportunity to be featured in Zeal College publications, providing participants with a platform to showcase their work to a broader audience. The State Level Poster Competition "TECHTONIC-K22" at Zeal College emerged as a highly successful event, providing a vibrant platform for SY and TY students to showcase their technical acumen and creative flair. The competition not only celebrated innovation but also promoted collaboration and interdisciplinary thinking.

The positive response from participants and the high quality of submitted posters reflect the success of the event in nurturing a culture of creativity and technological exploration among students at Zeal College. The success of "TECHTONIC-K22" sets a positive precedent for future editions, reaffirming Zeal College's commitment to fostering excellence in technical and creative expression among its students.



Zeal Education Society was established in 1996 with the vision to offer education with a difference, the expert guidance of Han. Shri. S.H. Katkar, a distinguished industrialist. ISS hasts eight institutes that provide quality education to students from pre-primary to PNII courses.

Zeal Polytechnic started in 2006 and affers Diplama Courses in Mechanical

Engineering, Civil Engineering, Computer Engineering, Electronics and Teleconversication Engineering & Electrical Engineering.

INSTITUTE VISION

"To empower society with heliotic development through quality education." Every endeavor we undertake, each activity we plan is another step towards activiting

#### INSTITUTE MISSION

To enrich knowledge with enhanced facilities to help Zeel students structure their careers to a glorious future and to develop the students as a recourse within and outside the organization through houstic focus on character building and integral student development through an array of comicular, co-curricular and extra-curricular activities.

For Computer Students: -O Artificial Intelligence -

All and Employability

o Inturnet of Things

For EATE Students -

#### For CVR Chaleston

- Intelligent Transportation System
   Law Cost Housing Technologies.
   Emerging Transis in Civil Engg.

#### For Electrical Students

- Emergy Revolution Faculty
   Energy Revolution Faculty
   Energy Revolution Faculty
   Energy to once Energy
   Rebatics in Indian industry Energy to new Energy.

  © Electronal Safety

#### For Machinelal Students:

- Advanced Buttery and Fuel Cell Development for Electric Vehicle.
   Advanced Cooling System.
- on. Bench too wind har

### RULES

#### Posters should be self made (tice AZ Size Pester)

- Write your name, your topic name and Institute name on the poster.
- · E-Certificates to all the participants.
- · Attractive prizes for the first three wincers.

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# ZEAL POLYTECHNIC. PUNE State Level Poster Competition Organized by DEPARTMENT OF CIVIL ENGINEERING **ATTRACTIVE PRIZES** ₹ 5,000/-



Last date of Registration : 31st March 2022 Last Date of Submission of Poster: 02nd April 2022
Seat Date too Sun top of Nation to Jone Date in
Peter should Submit on this Could; procedystic2708/genelisms Prize Bistribution Program: 08th April 2022

### Pranali Patil : 9822728242

Registration Fee ₹ 50

Registration Fee







Registration Link: shorturl.at/gkmJW



State Level Poster Competition Organized by

ZEAL POLYTECHNIC, PUNE

PRIZE DISTRIBUTION CEREMONY





### **Zeal Annual Sports**

The Zeal Annual Sports Meet, held Meetfrom February 4th to February 22nd, 2023, proved to be a spectacular celebration of athleticism, sportsmanship, and team spirit. The event brought together participants from various backgrounds, fostering a sense of unity and healthy competition. The sports meet spanned a period of 19 days, creating an extended platform for athletes to showcase their skills and engage in friendly competition. Starting on February 4th and concluding on February 22nd, the event provided ample time for participants to compete across a diverse range of sports. The sports meet featured an extensive array of events, catering to a wide range of interests and talents. The following sports were contested: The classic game of strategy saw intense battles of wits, showcasing the intellectual prowess of the participants. Players demonstrated their precision and skill in this popular indoor game, creating an atmosphere of friendly competition. The fast-paced nature of table tennis brought excitement to the sports meet, with quick reflexes and agile movements on display. The ever-popular sport of cricket brought together teams in a series of thrilling matches, captivating spectators and participants alike. Teams engaged in spirited matches, showcasing teamwork, coordination, and strategic play in the high-energy sport of volleyball. The Zeal Sports Meet featured competitive football matches, combining skillful dribbling, accurate passing, and strategic goalkeeping. The ancient game of Kabaddi added a traditional touch to the sports meet, with teams demonstrating strength, agility, and strategic planning. Participants engaged in fast-paced, strategic maneuvers, demonstrating agility and teamwork in this traditional Indian sport. The strength and unity of teams were put to the test in the gripping battles of tug of war, with each side vying for victory. A combination of precision and teamwork, throw ball matches showcased the athletic abilities of the participants.

The fast-paced and high-scoring nature of basketball brought excitement to the sports meet, with teams competing for supremacy on the court. A modified and fast-paced version of cricket, box cricket added a unique flavor to the sports meet, delighting both players and spectators. Shuttlecocks flew across the courts as participants displayed their agility, speed, and skill in the sport of badminton. The track and field events brought the thrill of speed and strength to the forefront, with participants competing in sprints and shot put. The Zeal Annual Sports Meet was a resounding success, promoting physical fitness, teamwork, and a spirit of healthy competition. Participants and spectators alike experienced the joy of sports, and the event contributed to the overall well-being and camaraderie within the community. The diverse range of sports showcased the talents and dedication of all involved, making the Zeal Annual Sports Meet a memorable and enriching experience for everyone.





















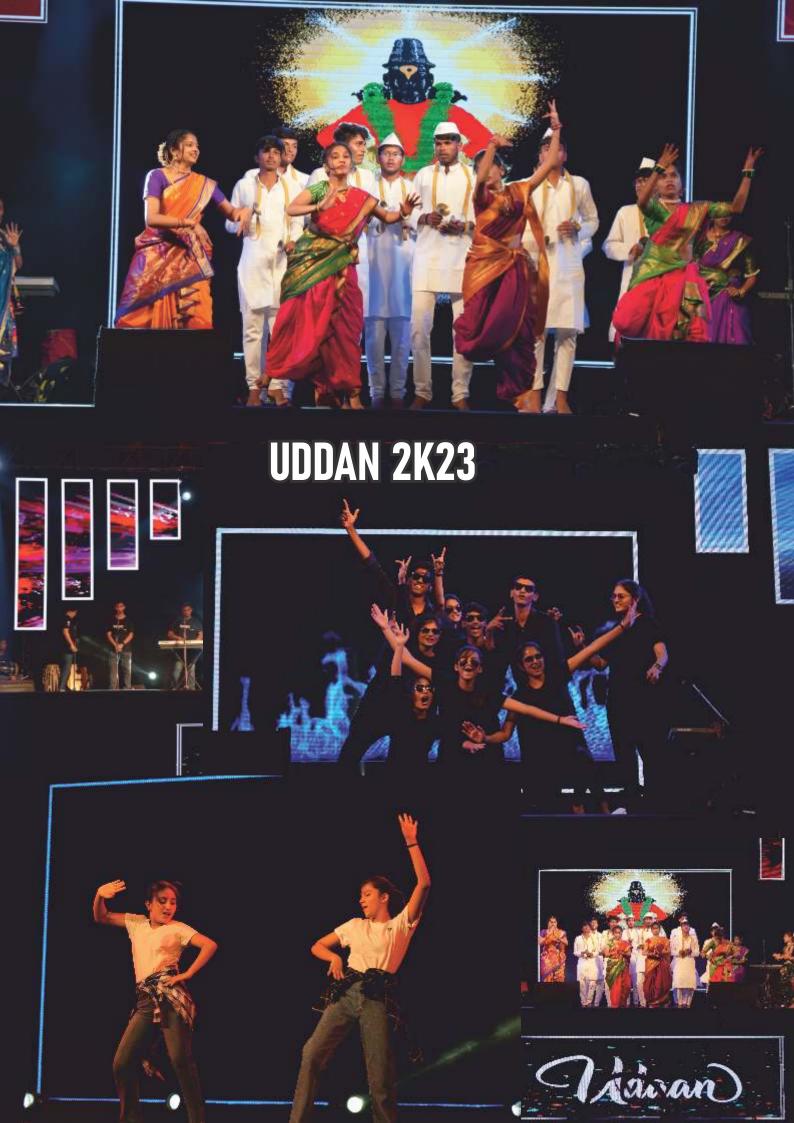


### **UDAAN 2023 Zeal Institute's Biggest Annual Festival**

Zeal Institute organized its biggest annual festival, UDAAN, in the year 2023, showcasing a diverse range of cultural and artistic talents. The festival provided a platform for students to express themselves through various forms of art and entertainment. UDAAN 2023 featured events such as dance, drama, music, singing, fashion show, instrumental performances, poetry, mimicry, and more. Additionally, the festival incorporated themed Cultural Days, including Retro Day, Traditional Day, and Mismatch Day Students presented captivating dance performances, displaying a mix of contemporary and traditional dance forms. The dance segment showcased the creativity and choreographic skills of the participants. The drama segment featured theatrical performances, skits, and short plays, highlighting the dramatic and storytelling abilities of the participants. Students creatively addressed social issues and showcased their acting prowess. The music segment encompassed a variety of genres, including solo and group performances. Participants showcased their vocal and instrumental talents, contributing to the vibrant musical atmosphere. The singing competition allowed students to showcase their vocal abilities across different musical genres. Participants exhibited their singing prowess, captivating the audience with melodious performances. The fashion show segment featured students showcasing their creativity in clothing and presentation. Participants walked the ramp with confidence, displaying a blend of style and cultural influences. The instrumental performances included a range of instruments, from classical to modern. Students demonstrated their skills in playing musical instruments, contributing to the festival's musical diversity.

The poetry segment allowed participants to express their thoughts and emotions through spoken word and written formLiterary arts were celebrated, emphasizing the power of words and artistic expression. Participants engaged the audience with entertaining mimicry acts, showcasing their talent for imitating famous personalities. Miscellaneous acts added a touch of spontaneity and humor to the festival. Participants dressed and performed in styles reminiscent of past eras, celebrating nostalgia and cultural history. A day dedicated to traditional attire, customs, and performances, promoting cultural diversity. Participants embraced the fun spirit of mismatched outfits and activities, fostering a sense of humor and creativity.

UDAAN 2023 at Zeal Institute emerged as a vibrant and diverse celebration of talent and creativity. The wide array of events, cultural days, and thematic elements showcased the rich cultural and artistic diversity within the student community. The festival not only entertained but also provided a platform for students to express themselves and foster a sense of community through shared experiences. The success of UDAAN 2023 is a testament to the creativity, enthusiasm, and collaborative spirit of the students and organizers at Zeal Institute.



### **Student Achievement in State Level Technical Paper Presentation**

On the 20th of April 2022-2023, Atharva Jaiswal achieved a remarkable feat by securing the second prize in the State Level Technical Paper Presentation organized by Venutai chavan polytechnic pune. This achievement is a testament to Atharva Jaiswal's dedication, research acumen, and the institution's commitment to nurturing academic excellence.

Atharva Jaiswal presented an innovative and insightful contribution to the chosen topic of the technical paper. The presentation showcased a unique approach and demonstrated a profound understanding of the subject matter. The technical paper exhibited a commendable level of research depth, incorporating thorough literature reviews, a well-defined methodology, and significant findings. Atharva Jaiswal's dedication to comprehensive research was evident throughout the presentation. Atharva Jaiswal effectively communicated the ideas, methodologies, and findings of the technical paper. The presentation was articulate, well-organized, and engaging, capturing the attention of both peers and judges. During the question-and-answer session, Atharva Jaiswal demonstrated a strong command of the research, responding to queries from the judges and audience with confidence and clarity.

Atharva Jaiswal was awarded the second prize in the State Level Technical Paper Presentation competition, affirming his outstanding contribution to the field and the institution's commitment to academic excellence. Atharva Jaiswal's achievement received positive acknowledgment and recognition from fellow participants, faculty members, and peers present at the event. Participating in the state-level competition provided valuable networking opportunities for Atharva Jaiswal, allowing him to connect with professionals, researchers, and peers in the field. The success in the State Level Technical Paper Presentation is likely to open doors for Atharva Jaiswal, presenting future opportunities for research collaborations, academic pursuits, and participation in subsequent technical competitions.

Atharva Jaiswal's second prize in the State Level Technical Paper Presentation is a testament to his academic prowess and research capabilities. This accomplishment not only brings recognition to Atharva Jaiswal but also reflects positively on the institution's commitment to fostering academic excellence. We congratulate Atharva Jaiswal on this outstanding achievement and anticipate his continued success in future academic endeavors and contributions to the field.





### **Student Achievement**

Sr. No.	Name of Students	Percentage	Year
01.	NANNAJKAR VAISHNAVI GANESH	93.27 %	FIRST YEAR
02.	GURAV SHREYA RAMKRISHNA	91.53 %	
03.	WALUNJKAR SAKSHI SANTOS	90.875 %	
04.	HMAHADIK VEDANTIKA ANIL	90.875 %	

Sr. No.	Name of Students	Percentage	Year
01.	BHANDARI SATYAJIT ASHOK	96.66%	
02.	KSHATRIYA SAMRUDDHI AVINASH	95.73%	SECOND YEAR
03.	NANNAJKAR TANVI GANESH	94.00%	

Sr. No.	Name of Students	Percentage	Year
01.	DHOTRE VAISHNAVI SACHIN	93.64%	
02.	NIKAM VIVEK PRASHANT	92.47%	THIRD YEAR
03.	JAISWAL ATHARVA PRADEEP	87%	

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