



# MECHBYTES

NEWSLETTER OF MECHANICAL ENGINEERING DEPARTMENT

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### Editors (Faculty):

**Mr. Tanay Rege**

### Editor (Student):

**Mr. Aditya Mandal**

## VISION

To evolve as a Centre of Excellence in Mechanical Engineering with a strong Industry Connect, ensuring engineers with a global perspective and professional ethics, thus adding value to society

## MISSION

- To ensure proficiency in academics with emphasis on fundamental concepts and problem solving leading to practical applications in the field of Mechanical Engineering
- To provide state of the art Training in collaboration with reputed industries and institutions focussing on interdisciplinary domains
- To engage in Research, Consultancy services and promote community outreach initiatives
- To promote Faculty Development through Quality Improvement Programs and Research

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- Graduates will apply Engineering Knowledge and demonstrate the requisite skills to meet challenges in the field of Mechanical Engineering.
- Graduates will adapt to the technological advances and relevant softwares in the industry.
- Graduates will acclimatize to real time Industrial Systems, Standards and Professional Engineering Practices.
- Graduate will exhibit Strong Values, Work Ethics, Positive Attitude, Managerial Skills and Team Work with concern for the society.

## PROGRAM SPECIFIC OUTCOMES (PSOs)

- Graduates will be able to demonstrate knowledge of Maintenance Engineering Practices, Industrial Automation Tools and standard Softwares in Mechanical Engineering and related areas.
- Graduates will be able to correlate knowledge of Mechanical Engineering and allied fields with Industrial Processes, Practices and Standards through field visits, Internships and other intervention

# ACADEMIC ACTIVITIES

## STUDENT CHAPTERS

### MECHANICAL ENGINEERING STUDENTS HUB (MESH) 2024-25 COMMITTEE

#### INSTALLATION



The Mechanical Engineering Students' Council (MESH) and the Electronics and Computer Science Engineering Students' Council (DBEATS) of Don Bosco College of Engineering held the installation ceremony for their respective committees for the academic year 2024-25 on August 30, 2024. The Chief Guest was Ms. Hortencia Fernandes, HR Supervisor at Helmerich and Payne Ltd. (H&P). The ceremony was also graced by Mr. Noel Farria, HR recruiter, H&P, Fr. Kinley D'Cruz (Director), Dr. Neena Panandikar (Principal), Dr. Pravin Verekar (Head of the Mechanical Engineering Department), and Dr. D.S. Vidya (Head of the Electronics and Computer Science Department).

During the event, Mr. Nimish Noronha summarized the past year's achievements under the MESH council, while Mr. Lenoy Mendes highlighted DBEATS' activities from the previous year. In his welcome speech, Dr. Verekar emphasized that leadership goes beyond holding a title—it is about positively influencing others. He encouraged students to actively engage in activities and step outside their comfort zones. Dr. Vidya underscored the value of interdisciplinary collaboration between both departments, and Dr. Panandikar discussed the newly introduced multidisciplinary postgraduate course, urging students to take full advantage of this opportunity. She also encouraged the newly appointed committee members to draft a strategic plan for the upcoming events. Fr. Kinley congratulated the outgoing committee for their excellent work. Quoting Einstein, he remarked, "Curiosity keeps leading us down new paths, the important thing is not to stop questioning," and challenged students to push their boundaries and broaden their horizons.

Ms. Fernandes spoke about H&P's latest technological advancements, highlighting its dedication to empowering and promoting women into leadership positions. She encouraged students to explore career opportunities in the petroleum industry and highlighted the attractive job prospects in remote operations within the sector, which garnered significant interest from the audience.

The newly elected DBEATS President, Mr. Loxley Dias delivered the vote of thanks.

## INSTALLATION OF CHAPTER WORKING COMMITTEE OF ISHRAE DBCE STUDENTS CHAPTER 2024-25



The Mechanical Engineering Department of Don Bosco College of Engineering (DBCE) installed the chapter working committee of the Indian Society of Heating, Refrigeration, and Air Conditioning Engineers (ISHRAE) DBCE Student Chapter for the academic year 2024-2025. The chief guest Mr. Hildon Lobo, Head of Expert Service Centre at Tech India Private Limited, graced the occasion. Other notable attendees included Mr. Mohnish Borkar, President, ISHRAE Goa Chapter; Rev. Fr. Kinley D'Cruz, Director, Dr. Neena Panandikar, Principal, Dr. Pravin Verekar, Head of the Mechanical Engineering Department and Mr. Vishal Kurtikar, ISHRAE Goa Chapter Student Chair.

In his welcome address, Dr. Pravin Verekar emphasized the ISHRAE community's contributions to students in the fields of heating, ventilation, air conditioning, and refrigeration. He highlighted the crucial role ISHRAE plays in engaging with students and the numerous benefits that participating in chapter activities offers for their future careers.

Dr. Neena Panandikar encouraged students to engage actively with ISHRAE by participating in various technical events and competitions. She stressed the importance of collaboration and the opportunities provided by ISHRAE for professional development. Rev. Fr. Kinley D’Cruz advised members to make the best use of the opportunities offered by ISHRAE and urged the newly elected council members to prepare diligently for upcoming events, with a focus on sustainability and the integration of artificial intelligence in innovative gadgets.

Mr. Mohnish Borker elaborated on ISHRAE’s main objectives, emphasizing the benefits of membership, such as access to webinars and field visits. He encouraged students to participate in various competitions organized by the society. He also acknowledged the efforts of Prof. Tanay Rege in promoting student membership in ISHRAE.

The new committee was installed by Mr. Vishal Kurtikar. The newly elected committee comprised: Rio DeMelo, President; Abhishek Dias, President-Elect; Dev Kalgutkar, Secretary; Chenoy Santos, Treasurer; Aniketh Dongre, Sachin Tamse, and Shravan Phadte as CWC Members

Mr. Hildon Lobo, delivered a talk titled “Industry’s Expectations from Engineering Students.” He urged students to transition from learning to contributing by continuously adding value to their organizations. He also outlined key traits for success, including punctuality, enthusiasm, proactive learning, collaboration, creativity, and adaptability under pressure, along with strong foundational knowledge and effective communication skills.

Rio De Mello, proposed the vote of thanks. One of the highlights of the event was the quiz competition on "Thermodynamics and Energy," which had participation from 11 student teams. Rio De Mello and Raul Baracho secured first place, while Josiah Fernandes and Chenoy Santos earned second place.

### **DBCE FSAI CHAPTER INSTALLS NEW OFFICE BEARERS FOR 2024-25**



The Don Bosco College of Engineering Student Chapter of the Fire and Security Association of India (FSAI) held its installation ceremony for the new office bearers for the year 2024-25 on October 18, 2024. The Chief Guest was Shri Arman Bankley, Director of AR Mine’s Group and President of Vibrant Goa. The event was graced by Dr. Ganesh Hegde, President of the FSAI Goa Chapter, Fr. Kinley D’Cruz, Director, Dr. Neena Panandikar, Principal, Dr. Suraj Marathe,

Officiating HOD of the Mechanical Department and Anish Savio Barreto, the incoming President of the Chapter.

Shri Bankley emphasized the need for quick, well-planned responses to safety challenges in industries, educational institutions, and everyday life. He encouraged students to actively participate in the upcoming Vibrant Goa event, urging them to connect with international delegates and explore opportunities abroad post-graduation, citing examples of past student successes. Fr. Kinley motivated students to continue progressing in their fields and make meaningful contributions. Dr. Panandikar stressed the importance of educating students on fire safety awareness in educational environments, while Dr. Marathe encouraged students to take full advantage of the student chapters at DBCE to enhance their future industrial careers. Aaron Rodrigues, the outgoing president, summarized the chapter's activities and technical events during the 2023-24 academic year.

Dr. Hegde led the installation of the new council members and outlined future plans for the chapter. The newly elected office bearers include Secretary Abhishek Dias, Joint Secretary Josiah Fernandes, Treasurer Elden Rodrigues, and CWC Members Aditya Mandal, Reeve Fernandes, Mazen Leitao, and Aniketh Dongre.

The event was coordinated by faculty advisors Prof. Ajit Salunke and Prof. Aniket Naik.



## INTERCOLLEGIATE TECHNICAL EVENT HELD AT DBCE TO COMMEMORATE ENGINEER'S DAY 2024



The Institution of Engineers, India (IEI) student chapter at Don Bosco College of Engineering (DBCE) organized an intercollegiate technical event on August 31, 2024, with the Mechanical Engineering Department to commemorate Engineer's Day 2024. The program included a quiz competition,

an idea presentation, and a digital poster design contest, with participation from students of engineering colleges and polytechnics throughout Goa.

Er. Benedicto Andrade, Chief Manager of Purchase at Paradeep Phosphates Ltd Goa Unit and Convenor (Mechanical) of the IEI Goa State Centre, delivered a talk on "Engineering of

Pumping Systems," sharing his expertise and experiences in designing, operating, and maintaining pumping systems.

The valedictory ceremony was presided over by Chief Guest Er. Elias Vaz, General Manager and Head of Commercial & Logistics at Paradeep Phosphates Ltd, Goa Unit, Fr. Kinley D'Cruz, Director, DBCE, Dr. Neena Panandikar, Principal, DBCE, Er. Anwar Khan, IEI Goa State Centre Chairman, and Prof. Ajit Salunke, Faculty Advisor of the DBCE IEI Chapter, were also present during the occasion. In his keynote address, Er. Vaz highlighted the significance of networking and engaging with industry professionals to acquire valuable insights and experience. He also stressed the need to drive impact through technological advancements, referencing the success of Apple's iPhone as an example. Er. Anwar Khan encouraged students to use the available resources and opportunities to foster their growth and development. He highlighted the benefits of being an IEI member and shared his eagerness for future events organized by the Chapter. In his address, Fr. Kinley D'Cruz congratulated the winners of the technical events and emphasized that the true value lies in learning through participation rather than just focusing on the outcomes. Dr. Neena Panandikar expressed her gratitude to the IEI Goa State Centre for their ongoing support and guidance and commended the committee members of the Chapter for successfully organizing the state-level event.

Mr. Prasad Adpaikar, Manager at Sanofi Healthcare India Pvt. Ltd., and Er. Benedicto Andrade judged the idea presentation competition. Prof. Sachin Turi and Mr. Sahil Birje evaluated the digital poster designs. Mr. Abhishek Dias conducted the quiz and delivered the vote of thanks.



## **WORKSHOPS/ SEMINARS / WEBINARS & EXPERT TALKS**

### **ONE-DAY WORKSHOP ON CONDITION BASED MAINTENANCE**

The Department of Mechanical Engineering in association with ISHRAE DBCE Student Chapter successfully hosted a full-day workshop on Condition Based Maintenance on July 13, 2024, at DBCE. Conducted by Mr. Dipak Kamath, an esteemed Maintenance Consultant and Proprietor of Om Reliability Hub, the workshop provided participants with profound knowledge and practical insights.

Mr. Kamath gave an overview of maintenance, highlighting its crucial role in industrial operations. He stressed the importance of regular maintenance in preventing equipment failures, ensuring safety and compliance with regulations, and achieving long-term cost

savings. The workshop covered various maintenance strategies, including preventive, predictive, and reactive maintenance, with a main focus on condition based maintenance (CBM).

The session introduced key condition monitoring techniques essential for CBM. Techniques like vibration analysis, oil analysis, thermography, and ultrasonic testing were explained in detail, showing their effectiveness in detecting anomalies and potential machinery failures. A significant part of the workshop was dedicated to hands-on sessions with running equipment, addressing alignment challenges, and demonstrating laser alignment technology. Mr. Kamath explained common alignment issues affecting machinery performance and demonstrated the use of laser alignment tools.



### **DBCE MECHANICAL STUDENTS ATTEND ADDITIVE MANUFACTURING (AM) WORKSHOP AT BITS PILANI GOA CAMPUS**

On 24th September 2024, third-year Mechanical Engineering students from Don Bosco College of Engineering, accompanied by Prof. Ajit Salunke, participated in an Additive Manufacturing (AM) workshop at BITS Pilani, K K Birla Goa Campus. The event provided valuable insights into contemporary AM techniques, aiming to offer a comprehensive understanding of the latest advancements in the field and their applications in industries such as aerospace, medical, and manufacturing.

The workshop featured renowned experts including Prof. K P Karunakaran from IIT Bombay, Dr. S K Asha, scientist at NCL Pune, Dr. T Ram Prabhu, Joint Director at DRDO Bangalore, and in-house faculty from BITS Pilani. Topics discussed included Electron Beam Additive Manufacturing, Fused Filament Fabrication, Residual Stresses in Laser-Based AM, Advanced Filament Manufacturing, Selective Powder Deposition, Sub-Zero (Cryogenic) AM, 3D Bioprinting for Biomedical Applications, Topology Optimization in AM, and Computational Modelling for AM. Participants also engaged in a hands-on session on Topology Optimization using ANSYS Mechanical software.

The program attracted faculty and students from various engineering colleges, along with research scientists and industry professionals.

### **TECH TALKS 2024: EDGING TOWARDS A CONNECTED FUTURE**

The Institution Industry Cell (IIC) of Don Bosco College of Engineering, in partnership with the Department of Mechanical Engineering, hosted a “Tech Talks” event on the theme "Edging Towards a Connected Future" on September 18, 2024. Organized to celebrate Engineer’s Day 2024, the event featured two engaging sessions designed to broaden students' understanding of contemporary engineering practices.

The first session, led by Mr. Ameya Shirodkar, Manager of Quality Control at Turbocam India Pvt Ltd, focused on “Application of Six Sigma Management in Manufacturing.” Mr. Shirodkar introduced students to the concepts and methodology of Six Sigma management in the quality control of components manufactured in the industry.

The second session, presented by Mr. Kedar Acharya, Assistant Manager of R&D at Netzsch Technologies India Pvt. Ltd., was titled “Introduction to Electric Vehicles.” Mr. Acharya’s talk focussed on the evolving landscape of electric vehicle technology, covering key topics such as components and types of EV, battery technology, and thermal design and management.

The event was attended by second, third, and final-year mechanical engineering students. It was coordinated by Prof. Ajit Salunke and Prof. Sanjeel Naik.



### WORKSHOP ON “CNC PROGRAMMING WITH MASTERCAM”

The Department of Mechanical Engineering at Don Bosco College of Engineering organized a one-day workshop on ‘CNC Programming with Mastercam’ for final-year Mechanical Engineering students from DBCE and Goa College of Engineering, specializing in Smart Manufacturing. Coordinated by Mr. Sachin Turi, Assistant Professor, and Dr. Suraj Marathe, Associate Professor, the workshop provided hands-on training in Mastercam software for generating numerical control (NC) code. Additionally, students observed machining demonstrations at the CNC milling and turning centers.

Dr. Pravin Verekar, Head of the Mechanical Engineering Department, welcomed the students and highlighted the importance of mastering advanced machining technologies like CNC in modern manufacturing. He also stressed the vast opportunities available to students in the automation field.

Mr. Sachin Turi and Mr. Aniket Naik conducted the Mastercam sessions. Later, Mr. Diptesh Naik and Mr. Johnson Vaz gave a live demonstration of the machining process for a turning job. The workshop took place over two-afternoon sessions on October 10<sup>th</sup> and 11<sup>th</sup>.





## FIELD VISITS

### SECOND YEAR MECHANICAL ENGINEERING STUDENTS OF DON BOSCO COLLEGE OF ENGINEERING VISIT ASTRA METALS AND AUTOSEV, VERNA

On 24th August 2024, second-year Mechanical Engineering students from Don Bosco College of Engineering visited Astra Metals Systems Ltd. and AutoServ, a comprehensive car service provider in Verna. The visits were facilitated by Mr. Murad Mulla, Director of Operations at Astra Metals Systems Pvt. Ltd., and Mr. Siddharth Khandekar from AutoServ, Goa. Dr. Chetan Gaonkar and Prof. Anish Bandekar organized and coordinated the field visit.



At Astra Metals Systems Pvt. Ltd., which specializes in precision sheet metal work, including fabrication and assembly, Mr. Siddhesh Rao, Planning and Sales Manager, introduced the students to various sheet metal processes such as punching, bending, laser cutting, fabrication, and powder metallurgy. During their visit to AutoServ, the students first explored



the Mechanical Service section, learning about routine car servicing and repairs. They then proceeded to the Detailing Service section, where they were briefed on interior and exterior cleaning, car protective coatings, headlight restoration, and underbody coating. The final stop was the Refinishing Services section, where Mr. Rajesh Mestry, Floor Supervisor, explained various refinishing processes.

**THIRD YEAR MECHANICAL ENGINEERING STUDENTS OF DBCE VISIT  
GLENMARK PHARMACEUTICALS AND GOA WASTE MANAGEMENT  
CORPORATION**



The Department of Mechanical Engineering of Don Bosco College of Engineering organized a one-day visit for the third-year Mechanical Engineering students at Glenmark Pharmaceuticals, Colvale and Goa Waste Management Corporation, Saligao. Prof. Sachin Turi, Prof. Gaurish Samant, and Mr. Abhishek Dias coordinated the visit.

At Glenmark, students toured the Service and Utility plants. At the Service plant, they observed critical water and air treatment processes used in pharmaceutical production. At the Utility plant, they saw compressors, chillers, and boilers in operation, learning about their mechanisms and preventive maintenance practices.



The visit to Goa Waste Management Corporation began with a presentation by Mr. Sameer Natekar, who detailed the types of waste processed and the challenges of segregation and recycling. The students then toured the plant, where they observed the waste management processes, including electricity generation from the biogas plant and manure conversion. Mr. Natekar highlighted the need for developing new technologies to recycle non-

biodegradable waste, which makes up 70% of the waste and is currently sent to cement industries in neighbouring states.

## ISHRAE FIELD VISIT TO SCOOP INDUSTRIES PVT. LTD



On 9<sup>th</sup> November 2024, the ISHRAE DBCE Student Chapter organized an industrial visit to Scoop Industries Pvt. Ltd., a leading producer of oxygen, nitrogen, and dry ice, as well as a distributor of various industrial gases. The visit was coordinated by Mr. Rio De Mello, Chapter President and Mr. Tanay Rege, Faculty Advisor of the Student Chapter.

During the visit, students gained exposure to advanced refrigeration and cryogenic systems used in gas liquefaction processes. The team at Scoop Industries provided students with an in-depth view of the production methods for liquefying gases and the technology behind maintaining cryogenic temperatures essential for these applications. The experience enhanced the students' practical understanding of complex industrial systems, offering them insights into real-world applications of engineering principles in gas production and handling.



## TRAINING & PLACEMENT

The Department of Mechanical Engineering at DBCE has consistently prioritized instilling strong work ethics and corporate leadership in its students. The institution has worked tirelessly to collaborate with prominent companies and industry leaders, ensuring enhanced career opportunities across various sectors. This year, the college witnessed a remarkable response to its placement efforts, with 19 well-known companies conducting recruitment drives on campus and offering 23 exciting job opportunities to the students of the Department of Mechanical Engineering of Batch 2024.

- Mahabal Akhilesh Arun and Aditya Dilip Lotlikar have been successfully placed at Buoyancy Consultants, one of the fastest growing design, engineering and consultancy services in India.
- Sushant Pradeep Kumar Maurya and Nash Raul Gomes will join IFB, a leading home appliances company.
- CEAT, one of India's leading tyre brands has offered a job opportunity to Nitesh Kumar Singh.
- Ace Centro, a renowned name in the construction and engineering sector, has placed four students: Abhijit Anil Pulikkal, Akshay Madan Naik, Bosco John Medeira and Pranav Uday Anklekar to work on various projects in the U.A.E.
- Ayres Alroy Pascoal Pereira has been placed with Helmerich & Payne, a global leader in drilling solutions.
- Parth Rampraakash Maurya has joined Simplisol Technologies Pvt. Ltd., a company specializing in IT solutions and software development.
- Aden Gomes has been placed with Optessa, a leader in optimization solutions for manufacturing.
- Savio Franky Medeira has been offered a position at Siemens, a global leader in electrical engineering and electronics.
- Shirodkar Tejas Uday has been selected by Ion Exchange, a company specializing in water and wastewater treatment solutions.
- Aadarsh Vishwanath Chodankar has been provided an opportunity to grow as a professional at HFCL, a leading player in the telecommunications sector.
- Trish Immaculate Dourado has been selected and successfully placed at Paradeep Phosphates Ltd. in Goa, a company specializing in the production of fertilizers.
- Rollan Fernandes has secured a position at Putzmeister Concrete Machines Pvt. Ltd., a global leader in concrete machinery and equipment manufacturing.
- Lakood LLP, a company specializing in modern furniture design and manufacturing has successfully placed Shreyas Sinai Silimkhan.
- Ryan Cleto Fernandes has accepted a job offer at Pentair WATER India Ltd., a leader in water filtration and treatment solutions.
- 8 students of the batch of 2024; Adler Vaz, Adlon Dias, Imran Nalavadi, Keegan Rodrigues, Lerison Pires, Rahul Kamble, Roshvor D'Costa and Kenworth Fernandes secured position at IMS Goa, to pursue marine Engineering.

# FACULTY INITIATIVES

## PAPER/ JOURNAL PUBLICATIONS

Sr. No.	Author Name	Title of Paper	Details of Journal name, volume, series, year/ Conference Details	National/ International
1.	Prof. Ajit Salunke	Development of a true density based automated quality grading device for unboiled arecanut kernels”	African Journal of Food, Agriculture, Nutrition and Development (AJFAND) (published on 31/8/24) Scopus indexed (Q3)	International
2.	Prof. Ajit Salunke	Estimation of physical properties of unboiled type Arecanuts using load cell and Ellipsoid approximation	Selected for presentation at International conference on mechatronics, control and robotics to be held at National University of Singapore in Feb 2025.	International conference
3.	Prof. Ajit Salunke	Determination of volume of unboiled arecanut kernels using image processing	Accepted for publication Acta Technologica Agriculturae" Journal ( SCOPUS Indexed- Q2) on 26/8/24	International
4.	Dr. Chetan Gaonkar	Effect of Mean flow on the transmission loss of a doubly tuned flow reversal muffler	Advances in Technology Innovation	International
5.	Dr. Chetan Gaonkar	Advances in Muffler Acoustics : From Conventional Material to Acoustic Metamaterial	High performance sustainable material and structures (Part of the book series: Sustainable civil infrastructures)	International

## WORKSHOPS/SEMINARS/EXPERT TALKS ATTENDED

Sr. No	Seminar/Workshop/ Short Term Courses/ Conferences/ Training Programmes etc.	Date	Duration	Organiz- ation	Name of the Staff Participated
1.	AICTE-ATAL- EduSkills FDP on Google AI-ML	8th – 13th July 2024	1 week	GEC, Goa	Prof. Gaurish Samant

2.	Two days training program on Requirements, Design of Fire Prevention, Life Safety & Fire Protection Systems	11th - 12th July 2024	2 days	FSAI Goa Chapter	Prof. Aniket Prof. Joyston
3.	Training program on drone technology organized by Garuda Aerospace in Chennai	1st – 5th July 2024	1 week	Garuda Aerospace, Chennai	Prof. Sanjeel Naik
4.	8 week NPTEL course on Introduction to Biomimicry	July-Sept 2024	8 week	IIT, Madras	Prof. Tanay Rege
5.	1 day workshop on Additive Manufacturing	24th Sept 2024	1 day	BITS Pilani, Goa campus	Prof. Ajit Salunke
6.	8 week NPTEL course on organ printing	July-Sept 2024	8 week	IIT Hyderabad	Prof. Sharad
7.	8 week NPTEL course on The science of Happiness and Wellbeing	Aug-Oct 2024	8 week	IIT Kharagpur	Prof. Sharad

## FACULTY INITIATIVES AND ACHIEVEMENTS

### DBCE PROFESSORS AND STUDENTS ATTEND 57TH ENGINEERS DAY CELEBRATIONS AT TAJ VIVANTA

The Institution of Engineers (India), Goa State Centre, commemorated the 57<sup>th</sup> Engineers' Day on September 14, 2024, at Taj Vivanta, Panjim. The event was graced by the Chief Guest, Dr. Dharendra Katti, Director, IIT Goa. Er. Ashwani Rawat, Director of product Management at Precisely Software Inc., delivered a keynote address on "Driving Sustainability with Engineering Solutions, Embracing the Latest AI-Driven Technologies." The occasion was also honoured by the presence of Er. Anwar Khan, Chairman, IEI GSC, and Er. Siddant Dubhashi, Secretary of IEI GSC.



Prof. Satyesh Kakodkar, Co-opted Member and Editor, IEI GSC, Prof. Ajit Salunke, Faculty Advisor, DBCE IEI Chapter, and Prof. Sharad Shanbhag, Coordinator, DBCE IEI Chapter,

were felicitated for their contributions to technical activities. Dr. Suraj Marathe, Associate Professor, DBCE and Member, IEI, also attended the program and received the appreciation on behalf of Prof. Shanbhag.

Student members Abhishek Dais, Anish Baretto, Aditya Mondal, Elden Rodrigues, Chenoy Ferrao, and Dev Kalangutkar volunteered to support the organizing team and were commended for their efforts.

## **TWO-DAY INNOVATION & ENTREPRENEURSHIP TRAINING AND EXPOSURE VISIT**

Dr. Babasaheb Ambedkar Technological University, Lonere, hosted a two-day workshop on Innovation & Entrepreneurship from June 12th to 13th, 2024, attended by Dr. Suraj Marathe from Don Bosco College of Engineering. The workshop covered key topics such as fostering a culture of innovation, entrepreneurship principles, and creating pre-incubation and incubation facilities for start-ups. Participants also visited the DFIIE Incubation Centre and 3D Design Printing Lab for hands-on insights.

The second day focused on advanced topics like IPR filing and management, start-up services (mentoring, funding, networking), and government policy mechanisms supporting entrepreneurship. Interactive sessions provided opportunities for networking and idea exchange. The workshop offered valuable learning and practical exposure in the field of innovation and entrepreneurship.



## **DBCE STAFF ATTEND TWO-DAY TRAINING PROGRAM AT GEC FSAI SKILL DEVELOPMENT CENTER**

The Goa chapter of the Fire & Securities Association of India (FSAI) hosted a two-day training program on “Fire Prevention, Life Safety & Fire Protection Systems” as per the National Building Code, 2016, on July 11-12, 2024, at the FSAI Skill Development Centre, Goa Engineering College. Assistant Professor Mr. Aniket Naik and Mr. Joyston Menezes from DBCE attended.

Sessions led by Shri Ashok Menon, National Secretary of FSAI, covered fire prevention systems and included practical demonstrations of firefighting equipment. Along with Mr. Akash Desai, Shri Menon discussed fire extinguishing chemicals, fire compartmentation, and fire pump calculations. Shri Sanjay Kumar, CGM at ONGC Goa, presented on fire hazards in the hydrocarbon industry. Additionally, officers from the Goa Directorate of Fire and Emergency Services provided hands-on training in firefighting techniques using portable extinguishers. The event was coordinated by Dr. Ganesh Hegde, President of the FSAI Goa Chapter.



### **GOVERNMENT POLYTECHNIC BICHOLIM STUDENT'S VISIT DBCE**

The Department of Mechanical Engineering organized a half-day institute visit for the third-year Mechanical Engineering students from Government Polytechnic Bicholim (GPB). Coordinated by Mr. Sachin Turi and Dr. Suraj Marathe, the visit included a tour of the CNC lab, hands-on training with Master CAM software for NC code generation, and demonstrations of machining on the Institute's CNC milling and turning centers. This visit is aligned with the students' elective subject on CAD/CAM as part of their Diploma studies.



The visit commenced with an introduction to the Mechanical Department by Dr. Pravin Verekar, Head of the Department at DBCE. He highlighted the extensive job opportunities



available for Mechanical Engineers in the industry and emphasized the importance of acquiring skills in the latest machining technologies, such as CNC, for manufacturing.

The Master-CAM sessions were conducted by Mr. Sachin Turi and Mr. Aniket Naik. Following these sessions, Mr. Gaurish Samant introduced the students to the CNC Milling and Turning Centre. Later, Mr. Diptesh Naik and Mr. Johnson Vaz provided a live demonstration of the machining process for a turning job. Mr. Vivek Narvekar, Head of the Mechanical Department at GPB accompanied the students.

### **GUEST LECTURE ON "RECENT TRENDS IN MANUFACTURING" AT GOVERNMENT POLYTECHNIC BICHOLIM**

The Mechanical Engineering Department of Government Polytechnic Bicholim organized a guest lecture on "Recent Trends in Manufacturing" on 14th August 2024 to expose students to the latest industry practices and emerging technologies. The session led by Mr. Gaurish Samant, Assistant Professor at Don Bosco College of Engineering (DBCE), covered advancements in manufacturing, focusing on automation, Industry 4.0, and sustainable practices.

Mr. Samant discussed how these trends are reshaping the industry, driving more efficient production processes and higher-quality products. His engaging presentation encouraged students to stay updated on technological advancements and consider further studies in the field. The event ended with an interactive Q&A session, followed by expressions of gratitude from Prof. Vivek Phadte and Prof. Ashish Prabhu to DBCE for their support. This initiative highlights the department's commitment to preparing students for the evolving industrial landscape.

### **COURSE ON ADVANCE MAINTENANCE PLANNING AND SCHEDULING**

Mr. Anish Bandekar, Assistant Professor of Mechanical Engineering, attended a three-day course on "Advanced Maintenance Planning and Scheduling" organized by Maintcons, the maintenance consultants, at Vivanta Panaji from June 26 to June 28, 2024. The course was conducted by Mr. Deelip Prabhudesai, principal consultant at Maintcons. This company specializes in assessing, training, and certifying companies in maintenance.

Mr. Prabhudesai delivered an engaging presentation covering various topics related to industrial maintenance, including maintenance strategies, maintenance versus asset management, the importance of planning and scheduling in companies, backlog management, work closure and documentation, analysis and continuous improvement, performance measurement, materials management, and computerized maintenance management systems (CMMS). Additionally, Mr. Prabhudesai explored case studies and problem-solving scenarios, discussing the challenges faced by maintenance engineers in specific situations.

# INDUSTRY COLLABORATION

## INDUSTRY MOU

### DBCE SIGNS MOU WITH INSTITUTE OF MARITIME STUDIES, VASCO



On October 21, 2024, the Mechanical Department of Don Bosco College of Engineering (DBCE), Fatorda, and the Institute of Maritime Studies (IMS), Vasco, signed a Memorandum of Understanding (MOU), marking the beginning of a new chapter of collaboration.

IMS is an institute approved by the Directorate General of Shipping, operating in Goa since 1997. It provides Pre Sea-Training for both Graduate and Diploma entry Engineers, preparing them to serve as Marine Engineers onboard Merchant Navy vessels. The MOU outlines the collaborative efforts between DBCE and IMS, focusing on training, development, and knowledge exchange. It aims to equip DBCE undergraduate students with essential skills for the Marine Engineering program at IMS. Additionally, the MOU enables professionals from both institutes to share their expertise and experience, fostering knowledge advancement in line with evolving technology.

The MOU was signed by Mr. Shivram Kamat, Director of IMS, and Rev. Fr. Kinley D'Cruz, Director of DBCE. Principal Dr. Neena Panandikar, Dr. Pravin Verekar, Head of the Mechanical Department, Dr. Suraj Marathe, Workshop Superintendent, Prof. Ajit Salunke, Department MOU Coordinator, and Mr. Sachin Turi, Department Placement Coordinator (Mechanical) were also present for the occasion. The IMS team was represented by Mr. Vivek Pai, Workshop Superintendent, and Mr. Heston Dias, Lecturer.

Following the MOU signing, faculty from both institutes engaged in productive discussions on enhancing technical education and exploring opportunities for Goan students in the Merchant Navy. The MOU lays the foundation for a long-term partnership between DBCE and IMS to deliver high-quality technical education. The event was coordinated by Mr. Sachin Turi and Mr. Heston Dias.

# STUDENT CORNER

## STUDENT/ALUMNI ACHIEVEMENTS

### MECHANICAL ENGINEERING STUDENTS WIN PRESTIGIOUS GOMANTAK ENGINEERING EXCELLENCE AWARD



The Gomantak Engineering Excellence Award, a highly esteemed recognition for outstanding Goan engineers, celebrates innovation, technical expertise, and problem-solving excellence across engineering domains. This year, students from the Mechanical Engineering Department at were honored for their groundbreaking project: "Design and Development of a Robotic Knee Exoskeleton for Rehabilitation and Mobility Assistance Using Motion Intention Sensors."

The project was developed by Mr. Aadarsh Chodankar, Mr. Adler Vaz, Mr. Aditya Lotlikar, and Mr. Sifan Sayed under the expert guidance of Asst. Prof. Tanay Rege and Associate Prof. Dr. Suraj Marathe. Their work showcased exceptional proficiency in design, research, and practical implementation, addressing critical challenges in the field of rehabilitation and mobility for patients. Created as part of their final-year curriculum, the project reflects the students' commitment to solving real-world problems through innovative mechanical engineering solutions.

The award was presented during a special ceremony held at Curca, Bambolim, by Honorable Chief Minister Mr. Pramod Sawant, in the presence of Mr. Suresh Prabhu (former Minister of Railways, Commerce, and Civil Aviation) and other distinguished guests from academia and industry. This recognition not only highlights the students' achievements but also underscores the department's focus on fostering creativity and technical excellence.

## FROM DBCE TO THE HIGH SEAS: ALUMNI'S MARINE CAREERS WITH IMS

We convey our best wishes for our alumni, passing out as Marine Engineers from Institute of Maritime Studies (IMS), Goa. It is with great pride that we extend our heartfelt congratulations to our 11 alumni — Alcon Jose Ferrao, Simron Wendell Rodrigues, Yash Manesh Arolkar, Agnelo Diago Fernandes, Jes Anthony Menezes, Renoy Dominic Fernandes, Rutik Daya Naik, Lionel Francis Sequeira, Amston Xavier Sanches, Omer Qabeer, and Lyzander Nehemiah Gomes—as they embark on their remarkable sea journeys.

Our Principal, Dr. Neena Panandikar, along with Mr. Sachin Turi from the Mechanical Department, had the privilege of witnessing the dazzling passing-out parade of Marine Engineers at IMS, Goa. As part of the MOU, we signed with IMS, Goa, we are committed to laying a strong foundation to inspire and prepare our students for pursuing the Marine Engineering Program as a viable option for further studies and career advancement.

