



# MECHBYTES

NEWSLETTER OF MECHANICAL ENGINEERING DEPARTMENT

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## Academic Activities

- Student Chapters
- Workshops/Seminars/Webinars & Expert Talks
- Field Visits
- Training & Placement

## Faculty Initiatives

- Paper/ Journal Publications
- Workshops/ Seminars / Expert Talks Attended

## Student's Corner

- Farewell 2023
- Alumni Interview

## Editors (Faculty):

**Mr. Tanay Rege**

## Editor (Student):

**Mr. Ayres Pascoal Pereira**

## 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 (PEO'S)

- Graduates will apply Engineering Knowledge and demonstrate the requisites 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 will concern for the society.

## PROGRAM SPECIFIC OUTCOMES (PSO'S)

- 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

### IGNITRON 2023

“IGNITRON 2023”, a One day event was organized by the Mechanical Engineering Students Hub of Don Bosco College of Engineering, Fatorda on 20 April 2023. It was inaugurated by Mr. Atul P Naik, CEO M/s Precitech Components. Other Dignitaries present were Fr. Kinley D’ Cruz, Director, Dr. Neena Panandikar, Principal, Dr Pravin Verekar, HOD-Mechanical Department, and Mr. Koushik Varma - MESH Chairman were also present on the dais.

Fr. Kinley D’Cruz, Director praised the department for organising many activities and also motivated students to learn from failures. Mr. Bosco, MESH Secretary briefed the audience about MESH events and about IGNITRON 2023. Dr Pravin Verekar, HoD Mechanical Dept welcomed the gathering. Dr. Neena Panadikar, Principal congratulated the MESH committee for organising various events and workshops conducted by the Mechanical Dept. Mr. Atul Naik, Chief Guest, who was also the Keynote speaker of the event, spoke about the scope of Mechanical Engineering and the fields in which the mechanical engineers have excelled especially in the Aerospace domain. He also talked about the recent trends and changes happening in the Mechanical engineering domain. Mr. Koushik Verma, MESH Chairman proposed the Vote of Thanks.

The events organized during IGNITRON were a competition on SolidWorks Software where a student had to model a given part on the software in the minimum number of time. A Technical Quiz was also organised by the students. All the events had a great response from the students. IGNITRON was coordinated by Prof. Suraj Marathe, Prof. Sanjeel Naik and the entire MESH Team.



# WORKSHOPS/ SEMINARS / WEBINARS & EXPERT TALKS

## SDA ELECTRICITY DEPT., GOVERNMENT OF GOA, TALK ON ECBC, DSM AND STAR LABELLING

The Department of Mechanical Engineering, in association with ISHRAE DBCE Students Chapter and in collaboration with the State Designated Agency, Electricity Department, Government of Goa, organized a talk on Energy Conservation in Buildings with focus on Demand Side Management (DSM), Energy Conservation Building Codes (ECBC) and Star Rating of Appliances on 20th February 2023 at Don Bosco College of Engineering. The program was organized in view of building awareness about the latest policies and best practices towards sustainable development and energy security.



The resource person for the talk was Mr. Sachin Deshpande, a BEE certified Energy Auditor with over 27 years of experience running multiple businesses while having national & international consultancy experience in Development, Deployment, Management and Financing of various projects in Energy Efficiency, Clean Energy and Sustainability with the government as well as in the private sector, providing services such as Detailed Energy Audits, PAT Audits, Carbon Footprinting and Sustainability, Electrical Safety Audits, Water Audits and Clean Energy solutions across the sectors such as Thermal Power Plant, Iron and Steel, Textile, DISCOMS, Hotels and Commercial Buildings, Pharmaceuticals, Pulp & Paper, Cement, Refineries, Chemical, etc.

The event started with the felicitation of the guest speakers. Thereafter, the keynote speaker Mr. Sachin Deshpande stated and explained the objectives and goals of the workshop. “Energy Security is one of the most critical aspect for any developing economy.” said Mr. Deshpande, highlighting the recent global events of geo political conflicts and healthcare and economic disruptions induced by pandemic and its repercussion and subsequent energy crisis. The speaker reflected his profound knowledge on the topic and highlighted how important it is to conserve electrical energy and exalting demonstration of effects of Building Envelope, Heating Ventilation and Air Conditioning, Service Water Heating and Electric Power and Distribution. The resource person also exhibited the possible steps that can be undertaken at the personal level to reduce consumption of electricity. It was followed by another topic on the policies and guidelines under The Energy Conservation Building Code (ECBC). The speaker also threw light on the star labelling policy by Bureau of Energy Efficiency for

domestic appliances. With a couple of case studies of domestic appliances of different star ratings, the cost benefit analysis was drawn to show the energy and cost savings over a life of the appliance.

The talk was attended by 80 students from Department of Mechanical Engineering and Department of Civil Engineering.



### ONE DAY WORKSHOP ON INDUSTRIAL SAFETY

The Department of Mechanical Engineering, Don Bosco College of Engineering in association with Fire & Security Association of India DBCE Chapter had jointly organized a one day workshop on “Industry Safety” for the students of the institution on 25th February, 2023. The keynote speakers were Mr. Suhas Naik (Chief OSH Consultant) and Mr. Jovito Lopez (Secretary General of St. John Ambulance, Goa). Around 79 students participated in the workshop.

The first session by Mr. Suhas Naik was on “Basic Industrial Safety and Hazards”. The speaker acquainted the students with the objectives and goals of the workshop. The resource person reflected his profound knowledge on the topic and highlighted how important it is to be aware about various industry hazards, how to take safety precautions. His presentation thoroughly explained how safety came into picture and quoted “Carefulness costs you nothing. Carelessness may cost you your life”. The speaker also exhibited the possible steps that can be undertaken at the personal level to employ safety measures in workplace. He also



shared basic need and importance of legal requirements at an industrial level. The speaker explicitly stated “Safety is a small investment for a rich future”. Overall the first session was very well received by the students and it is a great step forward for making students aware about the same.

The second session by Mr Jovito Lopez was on First Aid. The resource person informed the students about International first aid course (LIFAC). He firmly stated the various merits of healthy food eating habits. He then later presented a demonstration of CPR also making students aware about its importance. The immense enthusiasm and zeal in the students to learn was the main driving factor of the session. An interactive session ignited the inquisitiveness of participants. They have committed themselves completely to bring about a change in the situation of the “Industrial Safety”. The coordinator of the workshop were Prof. Saurabh Raikar. The organizing committee members were Mr. Aadarsh Chodankar, Mr. Akshay M. Naik, Mr. Arkan Mulla, Mr. Koushik Varma, Mr. Rollan Fernandes, Mr. Shubhang Adpaikar, Mr. Sifan Sayed and Tejas Shirodkar.



### **AUDIT COURSE IN MAINTENANCE ENGINEERING**

The audit course in maintenance engineering conducted by the Mechanical Engineering Department for TE Mechanical (6th Sem) Engineering students at Don Bosco College of Engineering provides students with a comprehensive understanding of principles and practices in the context of maintenance activities. This course aims to equip students with the knowledge and skills necessary to effectively evaluate and improve maintenance processes

within an industrial setting. Seven audit course sessions were conducted throughout the semester by inviting speakers from industry and academia. Here is a very brief report of all the sessions conducted.

**Session 1 and 2:** Practical sessions on dismantling and assembling different components.

The 1st and the 2nd sessions were conducted on 1st March and 8th March 2023 where the students were given components like air compressor, motor winding mechanism, 2-S Kinetic engine, bench press and drilling machine. The students were given the task to dismantle the given equipment and assemble it. The purpose of this activity was to gain practical experience and understanding of the internal workings of various parts, gathering the necessary tools and equipment for dismantling the component systematically, examining each part during the dismantling process and reassembling the components by verifying the correct alignment and positioning of each component ensuring each part is fitted correctly and according to specifications.

By following proper procedures and guidelines, it was possible to dismantle and reassemble components effectively and efficiently.



Session 1 and 2: Practical sessions on dismantling and assembling different components

**Session 3:** Technical Talk on Maintenance of HVAC Equipment

This session was held on 15th March 2023 and the resource speaker was Mr. Prakash Naik, Past President, ISHRAE Goa Chapter and Retired officer from Goa Shipyard Ltd.

Mr. Prakash Naik provided insights on the need for Maintenance and various techniques; namely, Predictive, Preventive & Corrective techniques in maintenance engineering. He also emphasized the requirement of maintaining a logbook and said, “It is a health chart of a machine or component”. He also explained the major problems that occur in refrigeration / cooling systems and briefed about the troubleshooting of the same. He then briefed about Indoor Air Quality (IAQ) audit guidelines as given by various bodies like AHSRAE, OSHA etc.



Session 3: Technical Talk on Maintenance of HVAC Equipment

#### **Session 4: Technical Talk on Reliability Centred Maintenance (RCM)**

This session was held on 29th March 2023 and the speaker was our in-house faculty member Dr. Suraj Marathe, Associate Professor in Mechanical Department.

Dr. Marathe started the talk by emphasizing the significance of maintenance in ensuring the smooth functioning of machinery and equipment. The speaker then moved on to discuss Reliability Centred Maintenance (RCM), which is a systematic approach to maintenance that aims to identify the optimal maintenance strategy for a given piece of equipment. Dr. Marathe provided valuable insights into the importance of maintenance and the various methodologies that can be used to optimize it.



Session 4: Technical Talk on Reliability Centred Maintenance (RCM)

#### **Session 5: Field Visit to Sanofi Goa Development Center**

This field visit session was held on 12th April 2023. The visit was organized by Mr. Prasad Adpaikar, Manager Engineering & Operations. The visit started with a presentation by Mr. Prasad Adpaikar, which covered the overview of Sanofi, various machines, utilities in the plant, most importantly the role of engineers in pharmaceutical industries. After the session the students were taken to the utilities section wherein the working of Chillers, Boilers, Diesel Generators, and their maintenance was explained.

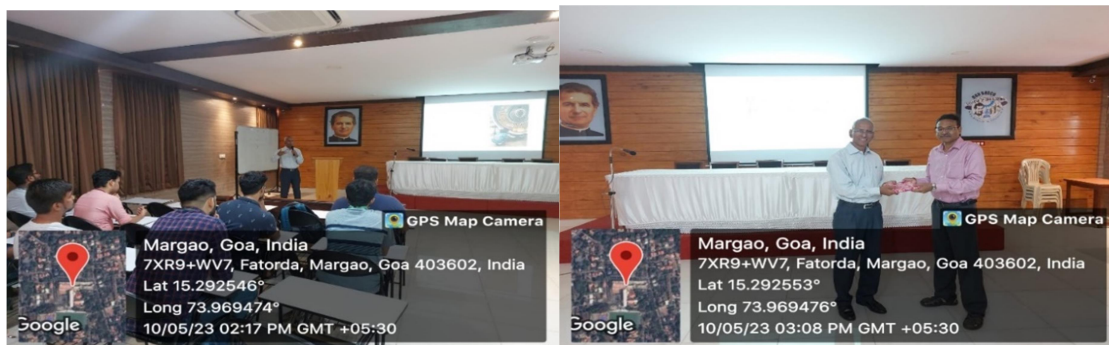


Session 5: Field Visit to Sanofi Goa Development Center

**Session 6:** Technical Talk on Maintenance in Process Industry

This session was held on 10th May 2023 and the resource person was Mr. Gerard D’Mello, Retired Chief Manager - Projects, Zuari Agro Chemicals Ltd and Past Chairman, Institution of Engineers (India) Goa State Centre.

The speaker spoke about the different types of maintenance with their advantages and disadvantages. He explained about the importance of maintenance in the process Industry, best practices in process Industry maintenance, variety of maintenance strategies employed in process industries and the challenges faced by the process industries in maintenance. He gave an in-depth analysis of maintenance practices in the process industry.



Session 6: Technical Talk on Maintenance in Process Industry

**Session 7:** Technical Talk on Vibration Monitoring of Machines

The last session on audit course was held on 24th May 2023 and the resource person was Prof. Ramnath Prabhu Bam, Lecturer in Mechanical Engg Dept at Agnel Polytechnic, Verna.



He said that vibration is an inherent characteristic of machines and can indicate potential faults or abnormalities. By monitoring vibrations, one can identify early signs of mechanical issues, such as misalignment, imbalance, bearing wear, and structural defects.

He also briefly explained about several techniques that are employed to monitor vibrations in machines such as Accelerometer-based Monitoring, Fast Fourier Transform (FFT) technique and online monitoring Systems. The speaker emphasized the importance of vibration monitoring for industries to recognize the value of vibration monitoring and incorporate it into their maintenance strategies to improve overall operational efficiency.



Session 7: Technical Talk on Vibration Monitoring of Machines



## INTRODUCTION TO CNC

The workshop on Introduction to CNC was conducted on 25th March 2023 for 4th year students of Mechanical Engineering at CAD Lab and CNC Centre.

The program started with an introductory session on CNC Machines by Prof. Sachin Turi, followed by Introduction session on Mastercam software and Hands-on session on Master cam Lathe tool path manager. The software session was followed by the practical session on

CNC Lathe machine wherein Mr. Johnson Vaz gave an insight about the machine and various process parameters which governs the surface finish of the component with a demo of thread cutting operation.

The second session was on the hands-on session on Mastercam Milling tool path manager by Prof. Gaurish M Samant followed by the practical session on CNC Milling machine wherein Mr Diptesh Naik explained the students about the working of machine with a demo of Pocket milling operation.

The Program enabled the students to gain insight into the CNC Machining. All the students had interactive sessions with the speakers of the day and made use of program to the fullest. Program concluded with a group photograph and thanking Rev. Fr. Kinley D’Cruz, Director, Dr. Neena Panandikar, Principal, Dr. Pravin Verekar, HOD of Mechanical Engineering, Dr. Suraj Marathe, Workshop Incharge, and Coordinators for their continuous support in making this program successful.

## FIELD VISITS

### FIELD VISIT TO IMS CAMPUS VASCO

The Students of Final Year (BE) from the Department of Mechanical Engineering – Don Bosco College of Engineering (DBCE) visited the campus of Institute of Maritime studies (IMS), Vasco on 10th March 2023.

The session commenced with a welcome note from Mr. Dipak B Shah, Director IMS. Later Mr Shivram Kamat, Dy. Director IMS and Mr Heston Dias, Lecturer IMS, introduced the marine engineering course to the students from training to career prospects. He elaborated the teaching learning process at IMS. Later the students were briefed about the admission process to the institute and the career after completing the one-year Pre Sea- Training Course from IMS.



The presentation was followed by a visit to various laboratories and workshops of IMS. The students were guided to the campus tour by the cadets of the Institute. The students got an opportunity to visit Engine room simulator, Welding shop, Marine workshop, Automation control lab, High voltage lab and Electrical Lab.

A doubt clearing session was arranged later on with the students. The students asked various doubts related to the course and future prospects in the marine engineering domain. The visit was coordinated by DBCE faculties Mr. Sachin Turi, Mr. Aniket Naik and Mr Ajay Tambwekar, Dy. Director, IMS.



### INDUSTRIAL VISIT TO YASKAWA INDIA PVT. LTD AND HINDUSTAN COCA-COLA BEVERAGES PVT. LTD (HCCB)

The Department of Mechanical Engineering of Don Bosco College of Engineering organised an Industrial tour to Bengaluru from 17th March to 24th March 2023. A group of 45 final year (8th sem) Mechanical Engineering students accompanied by Asst. Prof. Sharad M Shanbhag and Ms. Mancia Lobo, Counsellor went on an industrial tour to Yaskawa India Pvt Ltd, and Hindustan Coca-Cola Beverages Pvt.Ltd (HCCB), plants in Bengaluru. The purpose of this tour was to provide students with an opportunity to observe and understand the practical aspects of mechanical engineering in a manufacturing environment.

#### **Visit to Yaskawa India Pvt. Ltd:**

Yaskawa is a leading manufacturer of industrial robots and automation systems. It is at the forefront of technological innovation in the automation industry. The company's products are designed to be highly adaptable and versatile, with advanced features such as predictive maintenance, remote monitoring, and AI-based analytics. During the visit, the students were given a detailed presentation on the history of the company and its various products by Mr. Guruprasad Raju, Senior Manager-Marketing and Promotions. The tour started with a

visit to the production floor where the students observed the assembly lines, robotic systems, and other manufacturing processes. They also had the opportunity to speak with the company's engineers and managers, who provided them with a detailed explanation of the company's operations. The students observed the working of robots and Collaborative robot and their testing process. The factory was highly automated, with robotic arms performing most of the assembly work. Safety is a top priority for Yaskawa India Pvt Ltd, and the company has implemented a range of safety measures to protect its workers and equipment. Students observed safety barriers, protective clothing, and warning signs throughout the facility, and were impressed by the emphasis on safety in all aspects of the company's operations.



**Yaskawa India Pvt Ltd**

### Visit to Hindustan Coca-Cola Beverages Pvt. Ltd (HCCB):

Hindustan Coca-Cola Beverages (HCCB) is a leading manufacturer of beverages in India. During our visit, the students were given a brief introduction to the history of the company and its various products by Mrs. Ambika, Microbiologist. Students were given a tour of the bottling plant, where they observed the manufacturing process, quality control measures, and packaging operations. Students also had the opportunity to speak with the company staff, who provided them with a detailed explanation of the company's operations and practices. Students then proceeded to the production floor, where they were able to observe the various stages of manufacturing of Coca-Cola beverages. Students observed state-of-the-art equipment and advanced manufacturing techniques to produce a range of Coca-Cola products including Coca-Cola, Sprite, and Fanta. They also got to see the mixing of various ingredients, carbonation, bottling and packaging processes. Students learned about the company's efforts to reduce its water usage, water treatment plant to minimize waste, and promote recycling. The HCCB team explained the various quality control measures that they undertake to ensure that the products meet the highest quality standards.



The industrial tour was a great learning experience. Students gained an understanding of how mechanical engineering principles are applied in real-life manufacturing environments. They

also learned about the importance of automation and how it can improve efficiency and productivity in a manufacturing environment. They were impressed by the level of quality control measures taken by both Yaskawa and HCCB to ensure that their products meet the highest standards. The tour has provided the students with a new perspective on the practical applications of mechanical engineering and has inspired them to pursue careers in this field.



### FIELD VISIT TO GOA DAIRY PLANT

On 11th April 2023, the Mechanical Engineering Department of Don Bosco College of Engineering organized a field visit to Goa Dairy Plant for the BE Mech-II students. The visit aimed to provide practical knowledge and exposure to the students about the manufacturing and processing of dairy products. Goa Dairy Plant is a cooperative dairy plant, located in Curti, Ponda, Goa. It is the largest dairy plant in the state of Goa, producing milk and milk products for consumers in the region.



The students were accompanied by three staff members, Dr. Suraj Marathe, Asst. Prof Sharad Shanbhag and Mr. Dattaguru Sawardekar. They were welcomed by the officials and given a brief introduction about the plant's history, functions, and products. The students were assigned a guide to show them around the plant. The guide took the students through the plant and explained the processes involved in the production of milk and milk products. The tour started

with the milk reception area, where the raw milk is collected from the dairy farmers. Next, the students were taken to the milk processing unit, where they were able to observe the

different stages of milk processing such as homogenization, separation, and standardization. After the milk processing unit, the students were taken to the packaging unit, where they saw the different types of packaging used for different products.

The field visit to Goa Dairy Plant was an excellent opportunity for the BE Mech students to understand the practical aspects of dairy processing and manufacturing. The visit provided an insight into the plant's operations and the different stages involved in the production of milk and milk products. 46 students from BE Mech-II attended this visit. The visit was organised by Asst. Prof Sharad Shanbhag and Mr. Yash Phaldessai, Class representative of BE Mech-II.

### FIELD VISIT TO NETZSCH PUMPS

The students of fourth semester mechanical engineering of Don Bosco College of Engineering (DBCE), Fatorda visited Netzsch Pumps, Verna Industrial Estate on 20th April 2023 in order to understand and to see first-hand the factory setup manufacturing pumps. The 44 students were accompanied by Prof. Pravin Verekar and Prof. Chetan Gaonkar. The company manufactures screw pumps, rotary lobe pumps and peristaltic pumps.

The students and the faculty were welcomed to the company by Ms. Raileen Rego, Assistant Manager - HR & Admin. Ms. Rego explained the students about the company products. The students were shown presentations on the history of the company and on the safety protocols that are required to be followed during the field visit.

After proper briefing, the students were divided into two groups; they were taken around the factory by company engineers Mr. Somnath Surlakar from Production Department and Mr. Vishwaraj from Design Department. The engineers explained to the students the manufacturing process,



the quality control measures, and packaging operations. Students also had the opportunity to speak with the company engineers, who provided them with a detailed explanation of the company's operations and practices. Students observed the state-of-the-art equipment and advanced manufacturing techniques used to produce a range of pumps. The students were able to learn and understand how the company plant operated from start to finish and gain insights into their work model and the various products that they as a company provide in the market.

The industrial visit was a great learning experience for all the students. Students gained an understanding of how mechanical engineering principles are applied in real-life manufacturing environments. They also learned about the importance of proper storage and how it can improve efficiency and productivity in a manufacturing environment.

The students were impressed by the level of quality control measures taken by Netzsch Pumps to ensure that their products meet the highest standards. The tour has provided the students with a new perspective on the practical applications of mechanical engineering and has inspired them to pursue careers in this field.

### FIELD VISIT TO AMPTECH INDIA PHARMA AND LAB EXHIBITION

On 12th May 2023, 15 students of BE Mechanical Engineering of Don Bosco College of Engineering, Fatorda visited Amptech India Pharma & Lab Expo, (India's only Pharmaceutical & Lab Exhibition at Emerging Markets): Exploring Innovations in Pharmaceutical and Laboratory Technologies. The objective of our visit was to provide an opportunity for our department's students and faculty to explore the latest advancements in pharmaceutical and laboratory technologies, gain industry insights, and foster collaborations with leading companies and professionals in the field. Numerous exhibitors showcased their products through live demonstrations, allowing participants to experience the functionality and capabilities. The visit to the Amptech India Pharma and Lab Expo was a fruitful experience for our Students, providing valuable insights into the latest developments and trends in pharmaceutical and laboratory technologies. The expo offered a comprehensive platform for knowledge exchange, industry engagement, and networking.



We look forward to incorporating the learnings from the expo into our academic curriculum and research activities, further enhancing our contribution to the field of pharmaceutical sciences and laboratory technology.

Overall the visit to Amptech India Pharma and Lab Expo was informative and the students learned a lot about the product, automation and equipment of the pharma industry. The visit was coordinated by Dr. Suraj Marathe.



## TRAINING & PLACEMENT

Inculcating strong work ethics and corporate leadership in their students, has always been at the forefront of Don Bosco College of Engineering. The Institute has strived to associate itself with renowned industry leaders and pioneers to provide better work opportunities across a multitude of sectors. This year too has seen a notable response for placements in which reputed companies conducted placement drives in the College Campus.

- Godrej & Boyce Ltd. has played a pivotal role in India's economic growth and is now ensuring the career paths of Mr. Aazamkhan A. Dasankop and Mr. Varun Vinay Prabhu Dessai.
- Mr. Lemuel John De Cunha, Mr. Abdul Aziz Salman Hafeez Mohammed and Mr. Rahul Yadav have been successfully placed at Buoyancy Consultants, one of the fastest growing design, engineering and consultancy services in India.
- Mr. Neelesh Pataki and Mr. Shubham Rane have been selected and successfully placed at India's largest chain of café's, Coffee Day Global Ltd.
- With an aim to provide a holistic work environment and make daily challenges more rewarding, IFB has successfully recruited Mr. Josten D'Souza into its workforce.
- CEAT, one of India's leading tyre brands has offered exciting job opportunities to Ms. Ayisha Shaikh and Ms. Artika Bipin Vernekar.
- 8 final year mechanical students, Mr. Amston Sanches, Mr. Clive Rodrigues, Mr. Sigmoid Borges, Mr. Vishwesh Manerkar, Mr. Yael Pereira, Mr. Ayush Tari, Mr. Sachit Fal Desai and Mr. Jaison Carvalho have been provided opportunities to grow as professionals at Aries Marine Engineering Services.
- Mr. Kaushik Gaude has landed his first job at Saahas Zero Waste, which provides an enriching work environment while helping to contribute to the betterment of the world around.
- Goa Sintered Products Ltd., a quality producer of powder metallurgy components has offered job opportunities to Mr. Sheehan Terence D'Costa, Mr. Jaison De Melo and Mr. Pratik Prakash Naik.
- Betts India Pvt. Ltd. picked up to Mr. Shivam Pandey and Mr. Ashtang Mandrekar as trainee engineers at the placement drive on campus.
- Mr. Adil Shaikh, Mr Atif Ahmed and Mr. Sidhant Naik were offered the positions of Engineering Associate by The Postcard Hotels, a premium resort chain with presence all over the Indian Subcontinent.
- Putzmeister Concrete Machines Pvt Ltd picked up Mr Melistan Rodrigues and Mr. Nishant Pandey under their GET program during the campus placement drive.
- Mr. Kelan Reay Barreto and Mr. Abhishek Pawar were offered the position of Associate Project Engineer-Design by Speed Engineering Solutions Pvt. Ltd. Pune.

# FACULTY INITIATIVES

## PAPER/ JOURNAL PUBLICATIONS

Sr. No.	Author Name	Title of Paper	Details of Journal name, volume, series, year/ Conference Details	National/ International
1.	Dr. Suraj Marathe	Squat Angle Detection Instrument for Powerlifting Sport	Journal of Mechatronics and Automation June 2023, Vol. 10, Issue 1	National

## WORKSHOPS/SEMINARS/EXPERT TALKS ATTENDED

Sr. No	Seminar/Workshop/ Short Term Courses/ Conferences/ Training Programmes etc.	Date	Duration	Organization	Name of the Staff Participated
1.	Talk on Energy conservation in Buildings with focus on Demand Side Management (DSM), Energy Conservation Building Codes (ECBC) and Star Rating of Appliances	20 <sup>th</sup> Feb 2023	1.30 hr	DBCE	Prof. Tanay Rege
2.	One day workshop on "Industry Safety" Mr. Suhas Naik (Chief OSH Consultant) and Mr. Jovito Lopez (Secretary General of St. John Ambulance, Goa).	25 <sup>th</sup> Feb 2023	2 hr	Fire & Security Association of India DBCE Chapter	Prof. Saurabh Raikar
3.	Workshop on Introduction to CNC	25 <sup>th</sup> March 2023	1 day	Mech Dept	Prof. Gaurish Samant Prof. Sachin Turi Mr. Johnson Vaz Mr. Diptesh Naik

4.	4-week NPTEL course on Inspection and Quality Control in Manufacturing	Jan-Feb 2023	4 week	IIT Roorkee	Prof. Sharad Shanbhag
5.	8-week NPTEL course on Waste to Energy Conversion	Jan-March 2023	8 week 83%(5% topper)	IIT Roorkee	Prof. Sharad Shanbhag
6.	8-week NPTEL course on Steam and Gas Power Systems	Feb-March 2023	8 Week 75%	IIT Roorkee	Prof. Sharad Shanbhag
7.	12-week NPTEL course on Mechanics of Fiber Reinforced Polymer Composite Structures	Jan-April 2023	12 Week 80%	IIT Madras	Prof. Swapnil Ramani
8.	R & D Knowledge Sharing session on 'Mobile lighting Tower Gen-Set Retrofitting Techno Economic Analysis' by Prof. Tanay Rege	13 <sup>th</sup> May 2023	45 min	Mech Dept	Dept faculty members.
9.	R & D Knowledge Sharing session on 'Recent Advances in Power Transmission using Asymmetric Gears: An Overview' by Prof. Avil Dsa	31 <sup>st</sup> May 2023	45 min	Mech Dept	Dept faculty members.
10.	R & D Knowledge Sharing session on 'Hydrogen Powered Vehicles' by Prof. Aniket Naik	31 <sup>st</sup> May 2023	45 min	Mech Dept	Dept faculty members.
11.	One-week ISTE STTP on A practical approach to IOT and its applications	12-16 <sup>th</sup> June 2023	1 week	ECE Dept., DBCE	Dr. Saurabh Raikar Dr. Suraj Marathe Prof. Chetan Gaonkar Prof. Sachin Turi Prof. Aniket Naik Prof. Tanay Rege

## R & D CELL

The R&D Cell of Mechanical Engineering Department, Don Bosco College of Engineering, Fatorda organized following sessions.

### **Session 1: R&D Knowledge Sharing Session on ‘Mobile Lighting Tower Gen-Set Retrofitting: Techno Economic Analysis’**

Session on ‘Mobile Lighting Tower Gen-Set Retrofitting: Techno Economic Analysis’ was organized on 13/05/2023. The resource person for the session was Prof. Tanay Rege, Assistant Professor in the Department of Mechanical Engineering, Don Bosco College of Engineering. Prof. Tanay has carried out a consultancy work on this topic in one of the reputed industries in the state of Goa. He explained about how the lighting genset working on batteries is more economical than the ones working directly on IC engines. He supported the claims with experimental investigations he conducted in one of the industries.



### **Session 2: R&D Knowledge Sharing Session on ‘Recent Advances in Power Transmission using Asymmetric Gears: An Overview’**

Session on ‘Recent Advances in Power Transmission using Asymmetric Gears: An Overview’ was organized on 31/05/2023. The resource person for the session was Prof. Avil D’Sa, Assistant Professor in the Department of Mechanical Engineering, Don Bosco College of Engineering. Prof. Avil spoke about the latest progress in utilizing uneven gears for power transmission.

### **Session 3: R&D Knowledge Sharing Session on ‘Hydrogen Powered Vehicles’**

Session on ‘Hydrogen Powered Vehicles’ was also organized on 31/05/2023. The resource person for the session was Prof. Aniket Naik, Assistant Professor in the Department of Mechanical Engineering, Don Bosco College of Engineering. Prof. Aniket explained the working of hydrogen powered vehicles. He also elaborated on the advantages of hydrogen powered vehicles over electric vehicles.



# STUDENT CORNER

## BE MECHANICAL FAREWELL 2023

The farewell ceremony for the Mechanical Engineering students of Don Bosco College of Engineering was held on 8th June 2023 in the college auditorium. The event marked the conclusion of the students' academic journey and provided an opportunity to bid farewell to the outgoing batch.

The event commenced with a warm welcome by Dr. Pravin Verekar; Head of the Mechanical Engineering Department. Dr. Verekar shared inspiring words, reflecting on the students' achievements and growth throughout their time at the college. The Director Rev. Fr. Kinley D'Cruz graced the occasion with a motivating speech and acknowledged the hard work and dedication of the students and spoke about the significance of their roles in shaping the future of engineering. As the Principal Dr Neena Panandikar couldn't grace the occasion and be present to be with the students, she conveyed her warm wishes and words of encouragement for the future through a message delivered by a faculty of the department. In her note she further added "Dream big, follow passionately and success will be yours. Be humble, have patience, have good attitude in life and contribute positively to the society"

To add an element of entertainment and enjoyment to the farewell ceremony, various dance performances, songs, and engaging games were organized. The students showcased their talents and created a lively atmosphere, fostering a sense of togetherness among the students. Students got an opportunity to 'Walk the Ramp' to stake claim at the 'Best Outfit' awards, among other games organised.



Mr. Tanay Rege, assistant professor and coordinator of the event, announced the award for the best outgoing student of the mechanical department. While each nominee demonstrated

remarkable qualities individually, a departmental poll among its faculties, considering factors like academic performance, disciplinary record, participation in sports and cultural activities, and organizational initiatives, led to a joint victory for Ms. Ayisha Shaik and Mr. Aeryl Vales. Mr. Avinash Bhat and Mr. Amogh Prabhudessai, alumni from the classes of 2015 and 2017 respectively, were bestowed with the esteemed Most Distinguished Alumni Award for the year 2023. This recognition celebrates their remarkable achievements in their professional endeavors, noteworthy contributions to both society and the industry, and their strong affiliation with and valuable contributions to the institute.

A farewell cake was ceremonially cut to mark the end of the students' journey at Don Bosco College of Engineering and the start of a new phase in their lives, creating a special celebration. As the evening progressed, the students bid farewell to their beloved college and faculty members, expressing gratitude for the knowledge imparted and the support received throughout their academic years. The farewell ceremony concluded on an emotional note, paying tribute to the students' hard work and achievements. It provided an opportunity for reflection, celebration, and bidding farewell to their alma mater.



# INTERVIEW

## ALUMNI PROFILE: AN INTERVIEW OF MR. AVINASH BHAT

### Interview and Transcript by Mr. Ayres Pereira



*Earlier this year one of our student Mr. Ayres Pereira had the opportunity of interviewing Mr. Avinash Bhat, alumni of Department of Mechanical Engineering, Don Bosco College of Engineering Goa, currently associated with Mercedes-Benz R&D Bangalore.*

Ayres Pereira: Hello Avinash, tell me about yourself.

Avinash Bhat: “My name is Avinash Bhat. I graduated from Don Bosco College of Engineering in 2016, after which I took a sabbatical and prepared for GATE, which is a prerequisite for Masters in India. I got my admissions to MIT World Peace University, Pune and graduated in M. Tech Design Engineering in 2019. I then got an opportunity to work as an intern at Mercedes-Benz R&D in Bangalore. Later, I was hired by the company as PGET and since then I am associated with MBRDI”.

Ayres Pereira: How would you describe your role at Mercedes-Benz?

Avinash Bhat: “It's been four years since I'm working at Mercedes-Benz, currently at a post of Senior CAE analyst. So, my job role defines evaluating different components, predicting the lifecycle of different components of Mercedes-Benz cars. I evaluate the design and take measures to enhance the life of the component, basically the durability of components.”

Ayres Pereira: How did your college experience prepare you for your current role?

Avinash Bhat: “Normally as a student we feel that whatever we study in engineering might not be applied to our professional careers, but it was not the case for me. Currently, I am

working in a job role for CAE, wherein I usually work on the digital aspects, like digitalization of different components, and life prediction. So, what I have realized is that Design engineering and core mechanical topics like CAD-CAM, CAE, and FEM were of utmost importance.”

Ayres Pereira: Can you describe any extracurricular activities or organizations you were involved in during college and how did they impact you?

Avinash Bhatt: “So I was the president of ISHRAE in our college in 2016 and a member of the Chapter working committee in 2015. Under ISHRAE we organized some field trips, webinars, and a lot more activities. We also took part in pooled campus job interviews organized by ISHRE in Mumbai. So these are all the extracurricular activities where I developed leadership, creativity, and adaptability skills and also improved my ability to work in a team, communication, and time management skills.”

Ayres Pereira: You must have had a lot of achievements. Can you tell us something about it?

Avinash Bhatt: “Achievement-wise, I have a couple of them. But I would want to talk about the latest achievement that I've got as the best alumni from college. Standing over there, I felt that graduation is not the end, you still must work hard day by day, you know, to get that recognition and to be in the race. So, it was an honor that the college has identified me as one of the distinguished alumni for this year 2023. And standing at that podium in that hall, took me in 2016 when we were graduating. I could feel the same energy and I could remember all the good times I had as a student of DBCE.”

Ayres Pereira: Do you have any message for the students?

Avinash Bhat: “Your time as a student is a unique chapter in your life, filled with endless possibilities and opportunities for growth. Embrace this period with an open mind and thirst for knowledge. Remember, your education is not just about grades, but about gaining knowledge, skills, and experiences that will shape your future. Believe in yourselves, work hard, and always strive for excellence. So, seize every opportunity, follow your passions, and never limit yourself.”