MECHBYTES

NEWSLETTER OF MECHANICAL ENGINEERING DEPARTMENT

VOLUME 06, ISSUE 02, March - July 2022

Academic Activities

- Workshops/Seminars/Webinars & Expert Talks
- Field Visits
- Industry Collaborations
- Training & Placement
- Student Projects

Faculty Initiatives

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

Student's Corner

- Student Participation
- Alumni Interviews

Editors (Faculty):

Mr. Swapnil Ramani

Mr. Tanay Rege

Editor (Student):

Ms. Ayisha Shaik

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

WORKSHOPS/ SEMINARS / WEBINARS & EXPERT TALKS

2-DAY NATIONAL LEVEL ONLINE WORKSHOP ON 'VIBRATION AND NOISE CONTROL : RECENT TRENDS AND INNOVATIONS'

A 2-Day National Level Online Workshop on "Vibration and Noise Control : Recent Trends and Innovations" was organized by Mechanical Engineering Department of Don Bosco College of Engineering in association with Goa State Innovation Council on 25th and 26th of February 2022. The inaugural ceremony of the workshop was graced by Chief Guest for the event, Mr. Jose Noronha, Chairman of Goa Public Service Commission and Chairman of Goa State Innovation Council, Fr. Kinley D'Cruz, Director of DBCE, Dr. Neena Panandikar, Principal, Mr. Ajit Salunke, HOD of Mechanical Engineering Dept. and Dr. Pravin Verekar, Convener. Also present for the event were Dr. Kala Nayak, Registrar and Mr. Sudip Faldesai, Project Officer, GSInC.

Dr. Verekar formally welcomed all the dignitaries and participants of the workshop. He threw light on the topics that will be covered during the workshop. The Chief Guest for the function, Mr. Jose Noronha spoke about opportunities for innovation in the state. He emphasized the role of GSInC in supporting the startup community. He also stressed on importance of reading habits for students. He said "always strive for perfection" and wished the participants to take the benefit of the workshop. In the end, Mr. Ajit Salunke proposed the vote of thanks. The event was compered by Mr. Raymond Joseph and the workshop was coordinated by Mr. Chetan Gaonkar and Mr. Ramnath Prabhu Bam.

There were 5 eminent resource persons from premier Institutes and Industries of India as below:

1. Dr. M. L. Munjal, Professor Emeritus, FRITA, IISc Bengaluru

2. Dr. Krishna Mohan Kumar, Assistant Professor, IIT Indore

3. Mr. Bhushan Singh, Assistant Professor, Guru Ghasidas Vishwavidyalaya

4. Mr. Peeyush Bhonde, Area Manager, Technical Services (NVH), Josts Engineering

5. Mr. Suryakant Gawde, Vibration Analyst Level III, Certified Maintenance Partner at SKF Bearings

Apart from this, 3 sessions were conducted by in-house faculty members, Dr. Pravin Verekar, Mr. Chetan Gaonkar and Mr. Ramnath Prabhu Bam. Also a session on roles and responsibilities of GSInC was conducted by Mr. Sudip Faldesai. Around 100 participants from all over India with different backgrounds such as Industry Professionals, Faculty Members, Research scholars and students had registered for the event.

TWO DAY WORKSHOP ON 'ARDUINO & ROBOTICS'

The Goa State Innovation Council organized a two day workshop on Arduino & Robotics on the 8th and 9th of March 2022 at its Prototyping Lab. The workshop was held for the students of first year of Department of Mechanical Engineering.

Mr. Ketan Naik, Project Head at Asier Solutions delivered the sessions for the two days along with GSInC coordinator Mr. Siddhant Panjikar. The first day included sessions on Introduction to basic electronics where the students were given demonstrations to build virtual circuits in Tinkercad for control of motors etc. and an introduction to Arduino and programming. On day two of the workshop, sessions on 3D designing and printing were taken covering modelling in Blender and data exchange in STL format for 3D printing. The students were also given a practical hands-on exposure in printing certain robot parts on a 3D printer. Overviews on robot assembly were also provided to the students and were also involved in a group activity building a robot. Mr Sudip Faldesai, Project Officer GSInC; Prof Ajit Salunke, HOD Mechanical appreciated the involvement of the students in learning things beyond the academic curriculum while the Dr. Neena Panandikar, Principal added, "Additional learnings for students of Mechanical Engineering in emerging areas of Artificial Intelligence, Machine Learning, Industry 4.0 etc. is an added advantage for employment

prospects in the industry".

The workshop was coordinated by Prof. Harshad Pingulkar, Dept. of Mechanical Engineering and was well received by the students sharing their positive feedback on both the speakers for their content and delivery.

TALK ON MAINTENANCE OF HVAC EQUIPMENT

The Department of Mechanical Engineering conducted a Technical Talk on Maintenance of HVAC Equipment's on March 30, 2022. The session is held as a part of Audit Course in Maintenance Engineering for Third year students of Mechanical Department. The session was delivered by Mr. Prakash Naik, Treasurer, ISHRAE Goa Chapter and Retired Officer from Goa Shipyard Ltd.

HoD of Mechanical Department, Prof. Ajit Salunke welcomed the student participants and introduced about the audit course for the academic year 2021-2022. He also outlined the major activities that will be carried out during the course and explained the benefits of the same.

Mr. Prakash explained about the different types of HVAC systems. Various components of split AC, package AC, Precision AC units, Centre Plant, Vapour Refrigeration cycle were also briefly discussed.

Mr. Naik provided insights on the need for Maintenance and various techniques; namely; Predictive, Preventive & Corrective techniques in maintenance engineering were explained in detail. He also emphasized the requirement of maintaining a log book and said "It is a health chart of a machine or component".

Mr. Prakash Naik explained the major problems that occur in refrigeration / cooling systems and briefed about the troubleshooting of the same. He also elucidated the different controlling systems related to HVAC & RAC system. He then briefed about Indoor Air Quality (IAQ) audit guidelines as given by various bodies like AHSRAE, OSHA etc.

The Audit Course session was organized by the coordinators, Prof. Swapnil Ramani (Asst. Prof. – Mechanical), Prof. Raymond Joseph (Asst. Prof. – Mechanical) and Mr. Joyston Menezes (Lab Asst. – Mechanical). The session was attended by the students and staff of Mechanical Department.

TECHNICAL SESSION ON 'INDUSTRIAL STANDARDS & HOW TO BE INDUSTRIAL READY'

The Department of Mechanical Engineering conducted a Technical session on Industrial Standards and how to be industry ready on May 18, 2022. The session is held as a part of Audit Course in Maintenance Engineering for Third year students of Mechanical Department. The session was delivered by Alumnus of Mechanical Department, Mr. Tejas Pandit, Quality Executive, Putzmeister Concrete Machines India Pvt. Ltd.

Mr. Tejas Pandit briefed on the industry expectations, roles and responsibilities attached with the requirements of industrial businesses. Mr. Pandit said "In industry, time is money", and stressed on the importance of being efficient at work.

Mr. Tejas then elaborated on what industry expects and how students can be industry ready. Mr. Pandit also explained the importance of technical & non-technical skills, and gave tips to improve on the same. He also explained the students on the how to read production drawings and different standards that are referred to in the industry.

The session was attended by the students and staff of Mechanical Department. The Audit Course session was organized by the coordinators, Prof. Swapnil Ramani *(Asst. Prof. – Mechanical)* and Prof. Raymond Joseph *(Asst. Prof. – Mechanical)*

WORKSHOP ON 'FIRE SAFETY' BY FSAI STUDENTS CHAPTER

The FSAI student chapter of Don Bosco College of Engineering, Fatorda organised a workshop on Fire Safety on 20 May 2022 in association with FSAI Goa Chapter. The chief guest for the function was Shri. Nitin Raikar (Director, Directorate of Fire and Emergency Services, Goa). Also present were other dignitaries- Dr. Jennifer Lewis (President, FSAI Goa Chapter), Fr. Kinley D'Cruz (Director DBCE), Dr. Neena Panandikar (Principal, DBCE), Mr. Vinod Rodrigues (Secretary, FSAI Goa Chapter), Mr. Shawn D'sa (Jt. Secretary, FSAI Goa Chapter), Dr. Kala Nayak (Registrar, DBCE), Prof. Ajit Salunke (HOD Mechanical and faculty advisor, FSAI).

To kickstart the function, which was the first to be held in the offline mode since the beginning of the pandemic, Prof. Ajit Salunke welcomed the dignitaries. He mentioned that fire safety, first aid and industrial safety are regularly practiced by the mechanical department and this is highly appreciated by the industry. Dr. Neena Panandikar spoke about the role of the FSAI in providing fire and safety education and creating awareness for the students. This was followed by addressal of the occasion by Rev. Fr. Kinley D'Cruz who mentioned the importance of fire safety. Dr. Jennifer Lewis was next to share her thoughts as she spoke about how technology must be used to mitigate the risk of fire. This was followed by addressal of fire safety by the chief guest, Shri. Nitin Raikar, who spoke about the Classes of Fires, factors which the spread of fires depends upon, and methods of fire control. Mr. Omkar Mangesh Naik, President of FSAI, Student Chapter proposed the Vote of Thanks after which, an expert talk on Fire Safety was given to students and faculty in attendance. Here, an officer from the directorate of fire and emergency services, Goa gave detailed information about fire extinguishers, the types and methods of usage. This was followed by the Fire Safety Demonstration outside the college building where students and faculty members were provided with hands on experience, using the different types of fire extinguishers.

1 DAY HANDS-ON WORKSHOP ON '3D PRINTING & APPLICATIONS'

A 1-day hands-on workshop on '3D Printing & Applications' was organized by Department of Mechanical Engineering – Don Bosco College of Engineering (DBCE) in association with Goa State Innovation Council on 1st July 2022. The workshop was conducted mainly for the teachers of secondary and higher secondary schools across Goa and attended by 21 teachers from all over Goa.

The workshop was underway with a welcome address to all the participating teachers by Rev. Fr. Kinley D'Cruz – Director – DBCE. Dr. Neena Panandikar – Principal, addressing the teachers said, "emerging & interdisciplinary areas - 3D Printing, Robotics, Artificial Intelligence etc. are trending and the teachers and young students have an introduction to these". Mr. Ajit Salunke, HOD Mechanical Engineering and Mr. Sudip Faldesai, – Project Officer, GSInC also welcomed the participants and looked forward towards having engaging sessions with them.

The forenoon sessions of the workshop covered an introduction to 3D Printing, various processes and applications in healthcare and were delivered by Prof. Ajit Salunke. The participants were also given an insight into the roles and responsibilities of GSInC for prototyping by Mr. Sudip Faldesai. Later a hands-on experience on slicing software and demonstration on FDM machine was also given by Prof. Gaurish Samant and Mr. Siddhant Panjikar respectively.

The sessions were well received by the participating teachers and gave positive feedbacks & suggestions in having more such focussed workshops on 3D Printing, CAD and the possibility of incorporating certain fundamentals of 3D printing in their curriculum. The workshop was coordinated by Prof. Manjunath Narwate and Prof. Harshad Pingulkar.

INDUSTRY COLLABORATION

INAUGURAL CEREMONY OF ADVANCED WELDING CENTRE SUPPORTED BY PUTZMEISTER CONCRETE MACHINES PVT. LTD.

The Advanced Welding Centre of the Mechanical Department of Don Bosco College of Engineering was inaugurated on 5th May 2022 by the Chief Guest Dr. Xiangyang Jiang, Director, Putzmeister Concrete Machines Private Limited. Mr. Rakesh Ranjan, Global Head, Batching Plant, Putzmeister Concrete Machines Private Limited was the Guest of Honor. Rev. Fr. Kinley D'Cruz, Director, DBCE, Dr. Neena Panandikar, Principal, Prof. Ajit Salunke, HOD- Mechanical Department and Dr. Suraj Marathe, Asst. Professor & Workshop Superintendent were also present on the dais. The centre is supported by Putzmeister Concrete Machines Private Ltd. and has facilities for TIG and MIG welding. The function was attended by the company officials, officials from FiiRE and Goa state Innovation council, Heads of other departments & sections, media personnel, faculty, staff members and students.

Dr. Jiang said that that it was wonderful to know that DBCE has achieved so much in the last 10 years. He further added "3D Printing, IOT, AI are very important technologies for the world and there is bright future for mechanical engineers and opportunity to become valuable contributors to the society". Mr. Ranjan appreciated the Mechanical department and DBCE for the various beyond the curriculum activities and industry interaction. He advised students, saying "Focus on learning, know what to achieve, work on it, strive and keep learning". Fr. Kinley addressing the delegates said "I welcome you to the Don Bosco family, thanks for handholding with us and I wish that this collaboration will continue and become stronger in the future". He gave a brief presentation of the Salesian Society and the Don Bosco educational institutes. Dr. Panandikar congratulated the students of current final year batch

who have been selected through campus placements in reputed companies like Cipla, Buoyancy etc. She said "Our mechanical student's projects exhibited at SCIFFI 22 received wide acclaim from media and other stakeholders". Prof. Salunke gave a brief overview of the facilities and role of the welding centre in bridging the skill gap among students. He said "The centre can be used for skill training programs for the Industry". Dr. Suraj Marathe proposed the vote of thanks. The program was coordinated by Prof. Gaurish Samant and Prof. Harshad Pingulkar. Prof. Swapnil Ramani compered the event.

INAUGURATION OF CNC CENTRE

The CNC centre is established in the Mechanical Department of Don Bosco College of Engineering with the support of NSTEDB, DST, Govt. of India, FiiRE and Turbocam International. The centre was inaugurated by Mr. Jose Noronha, Chairman of Goa Public Service Commission and Chairman of Goa State Innovation Council in the presence of Dr. Levinson Martins, Director, Department of Science, Technology & Waste Management, Mr. Savio.Carvalho, Director, Turbocam India Pvt. Ltd. and Officials of ONGC, IPSHEM.

Director of Don Bosco College of Engineering, Fr. Kinley D'Cruz, Principal, Dr. Neena Panandikar, HOD- Mechanical, Mr. Ajit Salunke and Dr. Suraj Marathe, Asst. Professor & Workshop Incharge were also present for the inaugural function.

This state-of-the-art centre intends to align engineering education with the latest industry trends and practices, skill training, Industrial Consultancy in tool design and manufacturing of customised engineering jobs.

FIELD VISITS

BE MECHANICAL STUDENT'S VISIT TO INSTITUTE OF MARITIME STUDIES (IMS), 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 1st April 2022.

The session commenced with a welcome note from Mr Ajay A. Tambwekar, Dy. Director IMS. Mr Heston Dias, 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 Pre Sea 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 included visits to Engine room simulator, Virtual Reality station, Welding shop, marine workshop and Automation lab.

A doubt clearing session was arranged later on with the students. The students asked various doubts related to the course. The visit was coordinated by Mr. Sachin Turi and Mr. Sanjeel Naik.

SE MECHANICAL STUDENTS VISIT NIT GOA PERMANENT CAMPUS SITE AT CUNCOLIM

Second Year students of Mechanical Engineering Department of Don Bosco College of Engineering made a site visit to the NIT Goa permanent campus situated at Cuncolim. The visit was conducted on 4th April, 2022

The NIT campus is developed at Cuncolim by Central Public Works Department (CPWD). The EPC contract is executed B.G. Shirke Construction Tech. Pvt. Ltd. Mr. Pramod Yadav, Site Engineer and Mr. Sahil Desai coordinated the visit. Mr. Pramod Yadav briefed the students and faculty about the details of the project. Mr. Yadav emulated the different salient features of the project and mentioned that the project is developed PHASE wise. In PHASE I, the total site area is around 450000 sq,m and total built up area is approximately 70000 sq.m.

The project has dedicated buildings for Administration, Library, Seminar halls, Hostels and staff quarters among others.

The students were taken to the construction site and the factory wherein the innovative pre-cast technology was explained. With the help of this technology, construction takes place faster and with lesser man power. Mr. Yadav also explained the project management aspects related the contract.

The students had a fruitful learning experience through the site visit and interacted with the officials. Don Bosco College of Engineering signed a MoU with NIT Goa in 2019. The visit was arranged and coordinated by faculty of Mechanical Department, Prof Swapnil Ramani and Prof. Raymond Joseph and was accompanied by Dr. Suraj Marathe.

BE MECHANICAL FIELD VISIT TO OKAPI COMPOSITES, BETHORA

An industrial visit to Okapi Composites was organized by Mechanical Engineering Department, Don Bosco college of Engineering on 30th May 2022 for the students opting for FRC (Fiber Reinforced Composite) as their elective subject in Final Year. A total of 20 students were accompanied by Prof. Harshad Pingulkar and Mr. Dattaguru Sawardekar for the visit. Mr. Shwetang Nadkarni, CEO – Okapi Composites and an alumnus of Civil Engg. Dept. of DBCE guided and explained the students to its various manufacturing facilities and its products.

The visit was aimed at gaining industrial exposure and to let the students have an overview on the activities related to various processes, materials, material handling and safety in manufacturing of fiber reinforced composite carried out by Okapi Composites, Bethora, Goa. Students were given an exposure on the manufacture of glass fiber reinforced polymer composite structures for various applications, Preparation of moulds specific to the composite product and its manufacturing using Hand layup technique was

explained and demonstrated.. Reinforcements of woven and chopped strand mat glass fiber types were used in different stacking sequences to get the desired strength and stiffness to the composite structure. The company currently manufactures a variety of products such as composite doors, industrial gratings, toilet blocks, security cabins, benches etc. catering to industries as well as direct consumer markets. The students were also informed about the impact and applications of fiber reinforced composite in aerospace, automobile & construction industry. The field Visit was organized under the guidance of Prof Ajit Salunke HOD Mechanical Engineering, Don Bosco College of Engineering Fatorda.

ISHRAE DBCE STUDENTS CHAPTER INDUSTRIAL VISIT TO IFB AC UNIT, VERNA-GOA

Residential and business space-cooling demands are constantly rising around the world, as what was previously seen as a luxury has become a necessity. Air-conditioning manufacturers have played a big part in making units more affordable by increasing their efficiency and improving components and technology. For newly graduating students, keeping up with the latest innovations is critical. In order to bridge this gap Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) chapter of Don Bosco College of Engineering, Fatorda, had organised a field visit to the IFB Air Conditioner manufacturing unit at Verna, Goa.

A total of 48 student Members of ISHRAE DBCE Student Chapter, from the mechanical engineering department, accompanied by Prof Tanay Rege and Prof Sharad Shanbag had visited the state of the art facility at Verna. Line manager Mr. Jagannath and Mr. Keshav Bhat briefed the students about the various operations that took place in the plant. NC punch press machines were used to transform the sheet metal into their respective shapes. The Students learned how different components of the Air conditioner, such as the compressor, evaporator, condenser fins, and expansion valves, are manufactured and assembled to work as a single unit. For improved customer satisfaction, different tests were carried out under peak load conditions on the air conditioning unit, 80% of the inventory was locally sourced while the rest is imported. The plant had a capacity of producing 1500 units per shift; all manufactured units were Inverter ACs and uses R-32 as the refrigerant. Students were exposed to the testing facilities and the procedures and practices for product under various ambient temperatures as well as part reliability.

Automated manufacturing lines and MES system was implemented to automatically integrate all production information from industrial plant, improving process efficiency by collecting real-time data, this helped the students in gaining various insights about the popularly discussed term ‘Industry 4.0’.

TRAINING & PLACEMENT

Our meritorious students have secured jobs and have been placed at renowned companies through campus recruitment.

- Mr. Fletcher Antonio D'costa has been successfully placed at Worley, while Mr. Milbert Vaz Alfonso has bagged a job at Buoyancy Consultants and Engineering LLP.
- Xenerx Healthcare services Pvt. Ltd. has selected 2 of our deserving students, Mr. Rajay Naik and Mr. Clayton Pereira.
- DBCE has honed the skills of its bright minds to help them land jobs at the best companies. Rosenberger Interconnect India Pvt Ltd has selected 8 of our laudable students, Mr. Shivam Sawant, Mr. Rohit Ketkar, Mr. Saurabh Subhash Pawar, Mr. Mario Moniz, Mr. Stephen Ciriaco Coelho, Mr. Omkar Bhandari, Mr. Shreeyesh Ramdas Shirodkar and Mr. Cavel Noronha.
- Mr. Pramit Desai and Mr. Abhishek Ghadge have been selected and have accepted positions at Jinharsh Industrial solutions Pvt. Ltd.
- Mr. Jaideep Gaude has commenced his career at Aviza Technologies which manufactures metal, brass & copper sheets.
- Contributing to the highly skilled workforce at Cipla, 10 of our students will be joining this prestigious pharmaceutical company with the determination and commitment to excel – Mr. Tejan Samant, Mr. Lester Furtardo, Mr. Melvyn Da Costa, Mr. Sahil Chitrapur, Mr. Anstel Fernandes, Mr. Shannon Fernandes, Mr. Pundalik Karpe, Mr. Rajat Prabhu, Mr. Ruchil Nagzarkar, Mr. Kenneth D'Silva.
- Mr. Pratik Kerkar, Mr. Sudan Gaonkar, Mr. Daivik Malkornekar, Mr. Sriyansh Gawande and Mr. Sharath have been selected and are offered gainful employment at 5D Engineering Services.
- Mr. Sanath Bharne has successully landed a job at Coffee Day.
- Mr. Yash Devidas Sinai Sukhtanker was selected and placed at Optessa.
- Mr. Saideep Fadte, Mr. Akash Pawar, Mr. Omer Quarib have taken the first step in their careers with Syntegon, a company that is associated with sustainable processing and packaging technology.
- HFCL, a leading global technology company has offered exciting job opportunities to Mr. Binay Sharma.
- Mr. Pranay V Tari has landed his first job at Goa Shipyard Ltd.
- Mr. Atharva Gosavi has been provided opportunities to grow as a professional at Universal Cables Ltd.

FACULTY INITIATIVES

PAPER/ JOURNAL PUBLICATIONS

Sr . No.	Author Name	Title of Paper	Details of Journal name, volume, series, year/ Conference Details	National/ International
1.	Avil Dsa	Tribological aspects affecting surface durability of tooth sum altered spur gears : A load shearing approach	*Advances in Technology Innovation	International Journal (Cite score : 1) *Accepted and to be published

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	10th R&D Knowledge Sharing Session under the R&D cell. Prof. Saurabh Raikar presented a technical talk titled Design of Experiments using Minitab.	2nd March 2022	3.30pm-4.30pm	DBCE, online mode	Dept faculty members.
2	2-Day National Level Online Workshop on 'Vibration and Noise Control : Recent Trends and Innovations' in association with GSIC	25th and 26th Feb 2022	9.30-4.30pm	DBCE, Online Mode	Prof. Chetan Gaonkar, Prof. Tanay Rege, Prof. Ramnath Prabhu Bam, Prof. Harshad Pingulkar, Mr. Arun Sail, Mr. Dattaguru Sawardekar

3	Acreserve 2022 organized by ISHRAE Goa Chapter on 'VRC Technology & its Segments'	15th March 2022	10.00-5.00pm	ISHRAE Goa Chapter	Prof. Tanay Rege, Mr.Dattaguru Sawardekar, Mr. Arun Sail
4	4 week NPTEL course on Manufacturing Automation, IIT Kanpur	24th Jan-18th Feb 2022	Jan-March 2022	IIT, Kanpur	Prof. Sharad Shanbhg (Gold+Elite), Prof. Tanay Rege
5	4 week NPTEL course on Manufacturing Automation, IIT Kanpur	24th Jan-18th Feb 2022	Jan-March 2022	IIT, Kanpur	Prof. Sharad Shanbhag

TALK ON 'CAREER IN MECHANICAL ENGINEERING- PROSPECTS & FUTURE TRENDS' AT VIDYA VIKAS ACADAMY, MARGAO

Prof. Ajit Salunke delivered a talk on "Career in Mechanical Engineering"- Prospects & Future Trends" at Vidya Vikas Acadamy, Margao on 25th March 2022 for 11th standard students. He gave an overview of various specialization areas of Mechanical Engineering, job opportunities in the field, avenues for higher studies, Paradigm shift towards Mechatronics, Robotics and Industry 4.0. He also emphasized on role of mechanical engineers in the Defence sector, IT industry and in the management field. Prof. Salunke said that "A Mechanical Engineer has wide range of areas to choose and he can make career in automation /Robotics/IT/management etc. apart from the core discipline". He gave examples of eminent personalities from automobiles, space technology, politics, sports etc. who had a background in mechanical engineering and related fields.

The talk was coordinated by Prof. Chetan Gaonkar and Ms. Pooja Desai.

PRE FEST ACTIVITY FOR SCIENCE FILM FESTIVAL OF INDIA (SCIFFI 2022) BY PROF. AJIT SALUNKE AT BALRAM A DAY CARE SCHOOL, CANACONA

Prof. Ajit Salunke delivered a talk on "Acharya Prafulla Chandra Ray" at Balram A Day Care School, Canacona on 21st March 2022. The program was organized as a pre fest activity for Science Film Festival of India (SCIFFI 2022) which will be held at ESG Complex, Panjim from 26th to 28th April 2022. In view of Azaadi ka Amrut Mahotsav celebrations, the talk was planned to highlight the contribution of Indian Scientists. 105 students attended the talk.

Prof. Salunke gave a brief overview of Vijnana Bharati, Vidnyan Parishad, Goa and SCIFFI 2022. He gave a presentation of the life and works of Acharya Prafulla Chandra Ray and showed a video depicting the same. The program was facilitated by Dr. Dr. I. K. Pai Former Professor & HOD, Zoology & Director, UGC-HRDC, Goa University and he was instrumental in developing the resource material. Ms. Shradha Naik, Teacher coordinated the program.

Students Corner

STUDENTS PARTICIPATION

SCIFFI 2022

Science has a vital role in nation-building. With its rich traditional knowledge and customs, its youth, and most importantly, its drive and with this desire and determination to prosper, India looks at Science as a vehicle to meet aspiration of its people. Vidnyan Parishad, Goa, a unit of Vijnana Bharati, a Swadeshi science movement, is playing a role in this context by organising the Science Film Festival in Goa. The seventh edition of the SCI-FFI, India's science film festival, kicked off at Inox Panaji on 26-28 April 2022 in Goa. Dr. Paramod Sawant, the Chief Minister, officially opened the three-day festival. The festival, which took place at the Inox Complex and Maquinez Palace was a great success. Various events such as the Go-vidnyan expo, Innovation expo, Institutional expo, screening of various science films and documentaries, Indian knowledge system, students science village, robotics workshop were held under the banner of SCI-FFI 2022.

A team from Don Bosco College of Engineering students namely Shahul Ahmed, Keenan Cardozo, Akshay Batule, Nirbhay Borkar and Sahil Chitrapur guided by Prof. Gaurish Samant - Assistant Professor, Mechanical Engineering, participated in the innovation expo with their prototype of Oxygen Concentrator. The cost for the prototype is Rs. 50,000 and was built using indigenously sourced parts but the cost can be further reduce when mass produced, which is far less than the ones available in the commercial market. This concentrator can be used by 2-3 patients simultaneously depending upon the severity. It is also integrated with IOT so that the parameters such as oxygen purity can be remotely monitored. Eldrich Godinho, Valen D'Souza, Riff Fernandes, Alan Fernandes and Chris Fernandes displayed their drone used for spraying pesticides on coconuts precisely. A camera attached to the drone sends real time pictures to a mobile app which enables spraying based on the live images.

The expo drew over 3000 students from various schools and universities, as well as members of the general public allowing the team to display their prototype to a large number of audience gaining public and media exposure.

OMKAR EXCELS AT ALL INDIA DANCE COMPETITION

Omkar Naik, Third Year Mechanical Engineering Student won the Gold Medal at the National Dance Sports Competition held on 9th & 10th April 2022 at Town Hall Haridwar.

He was congratulated by the Director, Principal and Head of the Mechanical Department.

INTERVIEW

ALUMNI PROFILE; AN INTERVIEW OF MR. DEDAN ANTAO

Interview and Transcript by Mr. Kelan Barreto

Earlier this year one of our student Mr. Kelan Barreto had the opportunity of interviewing Mr. Dedan Antao, alumni of Department of Mechanical Engineering, Don Bosco College of Engineering Goa, currently working as Packaging Development Engineering with Honda of Canada Mfg. Ottawa, Canada.

Kelan Barreto: Can you tell me something about yourself? Where are you based and what do you currently do?

Dedan Antao: I'm from Vasco and I received my Bachelor's degree in Mechanical Engineering at Don Bosco College of Engineering, Fatorda. Post completion of my degree I worked for two years and then moved to Canada to pursue my Masters's degree in Mechanical Engineering from the University of Ottawa in 2018. Currently, I am working at Honda Canada.

Kelan Barreto: Being part of the first batch, what was student life like at Don Bosco's?

Dedan Antao: I remember a couple of my professors including Prof. Marathe, Prof. Salunke, Prof. Verekar and Prof. Sachin who were very involved with us, especially with things like recruitment. Initially, during our first two years, our classes were not in the new building since that was still being constructed. There were just four classes since we were the first and only batch. Our labs were pretty basic in construction. I think by around the beginning of the 3rd year we started transitioning into the new building which by then was still not entirely complete. Towards the end of the third year, we had pretty much completed the transition and were set up in the new building

Before travelling to Canada I had visited the campus to obtain reference letters from my professors and the campus looked different. Compared to what we had seen during our days the campus looked beautiful even better than the other engineering colleges in the state I'd say. So it's nice to see how far DBCE has come and how it has created a name for itself in such a short time.

Kelan Barreto: What are some fond memories from your days at DBCE? Things you were involved in other than academics?

Dedan Antao: We had some good fun during our days in college, the usual antics, besides which we were actively involved in sports at the university level, during our first two years.

As we were stepping into our third year, we had to give greater focus on our academics, but despite attending classes 6 days a week from 9 to 5, we never really loathed the routine and most of us hung around even after classes ended, unwinding either on the football ground or in the table tennis room.

Kelan Barreto: Seeing as you were a part of the first batch wouldn't you say it was a bit of a risk choosing DBCE as your college of study?

Dedan Antao: Yes, it was risky since it was a new college and there was no guarantee of placements. So yes, it was a leap of faith, and when a college is just starting it can either build and create a good reputation along the way or go sideways. Fortunately for us, it was the former and we even managed to land in top rankings (gold and silver medallists) at Goa University that year in Mechanical and Computers, so yes it was great.

Kelan Barreto: What were your first couple of jobs after graduation?

Dedan Antao: I landed my first job at Marine Electricals, Verna via college placements. They design control panels for big manufacturing companies and also for the Navy. It was mostly a design-oriented job.

I then landed a job at Cipla as a Project Manager, to supervise the construction, equipment to set up the HVAC layout etc. So that was quite a strong learning experience for me as I have never practically worked with HVAC systems before.

I was very keen on pursuing post-graduation and simultaneously was preparing for the admission process. I received confirmation of my admission to the University of Ottowa around October and I was set to start the course the following year in Jan. So between the period leaving Cipla and flying to Canada, I was working at a company of a family friend where they offer third party technicians to maintain HVAC systems at companies like Cipla. So I did it for about 5 months and then moved to Canada to pursue my Master's in Engineering at the University of Ottowa.

Kelan Barreto: Where do you currently work and what's your job role?

Dedan Antao: I currently work at Honda in the role of New Model Packaging Engineer. At Honda Canada, we primarily assemble the Civic and CRV models, and I actually get to see these vehicles 2 years prior to their launch and as a result, there's a lot of confidentiality involved.

My job revolves around ensuring the safety of the various parts during the supply chain process. In most modern cars there are around 30,000 odd parts and at Honda Canada, these parts arrive at the factory from different suppliers via trailers. My job is to design racks/packaging that encases these parts (I work with around 45 parts typically) to ensure that they are not damaged in transit to the supply chain from the docks. So as I said before we are shown the new vehicle 2 years before their launch, and so I get a 2-year time frame to design these racks which are then put into production for the next 5 years of the vehicle production.

It's a really interesting job, and I work in a lab environment testing these racks and approaching fabricators to manufacture these racks/packaging so it's unlike anything I have done before. This job does take a lot of work although I must say I do enjoy it.

Kelan Barreto: What advice would you give to aspiring mechanical engineering students? Is there anything you would do differently if you could go back?

Dedan Antao: My advice would be to take any opportunity to visit manufacturing plants and see how things work and function and that will certainly help you as you make your way to the industry. Theoretical knowledge is definitely important but don't skip out on the practical aspect and just keep trying to learn as much as you can.

Kelan Barreto: What are your plans for the future? What's next with your job?

Dedan Antao: Well, I'm looking forward to completing this project which should be around this August which is when we will launch the new model. After that, I might apply to some other departments within the company. There's this other department called process engineering/production engineering where the cars are tested on a race track at high speed to check for problems in areas such as vehicle dynamics and so on. So I'm looking forward to applying to that department because that's something I'd love to learn but it's not easy and it requires a lot of technical knowledge so let's see!