



THE BEACON

*The official Newsletter of The Department Of Mechanical Engineering,
Don Bosco Institute of Technology*



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HOD'S DESK

DR. N.M. RAO

Welcome to Mechanical Engineering Department at Don Bosco Institute of Technology. Our goal for undergraduate students is to give them a quality education with hands on experience which will be useful to the society at large. Each of our faculty members is ready and well equipped to achieve this goal. Our faculty members with support staffs along with students are continuously engaged in doing research and development activities in different areas like solar, automotives, automation and energy. This has helped our faculty and students to publish papers in different journals and conference proceedings and to obtain funded research projects. Department is also dedicated to transform students to respectable citizens by imparting moral and ethical values. As can be seen, we genuinely care about our students and their future.

Editor's Desk

MS. DEEPIKA GUPTA

A thought that has been enduring in mind when it becomes real; is truly an interesting and exciting experience. This newsletter was one such cherished work that had its roots in the persuasion. It would be a highlight of the various activities and advancements of various activities and initiatives of the department in this year. I am pretty hopeful that the reading would be rewarding to the readers of "The Beacon" as it provides a verdant landscape of technical, art, scientific, literary outpourings that supports teaching and research for the sake of exposure and expansion. I would like to thank all my faculty members for providing me the content for the newsletter. I would also like to take this opportunity to appreciate and thank my fantastic team for their relentless efforts and contribution for successful completion of this newsletter. I am also thankful to the entire management team of the institute, respected Principal Madam and Head of Department for their continuous encouragement and support. HAPPY READING!!!!



Student's Desk

MR. DHRUVRAJ GAMBHIRE

Spending 4 years at DBIT has truly changed me as a person, I have to say it is only down to the amazing friends, teachers and mentors I interacted with at Don Bosco. If it weren't for the constant support and encouragement of my teachers and friends in the Mechanical department, I wouldn't be able to achieve to become the Technical Secretary of DBIT and also get an admit to one of the better universities in the US, University of Illinois Urbana Champaign. I would like to take this opportunity to give some advice, the best thing about DBIT is that you have considerable autonomy, it means that if you have an event you'd like to organize, a project you want to implement or a student community you want to start you can take responsibility solely and work on these things with your creative freedom.



Our teachers, HOD and the Principal are always ready to support us when we have strong initiatives. This enables easy experimentation, so experiment with everything, whether it be drama, debating, organising fests or sports. Find out what you're good at and refine that skill. You can fail at what you don't want, so you might as well take a chance on doing what you love. Question everything relentlessly. Work on as many projects as you can during your time here, interact with your faculty more often. Their domain expertise and knowledge is incredible.

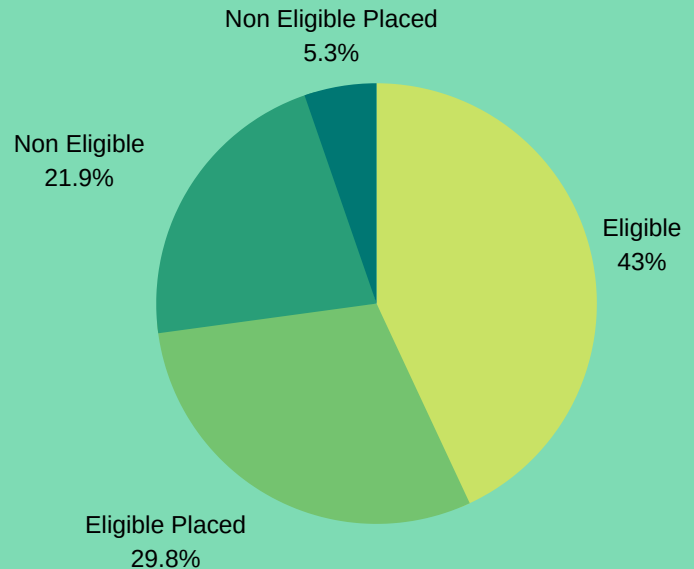
Especially with the E- cell incubator and fantastic initiatives like the Make A Thon organised by the Mechanical department you have a clear path and incentives to implement your projects. It takes just a simple LinkedIn search to realise that our alumni are working at the top companies, studying at the top universities and are doing very well for themselves. Be optimistic, be hopeful. Especially during these difficult times, be brave and be open to your new environment. DBIT has given me friends that will last a lifetime and you too will find your "family" away from home. Inspire them, as they will inspire you, to do good in the world. Most importantly, have fun while doing it.

INGREDIENTS FOR SUCCESS

How we go beyond the curriculum- and the results!

Training & Placements

This year major recruiting companies included **Zycus, Jacobs, LTI, Godrej and Boyce, Dyson, Kruger, Burohappold, sterling and wilson** etc.



Lab Infrastructure

3D Printing lab was established in the year April-2018 with a sole aim of exploring this emerging field in engineering and align students as well as faculty with this trend. As there was no direct class room training course available in 3D Printing in Mumbai region, and fortunately, we at DBIT, Department of Mechanical Engineering had the faculty and capability we started offering the certificate course on 3D Printing. We also provided consultancy for our students to do their BE Projects using 3D Printing facility and also did some consultancy projects for the outside world including BARC Mumbai.

Industrial Visits

Industrial visits offer a great source to gain practical knowledge. Students can observe and learn as to how theatrical concepts are put into action, thereby aiding their practical learning. Students are exposed to the real working environment and shown how things are done in an organisation. The Student Chapter of the Mechanical Engineering Department, ISHRAE, conducted Industrial Visits to 4 well known companies :Swegon Blue Box Pvt Ltd. on 7th September, 2018 where 37 students had visited the company.Mitsubishi Electric India Pvt. Ltd. on 28th September,2018 where 52 students visited the company in 2 batches, accompanied by Faculty Coordinator, Prof Cleta Pereira.Zeco Aircon Ltd. on 6th October, 2018 where 12 students had visited the company, accompanied by Faculty Coordinator, Prof Cleta Pereira.Bluestar, Royal Aircon & Airpro Engineers on 5th January, 2019 where 10 students had visited the company.

Topper's List

Vishal Achari
(9.85)

Ruchit Naresh (9.8)

Rahul Kadam (9.77)

4th semester

Rupesh Sawant
(9.92)

Viraj Jarande (9.88)

Ayaaz Mohammad (9.83)

6th semester

Harshal
Deshmukh (9.8)

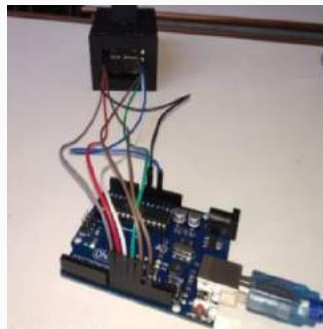
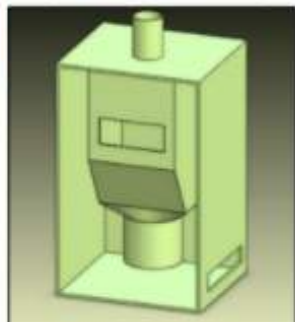
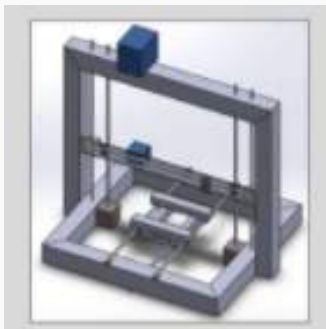
Parth Keswani & Milind
Khamkar (9.44)

Siddhay Maharao (9.4)

8th semester

AAC Meet

The Academic Council Meet of the Department of Mechanical Engineering was held on 19 January 2019 at 10 am. Topics such as the department's SEAD journey, placement details, research group progress and departmental research were discussed.



R&D Projects And Community Development Projects

- R&D projects: Department encourages faculty to do research and development in order to enhance the research skills and project quality in the department. Thus, every year faculty apply for university minor grants. There are a wide variety of research projects benefiting the community, product development, etc.
- Community Project: Faculty members undertake projects for community development either independently or in collaboration with other faculty members or students of DBIT.
- Students Isha Keskar, Faraaz Ahmed Shaikh and Parth Keswani worked with Prof. Deepika Gupta on a device that detects arsenic in water samples using Image Processing.
- Principal Dr. Prasanna Nambiar worked with students Ambesh Singh, Shantanu Tekade, Kaustubh Morye and Shraddha Khandare to design a piece of equipment to be used for cleaning silt and waste from small drains.
- Prof. Johnson Nellisery guided a group of final year students Sanket Choudhary, Ashley D'Silva, Joy Nadar and Jino Thoppil, who together designed and fabricated a miniature incinerator to dispose of menstrual waste.
- Prof. Madan Kulkarni mentored students Rohan Gangar, Karan Zope, Aaron Fernandes, Clinton Fernando and Sairaj Gawkar in building a compact agricultural machine to reduce efforts required by the farmers as well as cost for those who could not afford vehicles like the tractor available in the market.

EXPANDING OUR HORIZONS

Incorporating co-curricular activities that make well rounded engineers

FACULTY ACHIEVEMENTS

Dr. Yogesh Padiya, Prof Sandeep Sabnis, Prof Shreeprasad Manohar, Prof Juned Ahmed, received a grant of Rs. 1,25,000 from Mumbai university. The faculty worked on the projects along with a group of final year students. There are a good number of publications from faculty along with their group of final year students. This year six papers are published in refereed international conferences, eight in international journals. Thus, publishing the work along with students inculcates confidence and also students are trained to write a good quality research paper.



SEAD JOURNEY

This year the institute embarked a new journey of SEAD (Strategy to Excel, Achieve & Deliver) under the PrePearl Training Development Pvt Ltd. The journey helped the departments to focus on the key areas required to develop and also frame the vision statement of the department. The journey helped the department to identify strategic areas which can help better functioning of the department and will benefit the students in every aspect. We are very thankful to our mentor Dr. Krishnamoorthy for his continuous guidance and valuable inputs and also to our facilitators Mr. Leslie D'souza and Pearl D'Souza for their support.

MOU (SVERI)

The MEMORANDUM OF UNDERSTANDING (MoU) between Don Bosco Institute Of Technology, Premier Automobiles Road, Kurla (W), Mumbai- 400070 and Shri Vithal Education and Research Institute's College of Engineering, Pandharpur for Academic and Research Cooperation, is signed on the 23rd day of May 2019. The main objective of MoU was to explore the research in the area of microfluidics and develop the Advanced Micro-Machining lab in the department. A team of faculty from the department had visited the Institute to understand the area of advanced machining and discuss MoU.



XANTHIUM

A 17 member team consisting of Mechanical Department students participated in the Quad Bike Design Challenge held in Hyderabad. Some last moment roadblocks with the electrical and braking systems were experienced, due to which they were unable to succeed in the Dynamic Events, but the bike bagged the Runners Up prize for best CAE.



ISHRAE

Mr. Mitesh Joshi of BE Mechanical Engineering served as the President of ISHRAE DBIT for AY 2018-19. ISHRAE DBIT organised several Industrial Visits to various well known companies like Bluestar Ltd. and Mitsubishi Electric India Pvt. Ltd. Student members also visited schools in Thane and exposed them to interesting science experiments. ISHRAE DBIT students members also benefited from attending events like ISHRAE Job Junction and ACREX India.



PTM

Parent Teacher Meet was held on 8th September. The main objective of the meet is to discuss the academic performance, attendance, initiatives and best practices of the department. One to one interaction is done with the parents by respective class teachers. Parent feedback is taken at the end of the meeting.

GATE STUDY CIRCLE

Department introduced a new study circle to facilitate students who aspire to crack GATE exams and are interested to pursue their masters degree from IIT, NIT or serve PSU companies. From 2nd July 2018 the department organised a GATE study circle. The resource persons consisted of faculty members from DBIT, including principal Dr P Nambiar, Head of Mechanical Department Dr N M Rao, Dr Revathy S, Sandeep Dasgupta, Dr S Pawar, Pranjalee K, Satyanarayan Nagula, Sachin Sheravi, Johnson Varghese, Clea Pereira, Madan Kulkarni, Hemant Hogade, Shreeprasad Manohar, and Mahesh Rajwade. 27 candidates registered for the course out of which 2 were from other college.

STUDENT COUNCIL



Rohan Kamath: Cultural Secretary
Rohan Gangar: Treasurer
Dhruvraj Gambhire: Technical Secretary

BEYOND THE BOOKS

Work hard, play harder!

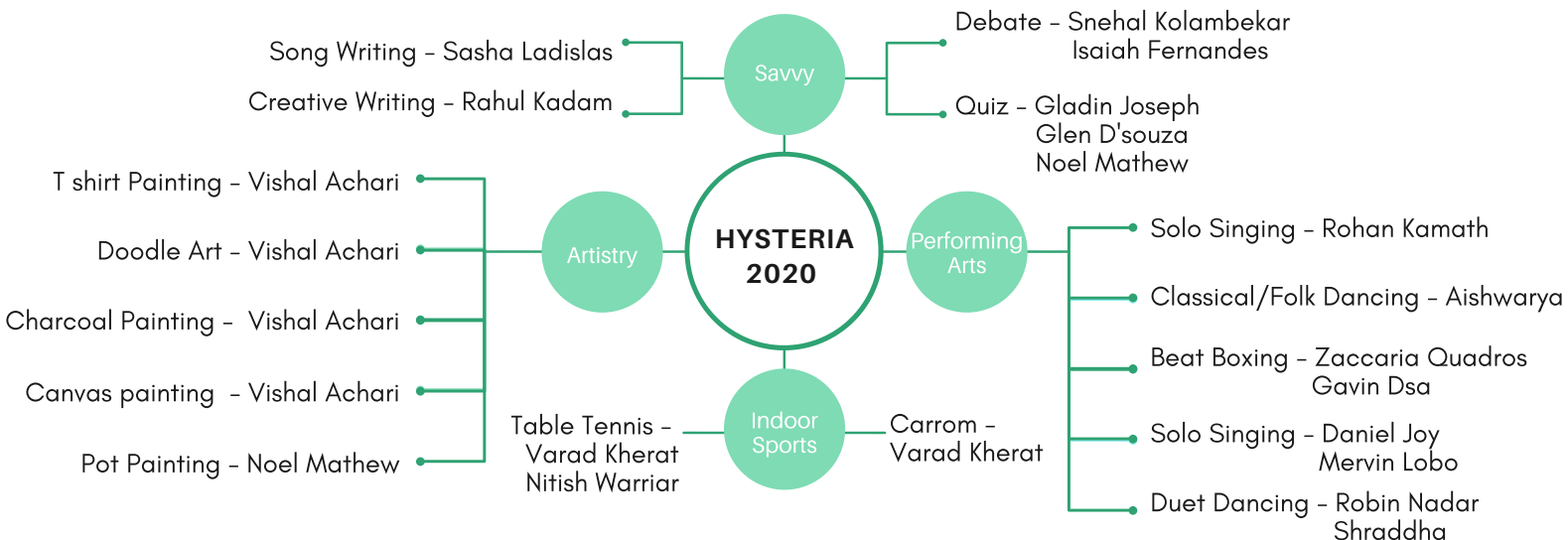


VORTEX

Vortex 2018 was held on the 26th of October, from 2 pm to 6 pm, with the theme of Arabian Nights. The event was opened with a band performance by the students, and several energetic dance performances put up by SE, TE and BE students. The faculty members weren't far behind with their equally enthusiastic performances. The Xanthium Racing team was felicitated for its year round accomplishments, and the event was closed with a vote of thanks by Dr. Rao, followed by a jam session and refreshments for the students.

HYSTERIA

Mechanical Engineering department students shone in DBCL's annual cultural fest, Hysteria this academic year. They bagged winning positions in various events of categories like dance, singing, beatboxing, song writing, art, quizzes, debates, and creative writing. The department's teams of both male and female students won several indoor and outdoor sports competitions in Hysteria, such as rink football, tug of war, and multiple athletic events, among others.



INTER COLLEGE ACTIVITIES

Mechanical Engineering students participated and won accolades in several inter college sports and cultural competitions both in Mumbai as well as across the country. Students emerged victorious at events like beatboxing, street play, basketball and shot put, held at Sophia's College, VJTI, SPTI, TSEC, Vidyalandkar Institute of Technology, and IIT-Kharagpur.

ZACCARIA JOSHUA QUADROS

- S.M Shetty college
- Hinduja college
- (charni road)
- Shankar Narayan college (Bhayander)
- Thane college
- Hinduja college
- SN college Bhayandar
- KC college
- SIES (Sion)
- Vidyalandkar institute of technology

AISHWARYA WARKE

- Talent Show (IIT kharagpur- spring fest)
- Nukad natak street play competition (Atharva college of engineering)

ROHIT PATIL & KASHIF SARGORUH

- Nukad natak street play competition (Atharva college of engineering)

RANGOLI (SECOND PRIZE)

- Dsouza Glen
- Gladin Joseph
- Ashley Dcruz
- Noel Mathew

ANSARI SALMAN AMIN

- Beatboxing (V.G Vaze Kelkar college)

SAYANTHAN MAHATO

- What are words worth? (Sophia)

JOEL NAZARETH

- INTERcollege
- Technical (E-cell)
- CADDICT (3D design competition)
- Fr concenciao Rodriguez institute of technology, Vashi
- First prize

DBPL

In DBPL 2018, both first and second place winning teams, The Kom-back Kings (Ethan Noronha, Smith Carvalho, Calvin Fernandes, Joshua Almeida, Aylmer Gonsalves, Veril and Mark D'Silva) and Spartans (Akshat Choudhary, Nitin Singh, and Troy Inchiparambil), consisted of students from the Mechanical Department.

E-CELL

The Entrepreneurship Cell of DBIT conducted two competitions: Brand Challenge and Rule the Mind. Both were dominated by students from the Mechanical Department: Lokesh Gaigande and Varad Dharap placed first in both competitions, and the second prize for Rule the Mind was bagged by Rohan Menezes, Balajaganath Nadar, Axin Samuel and Ajay Victor.

“

HAPPINESS IS A STATE OF ACTIVITY

- ARISTOTLE

”



HIGHLIGHT REELS



माझ्या मराठी मातीचा, लावा
ललाटास टिळा, हिच्या संगाने
जागल्या, दरयाखोऱ्यांतील शिळा
- कुसुमाग्रज



Marathi Club!

The Marathi Club of Don Bosco Institute of Technology was established in 2018 to bring the Marathi-language speaking group of people in the college under one roof. The primary purpose of the club is to develop the imaginative skills of students by encouraging them to give free expression to their ideas through various performing art forms such as Drama, Dance, Singing, etc. in Marathi. Hence, mechanical department faculty members Mr. Swapnil Gujarathi and Mr. Shreeprasad Manohar along with Mechanical Department students Rahul Jagdale, Prasad Tone, and Aishwarya Warke, set up the club with 30 student members. The club was established with an event called "Aarambh", with students putting up drama, singing, stand up and Lavani performances. The second event, "Jagdamb" was based on the life of great Maratha warrior king Chhatrapati Shivaji Maharaj and depicted the whole life of the personality through Dramas and Dance forms. Other than these main events, the club has organized several small cultural events such as Marathi Open Mic and several online events.

INNOVEX

"The only way to discover the limits of the possible is to go beyond them into the impossible."

-Arthur C. Clarke

Innovex is an exhibition of the BE students' year long efforts into a process that began with ideation, brainstorming and continuous monitoring, culminating in well drafted solutions and the realisation of their dreams to become competent engineers. Since its origin, Innovex has been a platform for the students to display their talent and creativity in designing solutions to challenging problems.

This academic year, the exhibition was held on 4th and 5th April, 2019. 39 stalls were set up in the walkway from 'A' to 'C' wing near the ground for Mechanical Engineering Department projects and poster displays. Projects were categorised in 5 categories:

i. Community development ii. Sustainability iii. Product development iv. Research v. Laboratory Development

Judges for Mechanical Engineering Department:

- Mr. Richard de Souza- CEO at Mahindra Business Solution: Inaugural Chief Guest
- Mr. Ajay Pillai - Senior Vice President, Thyssenkrupp India Private Limited
- Mr. Kasar Sarjerao Prakash - Project Manager, Tata Consulting Engineers Limited
- Prof. M. B. Bhide - Retired Professor
- Prof. Dilip Purushottam Manohar - Retired Professor

Principal Dr. Prasanna Nambiar appreciated the efforts put by all project teams and the guides and wished the students great success. The Rector -DBCL, Fr. Colbert da Silva and Executive Director DBIT-MMS, Fr. Mario Vaz gave their views and encouraged the students to participate and give their best for Innovex 2019. Two students Ms. Isha Keskar and Mr. Rayan Lobo from the BE Mechanical Engineering Department shared the journeys they undertook with their teams to complete their respective projects. Prof. Cleto Pereira, Project Coordinator of the Mechanical Engineering Department, announced the winners of the mechanical engineering department.



COMPACT AGRICULTURAL MACHINE (Prof. Madan Kulkarni)

- Mr. Rohan Gangar
- Mr. Karan Zope
- Mr. Aaron Fernandes
- Mr. Clinton Fernando
- Mr. Sairaj Gawkar

OPTIMIZATION OF SOLAR COOKER (Dr. Prasanna Nambiar)

- Mr. Myron Dsilva
- Mr. Ganesh Gupta
- Mr. Chinmay Jhadav
- Mr. Paulson Philip



DETECTION OF ARSENIC IMPURITY IN DRINKING WATER (Prof. Deepika Gupta)

- Mr. Parth Keswani
- Ms. Isha Keskar
- Mr. Faraz Ahmed Shaikh

DRAINAGE MANAGEMENT USING DESIGN THINKING (Dr. Prasanna Nambiar)

- Mr. Ambesh Singh
- Mr. Shantanu Tekade
- Ms. Shraddha Khandare
- Mr. Kaustubh Morye



DETECTION OF FLUORIDE ION IMPURITY IN DRINKING WATER (Prof. Deepika Gupta)

- Mr. Emmanuvel Joseph
- Mr. Arnold D'souza
- Mr. Kinnaird Fernandes
- Mr. Daniel D'Souza

Dear readers, we hope you cherish this edition of the newsletter. I would like to thank everyone who has immensely worked hard towards this edition to make it successful.

The Editorial Team

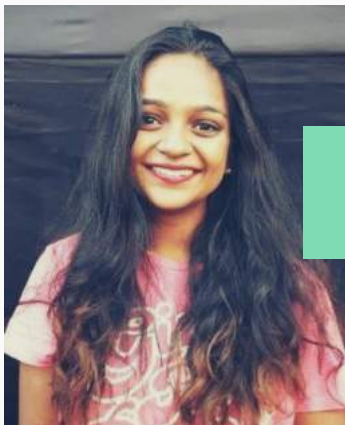


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