



AAROHAN

NEWSLETTER

DON BOSCO INSTITUTE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

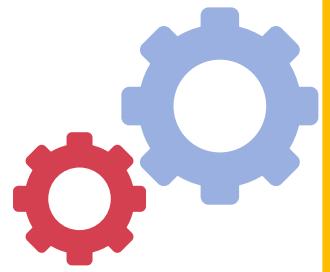
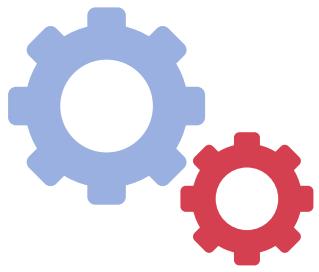


2023–2024



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MESSAGES



FR. CHARLES ANTHONY, SDB
ASST. DIRECTOR

It is with pride and admiration that I reflect on the achievements and strides made by our Mechanical Engineering Department. Our journey this past year has been a testament to the creativity and innovation that define human ingenuity.

Creativity is a unique ability that characterizes us as human beings. Throughout history, we have marvelled at the various creations born from our imagination and effort. Mechanical Engineering embodies this spirit, continuing the special enterprise of innovation and tool creation. The exhilaration of using tools to create new tools is a cornerstone of our discipline, and at Don Bosco's we provide our students with the opportunity to explore and discover this thrilling experience.

As Mechanical Engineers, we stand at the forefront of creation and innovation, leading the charge in developing solutions that shape our world. This unique position empowers us to wield significant influence and control, a responsibility we embrace wholeheartedly. Our commitment extends beyond mere creation; we strive to build and create tools that serve humanity and protect our planet. In this spirit, our department is dedicated to fostering sustainable practices and innovative solutions that contribute to the greater good.

I would like to extend my heartfelt congratulations to the entire Mechanical Engineering Department for their dedication, hard work, and achievements over the past academic year. Your efforts have not only advanced our department but also upheld the values and vision of Don Bosco's. As we look ahead, I am confident that the coming year will bring even more exciting and creative ventures.

Wishing you all the best for a wonderful and productive year ahead.

MESSAGES

PRINCIPAL'S DESK



DR. SUDHAKAR MANDE
PRINCIPAL, DBIT

It is with great pleasure that I extend my warmest greetings to all the members of the Mechanical Engineering Department and the readers of this edition of "AAROHAN". This newsletter serves as a testament to the vibrant academic and co-curricular activities that define our Mechanical Engineering Department at Don Bosco Institute of Technology, Mumbai. The field of Mechanical Engineering has always been at the forefront of innovation, shaping the world with groundbreaking advancements and practical solutions to complex challenges. Our department, with its dedicated faculty and industrious students, continues to uphold this legacy of excellence. The projects, research, and achievements showcased in this newsletter are a reflection of our commitment to pushing the boundaries of knowledge and technology. I would like to take this opportunity to congratulate the faculty members for their unwavering dedication and to the students for their enthusiasm and hard work. Your contributions are the cornerstone of our success and the driving force behind our department's accomplishments. As we move forward, let us remain committed to our mission of fostering innovation, nurturing talent, and contributing to the betterment of society. Together, we can achieve greater heights and continue to make a positive impact in the field of Mechanical Engineering.

HOD'S DESK

It gives me immense pleasure to present you the annual newsletter of Department of Mechanical Engineering for AY 2023-24. We, the faculty and staff members, are committed to impart a quality education with hands on experience to our students and ensure holistic development of students through Three-track Program viz. Academic, Aspirational & Wellness. We are making conscious efforts through student-centric & student-driven activities so that students would realize their passion over the span of four years while still they are on our campus. For this purpose, we have various student chapters & clubs such as MadGears Motorsports Club, ISHRAE Thane student chapter, Energy club, and Automation & Robotics Club. The efforts and activities through these clubs are aimed at improving student's employability and transforming them into responsible citizens. We believe that every engineer must contribute towards deriving sustainable solutions that can solve the industrial as well as societal problems and that the creative and innovative ideas are often generated at educational level by the young, enthusiastic and creative minds. Nowadays, the Start-up and entrepreneurship are buzz-words in India and in line with this, we endeavor to instill entrepreneurial mindset amongst our students leading to paradigm shift in students' attitude from being a job-seeker to becoming a job-creator.



DR. PRADEEPKUMAR SURYAWANSHI
PHD (MECH), IIT BOMBAY

STUDENTS' MESSAGES

"I am grateful to the mechanical department for teaching me to push myself and overcome challenges, one of the many things I have learned. Supportive professors and staff sparked my curiosity and deepened my understanding. This department has given me many memories to cherish for a lifetime. The encouraging environment boosted my confidence and made my journey as a mechanical engineering student transformative. I am glad to be part of this incredible department."



**SHAUN CHARLES
PINTO**

Attending Don Bosco Institute of Technology (DBIT) has been a transformative experience for me. Over the past four years, I immersed myself in the vibrant and supportive community, where I made lifelong friends and learned from incredible professors. The environment at DBIT fostered my curiosity and passion, and I always felt encouraged to explore new ideas and push my boundaries. My time at DBIT was filled with unforgettable memories and countless moments of growth. The sense of amity and the shared drive for excellence among students made every challenge manageable and every success even sweeter. I am deeply grateful for the opportunities and experiences that DBIT provided, shaping me into a more confident and capable individual.

My exceptional experience here led to my placement at L&T with a 6.5 LPA package. The academic environment skillfully blends theoretical & practical learning, supported by knowledgeable faculty who guided my engineering development. Dynamic campus life, modern facilities, and diverse extracurriculars enriched my overall growth. The Training & Placement Cell was pivotal, with their training sessions, resume workshops, and mock interviews. DBIT has laid a solid foundation for my career, and I highly recommend it for its quality education, dedicated faculty, and excellent placement support.



YASH KHAMKAR



**PRASAD BALRAM
DAS**

OUR PRIDE

Strong academic is the backbone of the institute. Our department strives hard to maintain it. Many students of the department have achieved distinction and the top among them are listed.



BEST OUTGOING STUDNET

**SHAUN CHARLES
PINTO**

ACADEMICS EXCELLENCE

**PRASAD BALRAM
DAS**



BEST SPORTSMAN

SHUBHAM PALANDE



TECHNICAL EXCELLENCE

DIXITA YADAV



BEST CULTURAL

YASH KHAMKAR

TOP ACADEMIC PERFORMER

Strong academic is the backbone of the institute. Our department strives hard to maintain it. Many students of the department have achieved distinction and the top among them are listed.

FINAL YEAR (BE)



MOHD ANAS MOHD SHAHID

SGPA 8.82



MANE SAMEEP SHASHIKANT

SGPA 8.77



PATEL ATHARVA RAVIKANT

SGPA 8.64

THIRD YEAR (TE)



VILAS KODAM

SGPA 8.77



MUQRI REHAN

SGPA 8.64



ANKIT KSHIRSAGAR

SGPA 8.64

SECOND YEAR (SE)



ARYAN CHAURASIA

SGPA 8.92



KHAN AHMED AKRAM

SGPA 8.54

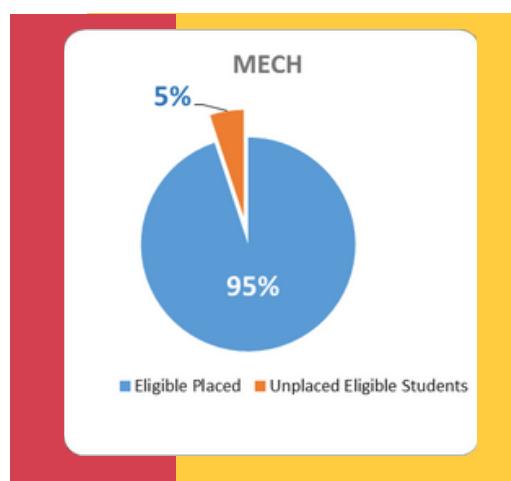
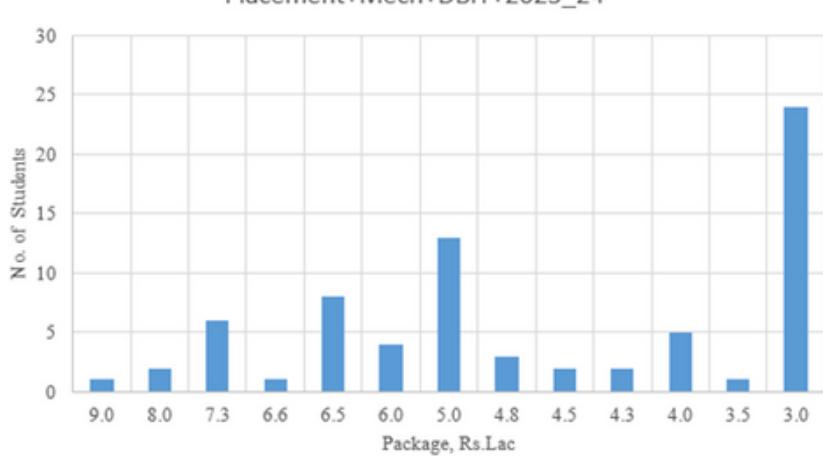
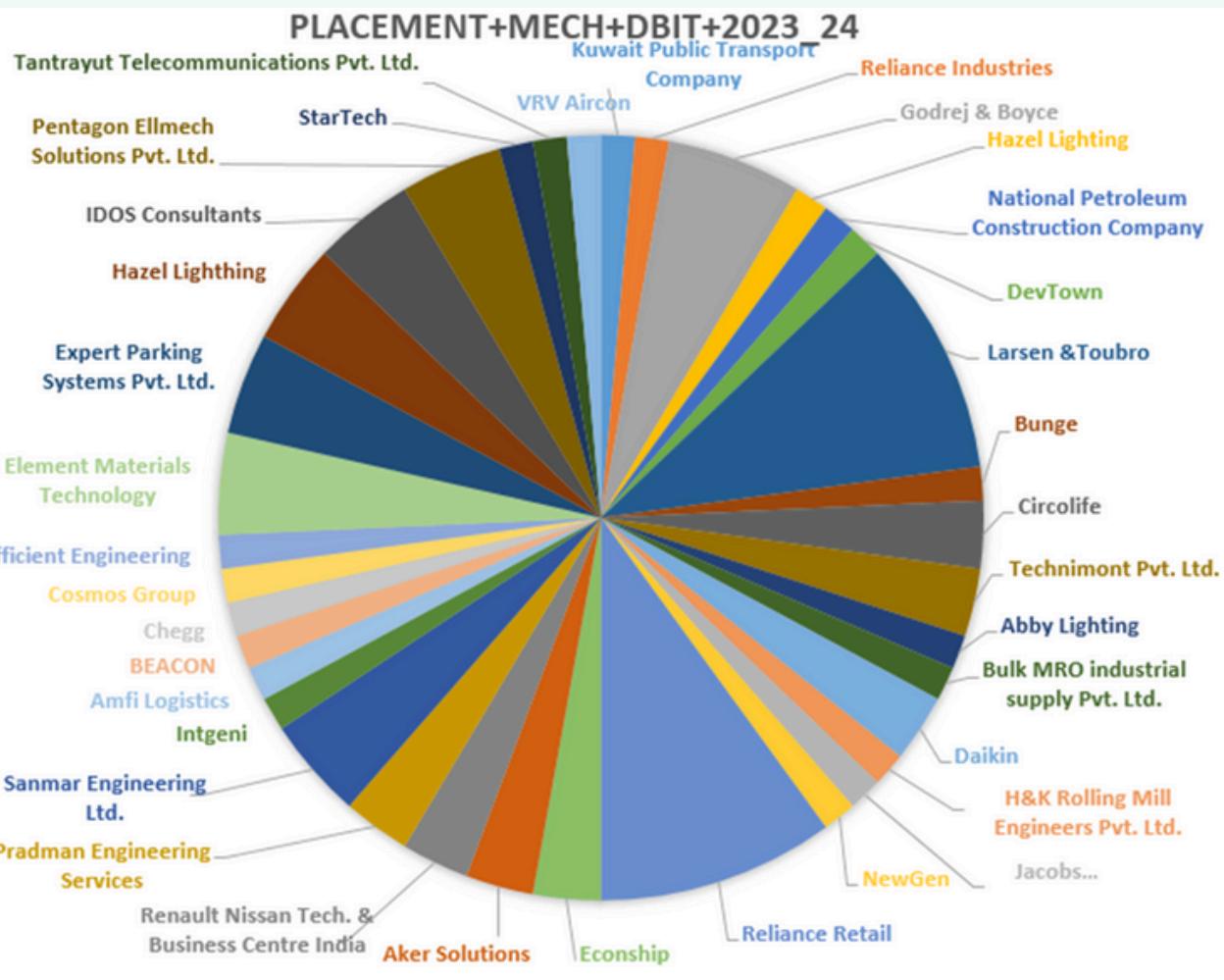


MATTHEWS VEDIKA

SGPA 8.50

PLACEMENT

The effort of the department in Academic, Co-curricular, and extracurricular activities reflects the recruitment and overall development of students. The department continues to retain its best efforts. Record breaking **95%** students were placed at repute industries and few have opted for higher studies.



INTERNSHIP

The training and placement team also takes every effort to provide internships to students in the best industries. This helps the students to upgrade their industrial knowledge and help them to understand the ongoing process and latest technologies. More than **26** students have availed themselves of internships in core mechanical-related companies.

Company	Student Name	Year
Mazagon Dock Shipbuilders	Abhishek Rane	BE
Kalyan Diesel Loco shed	Ashish Desai Ruturaj Kate Sujit Sahu Antony Jeniston Parminder Singh Vishal Basutkar Dhruv Kene	
Ceamtronics	Aniruddh Jadhav Atharv Gurav	
Fillpack Technology	Pravin Shinde Shehbaz Mukadam Nagori Hassaan	TE
Godrej & Boyce	Atharva Dukle	
TATA Motors Pune	Harsh Patil Sanhita Koli	
Morris Garage MG Kalachowki	Manas Rawool	
ISRO	Dixita Yadav	
IOCL	Nirav Prabhu Nishant Suryavanshi Atharva Prabhu	SE
Royal Enfield Nerul	Kene Dhruv Desai Anish Kate Ruturaj	
JSW (Salav)	Rayyan Nuraji	
SAF Engineering Sewree	Mohd Ali Karbhari	

Outreach Activities

Apart from internal activities, department also educated school children. Most of the activities were sponsored by CSR department of Larsen & Toubro and was done in collaboration with St. Joseph's Technical School.

MAKE3D PROGRAM

The program was conducted between 28th Nov to 15th Dec'23. The program was conducted by Prof Shreeprasad Manohar, Prof. Swapnil Gujarathi & Prof. Hemant Hogade. Total 23 students from Shishu Vikas Mandir English Medium School have participated. The objective of course called "Build 3D course" is to familiarize students with CNC (Computer Numerical Control) machines and equip them with the skills to create intricate designs using Fusion 360 software.



BUILD3D PROGRAM



The program was conducted between 22nd July to 30th Sep'23. The program was conducted by Prof Shreeprasad Manohar, Prof. Swapnil Gujarathi & Prof. Hemant Hogade. Total 21 students from Shishu Vikas Mandir English Medium School have participated. The objective is to introduce concept of 3D Modeling, proficiency in Fusion 360 Software, understand the related skillset required for industry and confidence building for the above.

INNOVATION AND DESIGN THINKING PROGRAM

The program was conducted between 28th Nov to 15th Dec'23. The program was conducted by Prof Shreeprasad Manohar, Prof. Swapnil Gujarathi & Prof. Hemant Hogade. Total 23 students from Shishu Vikas Mandir English Medium School have participated. The objective of course called "Build 3D course" is to familiarize students with CNC (Computer Numerical Control) machines and equip them with the skills to create intricate designs using Fusion 360 software.



Outreach Activities

K12 ACTIVITIES

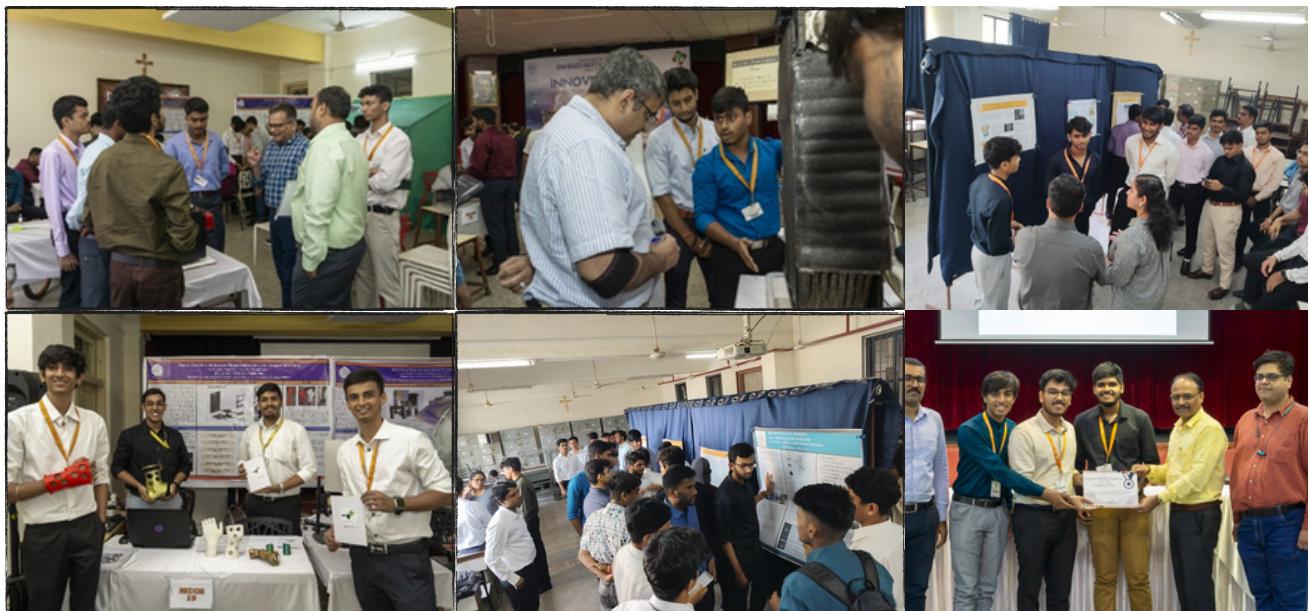
Other outreach activities were conducted under ISHRAE student chapter, for the children of nearby school

K12 Activity	Date	Participants	Objective
Drawing Competition	4/8/2023	Mumbai Utkal School	to know about Go Green, Save Water, and Air Pollution
Science Experiments	26/08/2023	Nearby schools children	to understand the concept of pressure
Elocution Competition	26/08/2023	Mumbai Utkal School	Importance of Education, Digital India, Unity in Diversity, Child Labour.
Science Land	8/9/2023	Mumbai Utkal School	Scientific principles in everyday life
Alphabets and Numbers for Kindergarten Students	25/09/2023	Mumbai Utkal School	To recognize simple words and familiarize themselves with the concept of print
Vedic Maths for Primary Students	6/10/2024	Mumbai Utkal School	to perform calculations with greater speed and accuracy
Introduction to the world of AI	12/10/2024	Mumbai Utkal school	to explore real-world applications of AI in various domains
Fun with Science	11/12/2023	St. Michel School	to encourage students to ask questions, make hypotheses, and engage in the scientific method to develop problem-solving and critical thinking skills
Automation Boon or Bane	11/12/2023	CES's Micel High school,	to improve efficiency and productivity, to encourage Innovation and Technological Advancement
Creative Thinking and Innovations	12/12/2023	St. School, Kurla	to encourage students to encourage imaginative thinking, develop problem-solving abilities and build spatial awareness as kids visualize and assemble
Eco-Friendly Crafting	14/12/2023	St. School	to use Recycled Materials, upcycling and minimizing packaging
English Grammar	13/02/2024	Mumbai Utkal School	to understand basic concepts of English grammar
Archimedes Principle	5/3/2024	Mumbai Utkal School	to understand basics of Archimedes principle

INNOVEX & INNOQUEST

Innovex and Innoquest are the respective platform provided by the institute for the BE and TE & SE students, to showcase their year-long effort in their projects. This helps them in open-ended discussions and deliberations for improving the scope of the project. During 2023-24, BE students have exhibited their actual working model projects while students of SE and TE have presented their skills through poster presentation. The winners of BE projects competitions during Innovex are displayed herewith.

Position	Name of the Student	Project Title	Guide
First	Yadav Dixita Arvind Sudha	A Novel 3 Axis Scissor Kinematics based Motion System with Double Universal Joint Configuration.	Prof. Swapnil Gujarathi
	Mane Sameep Shashikant		
	Veer Vinayak Arun Asmita		
	Salunke Ritesh Rajan Reema		
Second	Pinto Shaun Charles Anita	Fracture Cast 2.0: A Multipurpose Photogrammetric Device for Advanced 3D Printing	Prof. Shreeprasad Manohar
	Parmar Dev Janak Vasanti		
	Ved Neel Ajay Krishna		
	Panchal Priyank Rajesh		
Third	Surpal Gagandeep Singh	Conversion of Plastic Waste into Fuel, a Sustainable Approach	Prof. Madan Kulkarni
	Panesar Harjinder Singh		
	Chogale Saurabh Sudhakar		
	Mahajan Aryaman Manoj		
Consolation	Gupta Vidhu Shekhar	Reimagining Women's Mobility in Urban Settings	Dr. Prasanna Nambiar
	Viraj Vidyadharan Suja		
	Chavan Neel Sanjay		
	Pratham Sandeep Walgnde		
Consolation	Dwivedi Anuragdhar Shaktidhar	Finite Element Modelling of Steel Incinerator Containing Biomedical Waste	Prof. Johnson Varghese
	Gangishetti Shivanth Veeresham		
	Yalgi Abhishek Rewappa		
	Patankar Suyash Pandurang		

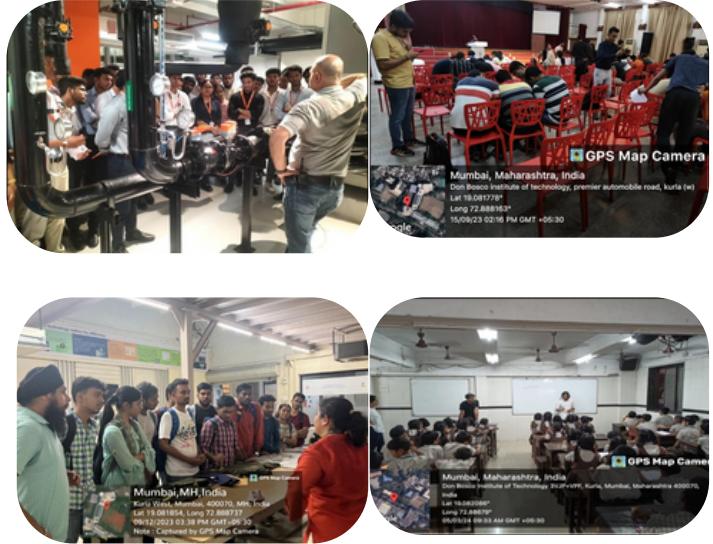


DEPARTMENT CLUBS

As a part of a three-track program, apart from academic needs, wellness and aspiration attributes being identified, The department has ISHRAE, MESA, Automation & Robotics (AAR), and Energy clubs. These clubs help the students to understand various aspects of Mechanical Engineering and provides a platform to further excel in their respective domain.

ISHRAE

- Participated for ISHRAE Installation ceremony on 15/07/2023 at A.P.Shah Institute of Technology
- Conducted Seminar on Marine Engineering on 4th August
- Arranged Walk through Around of Refrigeration Systems on 12th September
- Conducted Tech Quest Event (Treasure hunt) on Engineering Day 15th September
- Arranged Expert Talk on "Technical Advancement of field devices in HVAC Industry" by M/s. Belimo Professionals on 27th September'23
- Arranged an Industrial visit at M/s. BELIMO Industry on 13th October'23
- Organized a Webinar on "Women in Leadership – Achieving an Equal Future" on 16th March.



MADGEARS MOTORS-SPORTS CLUB



- Organized Inauguration and Unveiling of Go-kart event
- Participate at National Level Formula Kart design Challenge FKDC Season 7 competition at Coimbatore between 29th Oct'23 to 2nd Nov'23
- Participate at National level Go Kart Design Challenge (GKDC) Season 11 competition at Coimbatore between 15th Feb'24 to 19th Feb'24
- Organized workshop on "RevvUp: From Theory to Track", which dealt with theory to track at Colosseum 2024 between 26th to 28th Feb'24

AUTOMATION AND ROBOTICS CLUB

- Exhibition on IoT Lab Course MEL802 29th and 30th April 2024.

ENERGY CLUB

- Created YouTube content on various technical topics



ACHIVEMENTS OF FACULTY

The department has a well-blended mixture of faculties. Many of them are not only highly qualified from institutes of repute but also have rich industrial exposure. Few contributions of faculty in research, consultancy, and expert lecture are



Dr. Pradeepkumar Suryawanshi

Published papers on

- Suryawanshi, P., Singh, R., and Gupta, A. (2024). A mass spring model applied for characterizing mode_I fracture in orthotropic materials. *Journal of Mechanics of Materials and Structures*, 19(2):213–233.
- Suryawanshi, P. (2024). A mass spring model applied for simulation and characterization of behavior of composite structures. *Journal of Mechanics of Materials and Structures*, 19(3):397–418.
- Suryawanshi, P., Genetic algorithm based approach for identification of mesh topology of mass spring models for simulation of deformable objects. (Manuscript under Review at *Journal of The Institution of Engineers (India): Series C (IEIC)*)

FDP Attended

- Two Week FDP on Entrepreneurial Essentials: Elevate Your Entrepreneurial Prowess from 22 January -6 February, 2024
- The Entrepreneurship Gyan' (TEG), "Romancing the Balance Sheet" by Dr Anil Lamba (Entrepreneur) on 23 March 2024
- The Entrepreneurship Gyan' (TEG), "Entrepreneurship & Innovation - My Journey" by Dr Sharad Saraf (Entrepreneur, Chairman IITB & IIT Jammu) on 06 July 2024
- Indo-German Research Day 2024 by DWIH New Delhi on 28 May 2024
- Masterclass on "Valuation of Startups," by Ankur Mittal (Co-founder of IPV) on 29 Jun 2024

Organised Activities and Events

- A talk by an entrepreneur Mr Siddhesh Surve on 15 Feb 2024
- Delivered a talk for FE orientation program
- Talk by Team Shunya IITB on 29th March 2024
- Spark Tank pre-event on 25 Feb 2024
- Spark Tank-2024 on 26 Feb 2024
- Mentoring Sessions for selected teams from Spark Tank by Entrepreneur Mr Hitesh Hiran on 22 March 2024
- IIC Regional meet 2024 at Pillai HOC College of Engineering & Technology Rasayani on 06 Feb 2024
- Student participation in E-Summit at IITB On 3-4 Feb 2024
- Networking with FE's
- Visited Shubham Tanks Pvt Ltd in Dec 2023



Prof. Shreeprasad Manohar

Published papers

- Manohar, Shreeprasad S, Chinmoy Das, and Vikramjit Kakati. "Bone Tissue Engineering Scaffolds: Materials and Methods." *3D Printing and Additive Manufacturing* 11, no. 1 (2024): 347-362.
- Manohar, Shreeprasad S, Chinmoy Das, and Vikramjit Kakati. "A Review of Materials Suitable for tissue engineered bone scaffold." *Emerging Technology for Sustainable Development Select Proceedings of EGTET 2022 1061* (2023): 19.
- Conducted Larson and Turbo's CSR funded program "CrEAST" for school childrens



Prof. Mahesh Rajwade

Conducted 60 hr duration value added course on "Piping engineering" between May'23 to August'23. About 17 students have participated.

Prof. Swapnil Gujarathi

Conducted Larson and Turbo's CSR funded program, "CrEAST" for school childrens



Prof. Nilesh Gaware

- Received copy right on "Automatic Car Wash System using Arduino"
- Working as convenor for "Madgear Motorsport Club"

Prof. Johnson Nellisery

- Received copy right on "Drone for Plucking Fruits and Spraying Pesticide"
- Delivered a Guest lecture on "Robotics and Automation" for Godrej & Disha's digital laboratory on 18/01/2024.
- Conducted workshop "Introduction to Nano and Micro Drones" for Godrej & Disha's digital laboratory on 14/06/2024.
- Conducted workshop "Introduction to Robotics" for Godrej & Disha's digital laboratory on 14/06/2024.



Prof. Hemant Hodage

- Published a paper on International conference on "An Investigation of Threaded Insert Performance in Additively Manufactured Parts" At IIT (BHU) Varanasi
- Conducted Larson and Turbo's CSR funded program "CrEAST" for school childrens

CO-CURRICULAR AND EXTRA CURRICULAR ACTIVITIES

- Conducted Value added course "Innovation Next" for SE students.
 - Almost 50% project groups come up with innovative ideas, while 90% project groups demonstrated their concepts through models
- Guest Lecture on "Modern Trend In Nuclear Power plant", by Mr Sandeep Dasgupta on 19th Jan'24
- Guest Lecture on Aspiration to Realization for becoming an entrepreneur, by Jeetendra Janpandit
- Organized "Vortex23" a Department Function Day
- Two students were offered 2 months internship at Kruger Ventilation Industries (India) Pvt Ltd,
- MoUwith TSSIA, Thane small scale industrial Association and COSIA
- MoUwith Navayuvak Entrepreneurs Mumbai
- MoUwith SP-TBI Mumbai
- Guest lecturer conducted on session on Robotics and Automation on 18/01/2024
- Conducted an Industrial visit at M/s. Chirag Ice Factory Pvt. Ltd, Turbhe for TE students

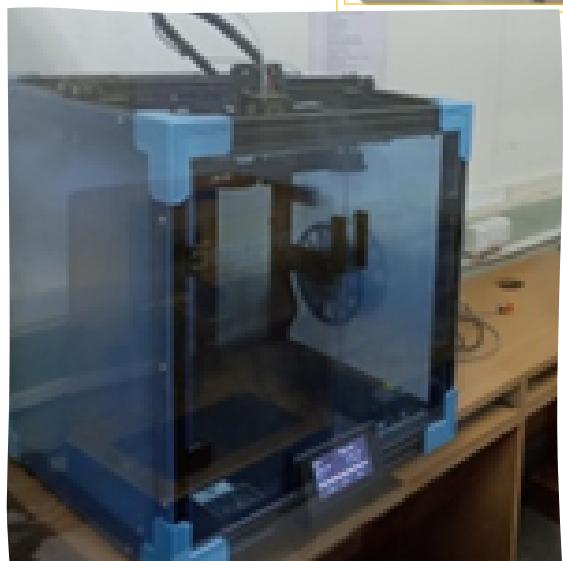
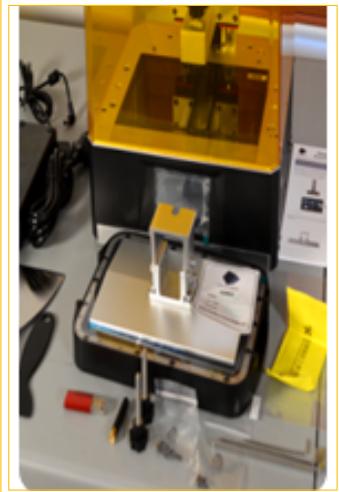


ADDITIONAL FACILITIES

3D PRINTING, INNOVATION & CNC MACHINE

Inorder to imbibe advance skills to students, department has introduced addtional facilities

- Advance 3 Dprinting machines
- Table top CNC machine
- Digital Incubator, which helps the students to get breakthrough Idea



OUR FAMILY



FR. ANTHONY PINTO, SDB
DIRECTOR



FR. CHARLES ANTHONY, SDB
ASST. DIRECTOR



FR. MCENROE LOPEZ, SDB
ADMINISTRATOR



DR. SUDHAKAR MANDE
PRINCIPAL

MEMBERS OF ACADEMIC ADVISOR COMMITTEE



Dr. S. Krishnamoorthy
Mentor (Mechanical
Engineering Dept)
Advisor, DBIT



Mr Prashant Chouthkanthiwar
Associate Vice President at
Godrej & Boyce



Prof. Bhalchandra Puranik
Professor, IIT Bombay



Mr. Shreyas Bakshi
Innovation Wor(k)shipper -
Leader, Strategist, Coach,
Advisor, Architect, Facilitator



Mr. Llewellyn D'sa
Co-Founder & CEO,
Robo Bionics



DR. YOGESH S PADIYA, EDITOR