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### **VISION**

To be the Centre of Excellence in Civil Engineering Education and Consultancy by providing holistic, innovative and research centric environment and keeping pace with rapidly changing technologies.

### **MISSION**

- To impart quality education in civil engineering, through effectiveness and innovation in teaching and learning.
- To promote positive interactions among faculty and students and foster networking with alumni, industry and other stake holders.
- To train young minds in soft skills, intellectual and ethical strengths, conducive to globally competitive environment.
- To motivate students for research and entrepreneurship in relevant sectors of society with focus on excellence and creativity.
- To undertake sponsored research and provide consultancy services in all the areas of civil engineering beneficial to the community.

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# FACULTY CORNER

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## R&D session

The Civil Engineering department had its ninth session under R&D cell on the 14<sup>th</sup> January 2022 at 4.00 P.M. The two speakers for this session were Asst. Prof. Prachi Dessai and Asst. Prof. Jeffrey Valadares. The former presented a study undertaken by her along with her project students, while the latter presented on a recent trend in Civil Engineering.

Prof. Prachi presented on 'Treatment of Effluent using Low Cost Adsorbents'. She addressed the major problems leading to waste water pollution viz. increasing population, industrialisation and untreated sewage. She highlighted on the need to treat the effluents to reduce the surface water and ground water sources and also save the aquatic environment. In her presentation, she discussed about adsorbents used previously by other researches to treat effluents, such as banana peels, fish scales, etc.

In her study, Prof. Prachi and her students used mango wood and teak wood powder to treat waste water samples collected from STP Shirvodem, Navelim in Goa. Varying amounts of these samples were added to the waste water and the waste water was later tested for BOD, COD, turbidity and pH. The result indicated that the mango wood had promising result in reducing the BOD, COD and turbidity.

Prof. Jeffrey presented on 'Ground Penetrating Radar'. He explained the working of a ground penetrating radar (GPR). He gave a brief review of its applications in transportation engineering, archeological surveys, sub-structural investigations and other utilities such as underground cables and cavities.

The Civil Engineering department had its eleventh session under R&D cell on the 18<sup>th</sup> February 2022 at 3.30 P.M. The two speakers for this session were Asst. Prof. Starina Dias and Asst. Prof. Oswyn Soares. The former presented a cost comparative study on cased and un-cased columns undertaken by her, while the latter presented on a GGBS and Flyash blocks.

Prof. Starina presented on 'Cost Comparative study of Cased and Un-cased Columns in Marshy Soils'. She described how stone columns and granular piles derive their load carrying capacity from the confinement offered from the surrounding soil. But in very soft soil this lateral confinement from the surrounding soil may not be adequate for the stone column. Hence wrapping the granular pile with geotextile was one of the techniques to improve the performance of stone column.

She highlighted on how the bearing capacity of an encased column could be increased while reducing its settlement. In her paper an attempt was made to investigate how the use of geotextile encasement for the stone columns at a bridge site at Mandur, Goa, having soft soil

could be cost-effective over ordinary stone columns. The proposed improvement by encasement with a geotextile was done by using finite element software, Plaxis 2D. After performing the analysis using both ordinary stone columns(OSC) and encased stone columns(ESC), for an area of 57.6 m<sup>2</sup>, twelve OSC were required at a cost of 9,00,000 rupees while nine ESC for an equivalent area, having a cost of 7,51,500 rupees. Hence comparing the cost of an OSC and ESC, the cost reduces by 16.5 percent for an ESC.

Prof.Oswyn presented on ‘GGBS and fly ash bricks’. He described the properties of fly ash, types of fly ash and its chemical composition. The presentation also showed a comparison between different classes of fly ash. He explained the major mechanical attribute of fly ash was to convert non-durable lime to Calcium Silicate Hydrate ( C-S-H), which imparts strength and durability to the concrete. In his study, Prof.Oswyn is trying to activate Fly ash and GGBS with free lime, which will react with Silicon Oxide or Silicon Dioxide to form the cementitious material C-S-H.

## PAPER/ JOURNAL PUBLICATIONS

Author Name	Title of Paper	Details	National/ International
<b>Dr. Shwetha P</b>	A Review Paper on Partial Replacement of Fine Aggregate by different Allied Materials	Sustainability, Agri, Food and Environmental Research 12 (1), 2022, ISSN: 0719-3726	UGC approved/ International

## WORKSHOPS PARTICPATED

Name of the Faculty Participated	Training Programmes	Date	Organization
<b>Prachi Dessai</b>	Online FDP on Smart manufacturing – Scope and challenges in research	17/1/2022-21/1/2022	AICTE Training and Learning(ATAL) Academy
<b>Dr. Shwetha Prasanna</b>	Online FDP on Sustainable construction materials and Technology	21/2/2022-25/2/2022	AICTE Training and Learning(ATAL) Academy
<b>Swaroopaa Sail</b>	Online FDP on Sustainable construction materials and Technology	21/2/2022-25/2/2022	AICTE Training and Learning(ATAL) Academy
<b>Starina Dias</b>	Online FDP on Sustainable construction materials and Technology	21/2/2022-25/2/2022	AICTE Training and Learning(ATAL) Academy
<b>Nadya Baracho</b>	Online FDP on Sustainability Engineering	18/1/2022-22/1/2022	AICTE Training and Learning(ATAL) Academy
<b>Nadya Baracho</b>	Seminar on Structural audit and repair rehabilitation of concrete structure	7/5/2022	Ultratech cement

## WORKSHOPS/ WEBINARS CONDUCTED

Name of Faculty/Resource person	Workshop/Seminar	Date
<b>Mr. Anant Pawaskar from Allterra Solutions LLP, Vashi, Navi Mumbai. Mr. Anant</b>	Total station Workshop	25 <sup>th</sup> and 26 <sup>th</sup> March 2022
<b>Asst Prof. Starina Dias &amp; Asst Prof. Akshata Kudchadkar</b>	Workshop on Geostudio	9th April 2022
<b>Er. Mahindra Caculo, Er. Akshay Chandonkar, Er. Pradeep Garg and Er. Tivikram Netravalkar</b>	Technical lecture series	8 <sup>th</sup> and 9 <sup>th</sup> of April 2022
<b>Mr. Abdul Majeed, Mechanical Engineer with Masters in HVAC was the speaker</b>	Introduction to Autodesk	1st June 2022

## NPTEL Orientation Program for Second Year & Third Year Students

NPTEL Orientation Program for Second & Third Year Students was conducted on 10/1/2022 at 11.30AaM by Prof. Vidya D.S. and Prof. Swaroopa Sail, Assistant Professor, Department of Civil Engineering. Students were introduced to the list courses being offered by NPTEL, how the courses are conducted, number of assignments to be answered, duration of each course, evaluation criteria, exam details. They were guided on how to enroll for the courses, types of certificates offered by NPTEL, domain courses and domain certificate etc. Students were explained about the credit courses offered by the Department to be chosen to earn 20 credits by the end of the eighth semester. The instructions while choosing the credit courses and advantages of enrolling for those were also shared. Students will receive BE with honours certificate from reputed institutions like IIT and IISC after completion of credit courses and domain certificate if they specialize in areas like Construction Materials Technology, Structural Analysis, Structural Design and Environment. Students who cleared credit courses while studying in third and fourth semester were congratulated. The third year students were



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# STUDENTS CORNER

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## FIELD VISITS

Name of Faculty	Course	Class & Sem	Date
<b>All Civil Faculty</b>	Fieldtrip to bridge construction site	SE & TE Civil Students	11th May 2022
<b>Prof. Jeffrey Valadares and Prof. Shruti Jambhale</b>	Field visit to under construction Zuari Bridge	SE & TE Civil Students	11th May 2022
<b>Prof. Jeffrey Valadares and Prof. Swaroopa Sail</b>	R.M.C Plant Vasco, ongoing construction site for a fire station in Vasco and Selaulim dam at Sanguem	SE Civil	23rd May 2022

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## PARTICIPATION IN CULTURAL ACTIVITIES

Name (s) of Students	Type & Level of Cultural Activities	Date(s)	Organised by
<b>Sanat Prabhudessai, Parag Khadji, Raj Mardolkar,Sudesh Shelar</b>	PROCYON 2022 "Ghumat Arti"	26 <sup>th</sup> and 27 <sup>th</sup> May 2022	Department of Computer Engineering, DBCE
<b>Parag Khadji,Niella Pereira</b>	PROCYON 2022 "Rock The Ramp"		
<b>Vishal Sutar, Sahil Patil</b>	PROCYON 2022 "Skit"		
<b>Vishal Sutar, Sahil Patil, Sumidha Savant</b>	PROCYON 2022 "Street Play"		

## PARTICIPATION IN SPORTS ACTIVITIES

Name(s) of Students	Award/Prize won	Date (s)	Organised by
<b>Muzammil Shaikh,Dikshita Nevli,Grishma Bandodkar, Blake Lourenco</b>	Intramural Tug of War (Mix) Competition	2021-2022	Don Bosco College Of Engineering, Fatorda
<b>Muzammil Shaikh</b>	4x100 M Relay Men run at college sports day	2021-2022	Don Bosco College Of Engineering, Fatorda
<b>Khadji Parag</b>	Intramural Basketball (Men) competition	2021-2022	Don Bosco College Of Engineering, Fatorda



<b>Khadji Parag</b>	Intramural Volleyball (Men) Competition	2021-2022	Don Bosco College Of Engineering, Fatorda
<b>Saishree Shirodkar, Niella Pereira</b>	Intramural Volleyball (Women) Competition	2021-2022	Don Bosco College Of Engineering, Fatorda
<b>Niella Pereira</b>	200 M women run at the college sports day	2021-2022	Don Bosco College Of Engineering, Fatorda
<b>Niella Pereira</b>	4x200 relay women run at the college sports day	2021-2022	Don Bosco College Of Engineering, Fatorda

## PARTICIPATION IN TECHNICAL ACTIVITES

<b>Name of the Student</b>	<b>Seminar/Workshop/ Technical Events/Conferences/Training programmes etc.</b>	<b>Date(s)</b>	<b>Organised by</b>
<b>Grishmaa Bandodkar</b>	Design Thinking	7 <sup>th</sup> July 2022	NDLI club of Don Bosco College Of Engineering
<b>Grishmaa Bandodkar</b>	Mathematics in Temple Architecture	10 <sup>th</sup> May 2022	NDLI club of Don Bosco College Of Engineering