



# Impact of MoU'S

## 2023-2024

### Department of Civil Engineering

#### ABOUT THE DEPARTMENT

Civil Engineering Department is accomplished with young, energetic, well-qualified, dedicated and experienced faculty in the areas of Structural, Geotechnical, Environmental, CAD structures and Water resources engineering. The department has been organizing various programs to enhance institute-Industry linkage through fieldtrips and workshops.

Every year students of third year are exposed to industries through internship programme of one month duration.

The department has 10 fully functional laboratories which along with academic requirement also cater to the internal revenue generation through testing and consultancy work.

These includes,

1. Strength of materials
2. Concrete technology
3. Building construction
4. Transportation engineering
5. Geotechnical engineering
6. Fluid mechanics
7. Surveying
8. Environmental engineering
9. Computer aided design laboratory
10. Research Lab

## 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.

The Department has signed a Memorandum of Understanding (MoU) with the following reputed organisation for the academic year 2023-2024.

Sr.no	Name of Organisation/Institute	Date of Signing
1	Public Works Department, Goa	7 <sup>th</sup> July 2021
2	Alcolab India LLP, Goa	15 <sup>th</sup> May 2023
3	Shekhar Panandikar & Associates	15 <sup>th</sup> May 2023

## Shekhar Panandikar & Associates, Goa

### 1. Seminar on Post Tensioning: 19<sup>th</sup> April 2024

A seminar conducted by Er. Shekhar Panandikar, an experienced engineer, explored the principles, applications, and practical considerations of post-tensioned concrete design and implementation for students of M.E., B.E., and T.E.

Post-tensioning is a technique in concrete construction where tendons are tensioned after the concrete has cured. This process introduces compressive stresses into the concrete, counteracting the tensile stresses from applied loads, thereby enhancing the structure's strength and durability.

Er. Shekhar emphasized that post-tensioning enables the construction of thinner slabs and longer spans without the need for intermediate supports, which leads to material savings and greater design flexibility.

The seminar provided valuable insights into the complexities and benefits of post-tensioning in concrete structures, highlighting the importance of ongoing learning and adaptation in structural engineering. A total of 72 students attended this informative session.

***Activities carried out:***

**1. Seminar on Post Tensioning:**

One of the key activities conducted under the MOU was an expert talk on post-tensioning. This event was organized to enhance the knowledge and skills of students in this specialized area.

**2. Internship Program for College Students:**

As part of the collaboration, Don Bosco College of Engineering facilitated an internship program for four of its engineering students. These students were selected to work on various industrial projects under the supervision of Er. Shekhar Panandkar.

**3. Placement**

One final-year student, Miss Amanda Luis, received a job offer from Shekhar Panandkar and Associates.



## Alcon Anil Counto Enterprises- ONE-WEEK ISTE

The Civil Engineering Department of Don Bosco College of Engineering, in collaboration with Alcon Anil Counto Enterprises, organized a one-week ISTE-approved Faculty Development Program (FDP) on “Emerging Trends in Civil Engineering,” held from May 13th to May 17th, 2024. The event was also sponsored by Jai Ganesh Ispat, Sumit Woods, Dyna Developers, Vibhav Real Estate, Reliance Builders, and Trimurti Real Estates.

### Day 1:

- **Er. Vishwamber Bhende**, Executive Engineer, WD IX, PHE, Public Works Department, presented on “Smart Water Systems.” He discussed various water supply schemes and the application of IoT in water management, including smart meters, sensors, GIS, and SCADA. He also addressed issues related to pumps at different levels and suggested solutions such as mobile pumping systems.
- **Er. Vir Kumar Sawant**, CEO of Biosphere Enviro Tech, spoke about “Recent Trends in Water and Water Treatment.” He covered the physical and chemical parameters of water, the steps involved in wastewater treatment, innovative water-

saving techniques, and the use of membrane filters. He also demonstrated how to check water quality using water testing kits.

#### **Day 2:**

- **Er. Carmelito Andrade**, a DGCA-certified Drone Pilot, gave a presentation on “Drone Survey.” He explained the components of drones, licensing and regulations in India, photogrammetry, and the accuracy of drone surveys. The session included a live drone demonstration.
- **Dr. Purnanand Savoikar**, Professor in the Civil Engineering Department at Goa College of Engineering, Farmagudi, Goa, discussed “Landslides.” He reviewed case studies of landslides in Goa and suggested remediation techniques such as gabion walls, soil nailing, and the use of Vetiver grass to prevent future landslides.

#### **Day 3:**

- **Er. Arnab Choudhary**, from the Research & Development Department at L&T, Chennai, presented on “Construction and Demolition Waste” in road construction. He explained how demolition waste is processed and used for backfill and soil stabilization. He also shared insights into “Cement Asphalt Mortar (CAM)” and its application in high-speed railway tracks, and discussed the use of “Plastic Concrete” in dams. The session included a video on tunnel boring machines.

#### **Day 4:**

- **Dr. Mohit Mistry**, Deputy Manager (Technical) at Geo Dynamics Testing & Consultancy Pvt. Ltd, delivered a lecture on the “Bullet Train Project, National Corridor - Design to Execution.” He covered the design and construction aspects of piles for the bullet train project and introduced Shinso piles.
- **Er. Prakash Bajaj**, Proprietor of Computer Help India, conducted a session on “Use of Software to Create Data, Drawings, and Estimation for Civil Engineers.” He demonstrated software such as Planwin, Framewin, and Draftwin for building analysis and design, and also introduced Visual Basics for coding.

Hands-on training sessions on Tekla Structures were held from 2:00 PM to 4:30 PM daily from Day 1 to Day 4. **Er. Raghvendra** guided participants through the user interface, modeling, assigning properties to members, and creating drawings for fabrication.

#### Day 5:

- **Er. Nadia Fernandes**, Deputy Town Planner at the Department of Town & Country Planning, Government of Goa, delivered a lecture on “Urban Planning.” She emphasized the importance of urban planning in creating equitable, prosperous, and sustainable cities, covering principles like Mixed-Use Development, Transit-Oriented Development (TOD), Green Infrastructure, and Community Participation.
- **Dr. Kiran Kamath**, Professor at the Department of Civil Engineering, M.I.T. Manipal, spoke on “Tall Building Structures.” He highlighted emerging trends in slip formwork and design considerations for tall structures, including the IS code 16700-2017.

The FDP provided a valuable platform for participants to enhance their knowledge of emerging trends in civil engineering and foster professional development in the field.

#### *Activities carried out:*

1. Association in organising the ISTE Workshop
2. Continuous learning for the Employees of Alcon Industry



## PUBLIC WORKS DEPARTMENT –GOA

### Mix Design Workshop For PWD Engineers

The Civil Engineering Department of Don Bosco College of Engineering, in association with Infra.Market, conducted a one-day workshop on ‘Mix Design’ for PWD Engineers on May 31, 2024, at the college premises. This workshop was organized as part of the MoU signed between the Civil Engineering Department and the Public Works Department, Government of Goa.

The event began with the traditional lighting of the lamp. The Director, Fr. Kinley D’Cruz, welcomed the attendees and emphasized the importance of staying updated with the latest industry developments. The chief guest, Er. Santosh Mhapne, Chief Engineer, PWD, highlighted the necessity of discipline in engineering practices and adherence to code provisions. The guest of honor, Dr. Raghavendra Y.B., Zonal Head of Technical Infra.Market, encouraged active participation and sharing of experiences to make the workshop productive.

Assistant Professor Jeffrey Valadares proposed the vote of thanks, motivating the audience to embrace new knowledge and push their boundaries. The event was coordinated by Assistant Professor Satyesh Kakodkar, with resource speakers Assistant Professor Shruti Jambhale and Assistant Professor Nadya Baracho.

Assistant Professor Shruti Jambhale delivered a lecture on the significance of mix design, its implications for site processes, and the latest code provisions. Assistant Professor Nadya Baracho provided an explanation of the code provisions with practical examples and emphasized the role of plasticizers and superplasticizers in enhancing concrete’s workability, strength, and durability.

In the afternoon, a practical session demonstrated two mix designs: one with superplasticizer and one without. This was followed by a question-and-answer session.

The workshop concluded with the presentation of certificates to the participants

*Activities carried out:*

**Mix Design Workshop for PWD:**

One of the key activities conducted under the MoU was a "Mix Design Workshop," designed to enhance the knowledge and skills of industry professionals, particularly those within the Public Works Department. Organized by Don Bosco College of Engineering, the workshop featured expert insights from the college's faculty.



**Compiled By: Asst. Prof. Jeffrey Valadares**

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