

# Blueprint

Civil Engineering Department's Newsletter Volume 02, Issue 01, July - December 2017

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## Upcoming Events

*Sankriti 2018*

## 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.

# DEPARTMENT ACTIVITIES

## *Engineer's Day*

The Engineering Community across India celebrates Engineers Day on 15<sup>th</sup> September every year as a tribute to the greatest Indian Engineer Mokshagundam Visvesvaraya, popularly known as Sir MV. Sir M. Visvesvaraya is known for successfully designing and constructing several river dams, bridges and revolutionizing the irrigation system in India by implementing irrigation and drinking water system.



On this special day the Civil Engineering Department of Don Bosco College of Engineering, Fatorda celebrated Engineers Day by inviting Er. Joaquim Primo Souza, Retired Chief Engineer-PWD who was the Chief Guest for the function. Also present for the function were Rev. Fr. Kinley D'cruz, Director, Prof. Annapurna Sakhardande, HOD and coordinators Prof. Jeffrey Valadares and Prof. B. R. Anirudha. Er. Joaquim spoke about how technology has changed over time and how we engineers have to keep up to this fast-moving technology. He also shared his experiences gained over time while handling various complex projects in and around Goa.

On this day 14 distinction holder students of Civil Engineering were felicitated by the Chief Guest. Winners of the various competitions held on CESA Installation day, were given prizes. AutoCAD Certificates were also distributed to students who had successfully completed the course.

# STUDENT ACTIVITIES

## *CESA Council (2017- 2018)*

The installation of the new Civil Engineering Students Association (CESA) Council for the academic year 2017-18 was inaugurated on 11th August 2017, in the esteemed presence of the Chief Guest Shri. R.B. Bhatkar -Director, Operation DCS limited, Guest of Honour and key note speaker Shri. Richard Dias, General Manager -HWTPL, Director Rev Fr. Kinley D’Cruz, Principal Dr. Neena S. P. Panandikar, HOD Prof. Annapurna Sakhardande and Coordinators Prof. Jeffrey Valadares and Prof. B. R. Anirudha.



The function began with the lighting of the lamp and a prayer song followed by a Welcome speech by Subrata Rai, a second-year student. Mr. Kohen Duarte the former Chairman of CESA, delivered the annual CESA report for the year 2016-17. Prof. Jeffrey Valadares introduced the new student Council 2017-18 who took the oath in presence of all. The Chairman of the CESA Council (2017-18) is headed by Mr. Siddhant Porob, from the Third Year Civil Engineering.

Thereafter the CESA council 2016-17 was felicitated by the chief guest for their excellent work during their tenure as office bearers. The Civil Engineering Department Newsletter- “Blueprint” and Souvenir of “Sankriti 2017” were also released on this occasion. After a talk on “Replenish” by the key note speaker Shri. Richard Dias, there was a photography and debate competitions which were enjoyed by all.

## *Concrete Mix Proportioning*

The Civil Engineering Department of Don Bosco College of Engineering, Fatorda in collaboration with Ultra- Tech Cement organized a “Concrete Mix Proportioning” workshop on 22<sup>nd</sup> September 2017, for the second year Civil Engineering students. The purpose of concrete mix proportioning is to ensure the most optimum proportions of the constituent materials of concrete to fulfil the requirements of the structure built.



This workshop is organized every year as part of the curriculum in the subject of Concrete Technology for the second-year Civil students to make them industry ready by familiarizing them in making various grades of concrete. The workshop was conducted by Mr. Vikrant Dessai, Technical Officer, Ultra-Tech Cement who went through the

basics of making concrete and later guided students in designing a particular grade of concrete and performed a demonstration to show the same. In all 55 students attended the workshop. The workshop coordinator was Prof. Starina Dias.

## *Soft Skills Development*

The students of Third Year Civil Engineering attended a workshop on 10th of July 2017. It comprised of two sessions by Ms Priyanka Rao - Corporate trainer.

The sessions covered following topics

1. Business dressing
2. First Impression
3. Business etiquette

From the perspective of interviews and work environment.



## *'AUTO-CAD' TRAINING*



An AutoCAD training Course was organized for the TE Civil students of Don Bosco College of Engineering from 3<sup>rd</sup> July to 7<sup>th</sup> July 2017. In this course Prof. Starina, Prof. Shruti, Prof. Nadya and Prof. Parashuram trained students on basics of AutoCAD software like Draw Toolbar, Modify Toolbar, and Dimensioning etc. The students also got hands on practice on these toolbars. These courses are provided

to the students to enhance their all-round development. In all 50 students attended the entire course consisting of 18 sessions held from 3<sup>rd</sup> July to 7<sup>th</sup> July 2017.

# FIELD VISITS

## *Field Visit to Sewage Treatment Plant at Tonca*

The final year Civil Engineering students of Don Bosco College of Engineering, Fatorda along with Prof. Prachi Dessai and Prof. Madhuraj Naik visited the Sewage Treatment Plant at Tonca, Miramar on 27<sup>th</sup> October 2017. In all seventy-one students visited the site.

On visiting the site, the students were made aware that the sewage treatment plant treats municipal waste for the Panjim City having an approximate population of 60,000. The plant has a capacity of treating 12.5 MLD of waste water every day. The Assistant Engineer In charge Mr. Shetty explained the various aspects in the processes involved in the treatment of wastewater.

This visit was extremely beneficial to the students for understanding the primary treatment processes to treat municipal effluents. Students gained hands on experience in understanding the execution of processes like Screening (grit removal), Aeration, Digestion, Decanting, Chlorination and also learnt benefits of C-Tech (Cyclic activity sludge process) technology used in treatment plant.



# *The State Assembly Complex and Central Library Building*

On 12 July 2017, a field trip was organized for the Third Year Civil Engineering students of Don Bosco College of Engineering to 2 different sites. In the morning session, they visited The State Assembly Complex which is located on a hillock plateau, with a plot admeasuring 54,250 Sq. with trapezoidal shape, overlooking Mandovi River along the National Highway No. 17 at Porvorim in the village of Penha de France in Bardez Taluka.



On arrival to the site the Marshall of the state assembly, Mr. Deepak Bhosle explained the different building units of the State Assembly. He stated that the State assembly is designed as per Indo-Portuguese style consisting of VIP Block, Assembly Block and the Secretariat Block. Tenders were invited to design the project and the design by M/s. Karan Grover and associates was selected. The construction contract was offered to M/s. Ahluwalia contracts (India) Ltd. The foundation stone for this prestigious project was laid on auspicious day of 22nd January 1994 by Late Dr. Shankar Dayal Sharma, President of India. In the second half, the students visited the State Central Library where Mr. Bhandodkar explained the building units and the entire process of the library building. The central Library is housed in a spacious, building designed by award-winning architect Gerard da Cunha. According to the officials of the Goa State Infrastructure Development Corporation (GSIDC) the building costs Rs 32 crore and comprises of six floors, covering an area of 13,369 square meters. The students were accompanied by Prof. Satyesh Kakodkar, Prof. Prachi Desai and Prof. Parashuram Hosmani.

## *Sub District Id Hospital and Flyover*

On 14<sup>th</sup> July 2017 the Third-Year Civil students visited Sub District ID Hospital Ponda the purpose of the field visit was to understand about the different units of the hospitals and planning of the same. Sister Hema Naik guided students through the hospital. The hospital was a G+3 structures which included reception area, pharmacy, waiting room, casualty for emergency, all the OPD's on the first floor and the wards on the other floors which were differentiated as female ward, male ward and children ward. The hospital is equipped with 3 lifts out of which 1 is for the doctors and patients and other 2 are for the visitors. Around the hospital building gabion wall is used as a retaining structure.



The second visit was a to flyover under construction in Ponda where the students saw the placing of Reinforced Earth Retaining Panels and casting of one of the bridge girders. Mr. Patil Junior Engineer, PWD was the guide for the site.

Asst. Prof. Nadya Baracho and Asst. Prof. Shruti Desai accompanied the students for the field visit. Total of 55 students attended the field visit.

## *Bridge Construction Site Across River Mandovi, Panaji*

The Department of Civil Engineering, Don Bosco College of Engineering, Fatorda organized a field visit for the third-year Civil students on 20<sup>th</sup> July 2017 to the bridge construction site across river Mandovi, Panaji which included a visit to the approaches on NH-17 between Pundalik Nagar junction (Porvorim) to Mercedes junction.

GSIDC awarded this project on EPC contract to L&T Construction Heavy Civil Infrastructure IC. L&T Construction has engaged L&T Infra Engineering as the detailed



design consultant. GSIDC has appointed S.N. Bhohe & Associates Pvt. Ltd, Navi Mumbai as the owner's Engineer. The students were directed to the site by Mr. Rajkumar-Manager, Larsen & Toubro Limited. On site the made students aware of the safety rules and regulations to be followed. Mr. Sanjeev Sinha, Resident Engineer, M/s. TPF Engineering Pvt. Ltd (Goa Regional Office) explained about the different phases of bridge construction. He explained that the bridge being constructed across river Mandovi, Panaji is of 3.1 km in length across the river and includes approaches on NH-17 between Pundalik Nagar junction (Porvorim) to Mercedes junction. This new cable Stayed Bridge is of 600 m length and 21 m width, having viaduct with length of 3330 m and width of 19.20 m and is being aligned between the two existing bridges to avoid the disturbance to the flow of water. The bridge has a 4 lanes configuration and has pile Foundation done with Piles of 1500 mm diameter having solid approaches of 504 m length.



He explained the concept of a cable-stayed bridge stating that a cable stayed bridge has pylons, from which cables support the bridge deck. A distinctive feature is the cables which run directly from the tower to the deck, normally forming a fan-like pattern or a series of parallel lines. In a cable stayed bridge, depending on its design, the cables carry the bridge deck from one or both sides of the supporting tower. The stay cables carry the deck and transfer all bridge loads to the foundations. This is done by transmitting the cable stay forces, through its extremities; at its anchorage points. Stay cables are firmly attached to the anchorages which are designed to resist the buckling forces of the loads. Mr. Sanjeev Sinha also explained the Precast segmental erection to the students. The precast segments are done with bars through the lifting Holes and epoxy is used to join the segments. A group of 15 civil engineering students accompanied by Asst. Prof. Oswyn Soares and Asst. Prof. Swaroopa Sail visited the site.

## *Field visit to Andrew Commscope Telecom R&D Plant, Verna*

A field visit was conducted by the Department of Civil Engineering, Don Bosco College of Engineering on 27<sup>th</sup> September 2017 to Andrew CommScope Telecom R&D Plant, to study the Post-tensioning work being carried out on site. Six students from the final year Civil Engineering visited the site, accompanied by Assistant Professor Kaushik V. Pai Fondekar. On visiting the site, the students met Consulting Er. Shekhar Panandiker and Er. Aravind Nayak who are currently executing the structural design for the project, while M/s RBS Candiaparcar is the contractor. Er. Shekhar Panandiker explained the technical details on the site where he also mentioned the necessity of carrying out post-



ensioning for the first-floor slab stating that the height was restricted for placing the machinery if beams were provided. He also explained that the slab was 225mm thick which is more than the conventional slabs to avoid crushing of the slab while stressing the tendons. The concrete was already laid on one side of the slab including the post-tensioning beam, but through the exposed steel skeleton the students were shown the conduits of the tendons along with the conventional steel for slabs. Er. Shekhar also stated that after the concrete gains 75% of its strength, grouting is done in the conduits and after the grout sets the tendons are stressed using special machinery brought by UTRACON. After visiting the construction site, the students were also taken to the site office where they got to see relevant structural drawings, bending profile of conduits and tendon detailing. Er. Shekhar concluded by enlightening the students about the various structural designs in India and how Industry functions.

# FACULTY ACHIEVEMENTS

## PAPER/ JOURNAL PUBLICATIONS

- Dr. Shwetha Prasanna published a paper on 'Special variability study on physical properties of forest soil', Vol. 10, No. 03, P. P. 697-703, 2017, ISSN 0974-5904. International Journal of Earth Sciences and Engineering

## WORKSHOPS/SEMINARS/EXPERT TALKS CONDUCTED

- Prof. Nadya Baracho, Prof. Shruti Desai, Prof. Starina Dias and Prof. Parashuram Hosamani conducted an Inhouse AUTO-Cad Training for students of Third year from 3<sup>rd</sup> July to 7<sup>th</sup> July 2017.
- Prof. Starina Dias organized a "Concrete Mix Proportioning" workshop on 22<sup>nd</sup> September 2017, for the second year Civil Engineering students.
- Mr. B.R Anirudh conducted a One Day In-House training on MIDAS for the students of B.E.

## WORKSHOPS/SEMINARS/EXPERT TALKS ATTENDED

- Dr. Neena Panandikar attended a Phase 3 programme of UKRERI (UK – India Education & Research Initiative) on Leadership and Management Challenges from 28<sup>th</sup> to 30<sup>th</sup> June 2017, 31<sup>st</sup> July to 2<sup>nd</sup> August & 4<sup>th</sup> to 7<sup>th</sup> October 2017 at AICTE Head Quarters, N.D.
- Dr. Shwetha Prasanna attended a Seminar cum workshop on I.S.1893(Part 1): 2016 & I.S. 13920:2016(Accredited CPD programme of Engineering Council of India(ECI), New Delhi on 9<sup>th</sup> & 10<sup>th</sup> Nov – 17 at Citrus Banquets, Caculo Mall, Panjim- Goa.
- Mrs. Annapurna Sakhardande attended a Seminar cum workshop on I.S.1893(Part 1): 2016 & I.S. 13920:2016(Accredited CPD programme of Engineering Council of India(ECI), New Delhi on 9<sup>th</sup> & 10<sup>th</sup> Nov – 17 at Citrus Banquets, Caculo Mall, Panjim , an AICTE approved Faculty Development programme on 'Pedagogy for Online & Blended Teaching Learning Process' conducted by IIT Bombay from September 14<sup>th</sup> to October 12<sup>th</sup> 2017, an AICTE approved Faculty Development programme on 'Foundation Program in ICT for Education' from August 3<sup>rd</sup> to September 7<sup>th</sup> 2017
- Mr. Jeffrey Valadares attended a 1-week AICTE-ISTE Workshop on Statistical Tools & Techniques in Research Methodology from 6-10<sup>th</sup> November 2017 at Don Bosco College of Engineering, Fatorda, Goa.
- Mr. Oswyn Soares attended a Seminar cum workshop on I.S.1893(Part 1): 2016 & I.S. 13920:2016(Accredited CPD programme of Engineering Council of India(ECI), New Delhi on 9<sup>th</sup> & 10<sup>th</sup> Nov – 17 at Citrus Banquets, Caculo Mall, Panjim- Goa.
- Ms. Swaroopa Sail attended a 1-week AICTE-ISTE Workshop on Statistical Tools & Techniques in Research Methodology from 6-10<sup>th</sup> November 2017 at Don Bosco College of Engineering, Fatorda, Goa.
- Mrs. Nadya Baracho attended a Seminar cum workshop on I.S.1893(Part 1): 2016 & I.S. 13920:2016(Accredited CPD programme of Engineering Council of India(ECI), New Delhi on 9<sup>th</sup> & 10<sup>th</sup> Nov – 17 at Citrus Banquets, Caculo Mall, Panjim- Goa.
- Mr. Madhuraj Naik attended a Two-Day Industry-Academia-Professional bodies collaborative programme on Advanced Design of Steel Structures organized by GEC, Farmagudi in association with INSDAG Kolkata, ACCE(I) Goa chapter and ACES on 22-23<sup>rd</sup> September 2017 at Goa College of Engineering, Farmagudi – Ponda, Goa. & a 1-week AICTE-ISTE Workshop on Statistical Tools & Techniques in Research Methodology from 6-10<sup>th</sup> November 2017 at Don Bosco College of Engineering, Fatorda, Goa.

- Mr. Kaushik Pai Fondekar attended a Two-Day Industry-Academia-Professional bodies collaborative programme on Advanced Design of Steel Structures organized by GEC, Farmagudi in association with INSDAG Kolkata, ACCE(I) Goa chapter and ACES on 22-23rd September 2017 at Goa College of Engineering, Farmagudi – Ponda, Goa.

## STUDENTS ACHIEVEMENTS

### CULTURAL

- Mr. Uddhav Naik secured 1st place in drawing competition on the topic 'Non – Violence day' organised by Don Bosco College of Engineering on 4th October 2017.

### TECHNICAL

- Mr. Fred Noronha secured 1st place in Sky Scraper held during the annual technical event TECHYON at Padre Conceicao College of Engineering on 13th and 14th October 2017.
- Mr. Maqsood Alam secured 1st place in Sky Scraper held during the annual technical event TECHYON at Padre Conceicao College of Engineering on 13th and 14th October 2017.

### SPORTS

- Aman Kalias Naik won a 'Silver Medal' in Taekwondo organised by Goa University from 26th to 28th September 2017.
- J B Vianney Furtado participated in Table-Tennis (Men) organised by Goa University from 17th to 19th July.
- Naik Deepraj D, Leon Mario R De Souza, Ray Cortez participated in Badminton (Men) organised by Goa University from 25th to 28th July.
- Stella Tom participated in Table-Tennis (Women) Organized by Goa University from 17th to 19th July.
- Ankita Kalidas Raikar participated in Badminton (Women) organized by Goa University from 25th to 28th July.
- Shamrao Jagruti Majalkar participated in Judo (Women) organized by Goa University from 1st to 3rd August.
- Fernandes Paraj N. L., Kohen Duarte & Aman Kumar participated in Swimming (Men) organized by Goa University on 5th August 2017.
- Pranav Mangaonkar, Pavan Kumar Singh, Ashish Arlekar, Harish Borkar, Yash Desai & Siddhant Porob participated in Power Lifting (Men) Organized by Goa University from 10th to 16th August 2017.
- Ritu Vishwakarma, Reeyana A Nadaf, An Aleena Treasa participated in Tennikoit (Women) organized by Goa University from 21st to 23rd August 2017.
- Floyd Lobo, Aliston A ` D' Costa & Abhishek Kothambikar participated in Football organized by Goa University in September 2017.

## TRAINING & PLACEMENT

The students of Final Year Civil Engineering have undergone 2 Weeks Internship programme from 3<sup>rd</sup> July to 15<sup>th</sup> July 2017 at various places such as Aman Builders, Apollo Engineers & Contractors, Nanu Real Estate Pvt. Ltd, Dilip Buildcon Pvt. Ltd. Models Constructions, MVR Infra Projects Pvt. Ltd, RBS Khandeparkar etc.