DON BOSCO COLLEGE OF ENGINEERING

Fatorda, Goa - 403 602

DEPARTMENT OF CIVIL ENGINEERING

Testing and Consultancy Services

For additional queries Contact:

Tel No.: (0832) 2744141 / 42, 2744111

Website: www.dbcegoa.ac.in

E-mail: dbcefatorda@dbcegoa.ac.in

hod_civil@dbcegoa.ac.in

DON BOSCO COLLEGE OF ENGINEERING, FATORDA, GOA

Don Bosco College of Engineering (DBCE), Fatorda, started in the year 2011 with the mission of equipping the younger generation with technical knowledge, moral and spiritual approach to face global changes. It has been recognized by DTE - Government of Goa; AICTE - New Delhi; and is affiliated to Goa University. The college, within a short span has gained reputation by providing high quality engineering education, counselling, entrepreneurial skill development, staff welfare and empowerment, research work, employability of its graduates, strengthening its industry institution interaction, infrastructure and services to the society. FiiRE (Forum for Innovation Incubation Research and Entrepreneurship) has been prompted under the NIDHI programme of Government of India for mentoring ideas, start-up and entrepreneurship to promote innovation and facilitate links between the institute and all stake holders in the region.

INSTITUTE VISION

To evolve as a Centre of Excellence for professional education, fostering innovation, entrepreneurship, research and consultancy, by providing a holistic learning environment, thus ensuring integral development of the youth, the Don Bosco way.

INSTITUTE MISSION

- To provide quality education and training with global perspective that produces engineers with professionalism and ethics.
- To emerge as a focal point for research and consultancy services through advocacy and collaboration with prestigious institutions, industry and all other stakeholders, locally and globally.
- To promote innovation by providing state of the art incubation facilities.
- To foster integral development through career counselling, skill

- upgradation and entrepreneurship initiatives.
- To impart value education and encourage extra-curricular activities and community outreach programmes for personal growth and social transformation.

ABOUT THE DEPARTMENT

The 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 offers Bachelor of Civil Engineering (BE) programme, with the total number of 60 seats in the first year and a few seats for lateral entry into the second year. The department has been organizing various programs to enhance Institute-Industry linkage through field trips and workshops. The department provide quality education and training to undergraduates to cope up with the industries.

VISION

To be the Center 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.

PLACEMENT OPPORTUNITIES

A number of companies visit the campus for the recruitment of our Civil Engineering students. The placement record of our students passing out from college has been fairly good.

FOREWORD FROM THE HEAD OF DEPARTMENT

Civil Engineering is one of the oldest engineering disciplines and aims at facilitating the life for the society and in general making the world a better and more civilized place to live. It is the most versatile and core branch of Engineering comprising of Structural Analysis & Design, Geotechnical, Irrigation and Water Resources, Transportation, Construction and Environmental Engineering etc. The department has set up a great tradition of producing eminent engineers who are competent and committed to the high professional standards in the field of engineering and technology. A well-qualified and competent faculty with well-equipped labs is committed to provide an excellent teaching methodology for nurturing the students into excellent engineers as well as good human beings. Our graduates are exceptionally well prepared for challenging careers, handling major projects and being on the fast track towards new heights in their careers.

Dr. Shwetha Prasanna

Head of Civil Engineering Department

LABORATORY DETAILS

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 include

1. Strength of Material
2 Concrete Technology
3. Building Construction
4 Transportation Engineering
5. Geotechnical Engineering
7. Fluid Mechanics
8. Surveying
9 Environmental Engineering
10. Computer Aided Design Laboratory

The department has well equipped lab which includes a 100T UTM (capable to testing steel for diameters up to 32 mm), 200T CTM, Core cutter for extraction in situ samples of concrete, UPV, Rebound Hammer and Total Station.

TESTING AND CONSULTANCY

The department offers its services to the construction industry to carry out various routine and specialized test on Civil Engineering materials like cement, concrete, steel, aggregate, tiles and soil. We also undertake design of various structures and proof checking of drawing for private, semi government and government agencies.

FACULTY CONTACTS

Dr. Shwetha Prasanna
Head of Department
Ph.D. (Water Resource Engineering) - N.I.T.K
Email: shwetha.p@dbcegoa.ac.in

Mr. Satyesh Kakodkar
M.E. (Foundation Engineering) - Goa University
Email: satyesh.kakodkar@dbcegoa.ac.in

Mrs. Swaroopa G. Sail
M.E. (Foundation Engineering) - Goa University
Email: swaroopa.sail@dbcegoa.ac.in

Mr. Jeffrey Valadares
M.E. (Foundation Engineering) - Goa University
Email: jeffrey.valadares@dbcegoa.ac.in

Mrs. Shruti Jambhale
M.Tech. (Structural Engineering) - V.T.U,
Email: shruti.desai@dbcegoa.ac.in

Mrs. Nadya Baracho
M.Tech. (Structures) - Pune University
Email:nadya.baracho@dbcegoa.ac.in

Ms. Starina J. Dias
M.E. (Foundation Engineering) - Goa University
Email: starina.dias@dbcegoa.ac.in

Mr. B R Anirudha
M.Tech. (CADS) - V.T.U
Email: br.anirudha@dbcegoa.ac.in

Mrs. Prachi P Dessai
M.Tech. (Environmental Engineering) - V.T.U
Email: prachip.dessai@dbcegoa.ac.in

Mr. Kaushik Pai Fondekar
M.Tech. (Structural Engineering) -V.T.U
Email: kaushik.paifondekar@dbcegoa.ac.in

TECHNICAL SUPPORT

Mr. Shantanu Desai, Mr. Antonio Soares, Mr. Vincent Fernandes

TESTING AND CONSULTANCY SERVICES	
1) CONCRETE LABORATORY	
SR NO	**TYPE OF TEST**
	(a) Cement Testing
1	Specific Gravity
2	Fineness
3	Soundness
4	Consistency
5	Setting Time
6	Compressive Strength (3,7,28 days)
	(b) Coarse and Fine Aggregates
1	Specific Gravity
2	Water Absorption
3	Density
4	Soundness
5	Sieve Analysis/Gradation
6	Moisture Content of Fine Aggregate
7	Flakiness Index
8	Elongation Index
9	Crushing Value
10	Abrasion Value
11	Bulking of Sand
12	Silt Content
	(c) Other Tests/ Consultancy
1	Mix Design River sand
2	Mix Design Crushed Sand
3	Extracting 38 dia L/D=2 core in lab
4	Extracting 100 dia L/D=2 core in lab
5	Accelerated Curing of cubes (set of 3) + Testing
	(d) Non Destructive Testing
1	Rebound Hammer Test
2	Ultrasonic Pulse Velocity(UPV) Test

2) BUILDING MATERIAL LABORATORY

SR NO	TYPE OF TEST
	(a) Bricks
1	Compressive Strength (Set of 5- IS 3495 part I :1992)
2	Water Absorption (Set of 5 as per IS 3495 Part II 1992)
3	Efflorescence (Set of 5 IS 3495 Part III:1992)
4	Dimensions (Sample of 20 to be certified as per IS1077:1992)
	(b) Solid Concrete Block Testing
1	Dimension (Set of 15: IS 12440-1988)
2	Compressive Strength (Set of 8)
3	Block density (Set of 3)
4	Water Absorption (Set of 3)
	(c) Laterite Stone Testing
1	Compressive Strength (Set of 5-IS 121 part I 1974)
2	Water Absorption
3	Dimensions (Set of 8- IS 3620 Rev 2008)
	(d) Paver Block Testing
1	Compressive Strength (Set of 8)
2	Water absorption (Set of 3)

3) STRENGTH OF MATERIAL LABORATORY

SR NO	TYPE OF TEST
1	Tensile Strength and Elongation below 20mm (set of 3)
2	Tensile Strength and Elongation from 25mm (set of 3)
3	Tensile Strength and Elongation from 32mm (set of 3)
4	Unit Weight and Dimension Verification
5	Tensile Test for Metal Parts
6	Bend Test per specimen

4) GEOTECHNICAL ENGINEERING LABORATORY

SR NO	TYPE OF TEST
1	Proctor Density (Compaction)
2	Modified Proctors Test
3	Compaction Graph
4	CBR (including compaction)
5	Atterberg Limit
6	Grain Size Distribution for Coarse grained Soils
7	Grain Size distribution for Fine grained Soil
8	Specific Gravity
9	Field Density and Moisture Content
10	Box Shear test (Shear Strength Parameters Cohesion & Friction)
11	Unconfined Compression Test
12	Vane Shear Test
13	Consolidation
14	Permeability Test

5) TRANSPORTATION ENGINEERING LABORATORY

SR NO	TYPE OF TEST
	(a) Physical Tests on Fine Aggregates
1	Specific Gravity
2	Water Absorption
3	Moisture Content
4	Sieve Analysis
5	Fineness Modulus
6	Bulking of Sand
	(b) Physical Tests on Coarse Aggregates
1	Specific Gravity
2	Water Absorption
3	Dry loose Bulk Density
4	Sieve Analysis
5	Flakiness Index
6	Elongation Index

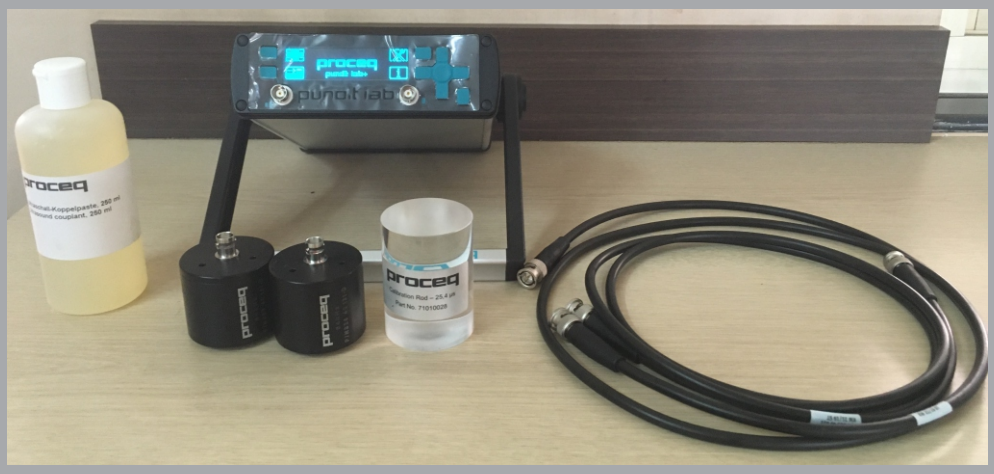
SR NO	TYPE OF TEST
	(c) Mechanical Tests on Aggregates
1	Crushing Value
2	Abrasion Value
3	Impact Value
	(d) Testing of Bitumen
1	Penetration test
2	Softening point test
3	Ductility test
4	Stripping Value test
5	Bitumen Extraction test
6	Marshall Stability Test

6) ENVIRONMENTAL ENGINEERING LABORATORY

SR NO	TYPE OF TEST
1	pH
2	Turbidity
3	Acidity and Alkalinity
4	Hardness
5	Chloride
6	C.O.D
7	B.O.D
8	D.O
9	Jar Test
10	Residual Chlorine
11	Chlorine demand

Additional charges will need to be paid for certified reports

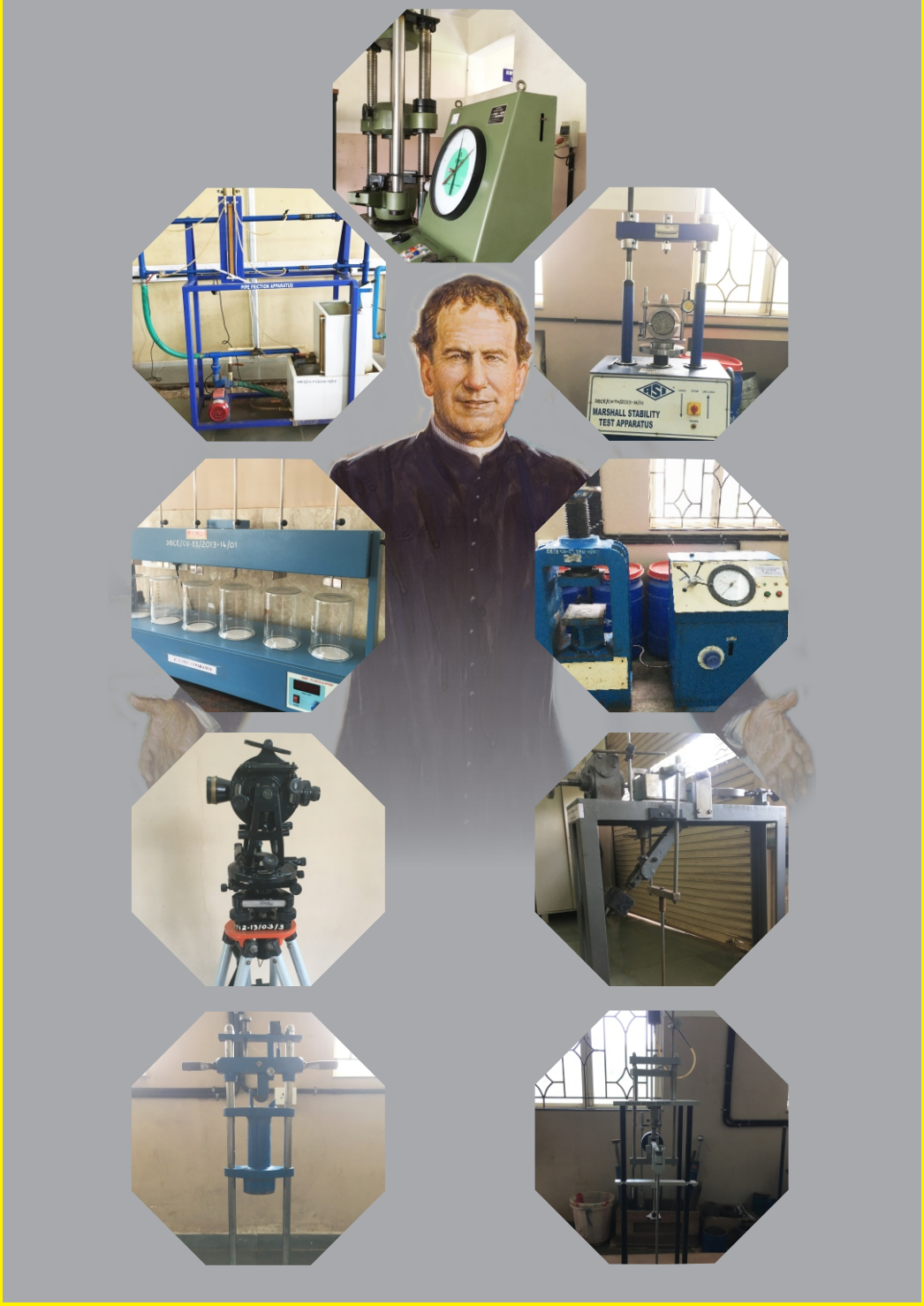
PUNDIT LAB UPV MACHINE



The Department of Don Bosco College of Engineering also offers services towards Non Destructive testing using Pundit Lab Ultrasonic Pulse Velocity machine to measure the quality and crack development measurement of concrete. The machine has the following transducer specification

1) Frequency=54 kHz±5 kHz, measuring distance up to 7m.

2) Bandwidth	<10kHz
3) Driving voltage	-1000 V to + 1000 V
4) Contact surface diameter	36.77 mm
5) Dimensions	Diameter 49.7 mm
	Length (without BNC connector) 46mm


MARSHALL STABILITY
TEST APPARATUS