



Vidyavardhini's College of Engineering & Technology
K.T. Marg, Vasai (W).

CIVIL TODAY

VOLUME - 2, ISSUE - 1

MAY 2020

EDITORIAL COMMITTEE:

FACULTY ADVISOR:

1. Mr. VIREN CHANDANSHIVE
2. Mr. VIKRANT KOTHARI

STUDENT EDITOR

1. Ms MIHIKA MALANKAR
2. Ms. KETKI PATIL

INSIDE THIS ISSUE:

- | | |
|-----------------------------|---|
| STUDENT DEVELOPMENT PROJECT | 2 |
| STUDENT DEVELOPMENT | 3 |
| STUDENTS PERFORMANCE | 4 |
| INDUSTRY CONNECT | 5 |
| FACULTY PERFORMANCE | 5 |
| INTRODUCTION TO SOIL NAILS | 8 |

CIVIL ENGINEERING

The design, construction and maintenance of the physical and naturally built environment including public works like roads, bridges, canals, dams, airports, sewage systems, pipelines, structural elements of buildings and railways is the domain of professional engineering discipline known as civil engineering. Traditionally, civil engineering has been divided into a variety of sub discipline. After military engineering, it is regarded as the second oldest engineering. The progress of civil engineering works led to the creation of the world's architectural wonders, which range from the Egyptian pyramids to the contemporary sky scrapers. Buildings, water distribution system, irrigation projects and other infrastructure includes roads, railways etc are all provided by civil engineering.

Any professional engineer who uses physical and scientific concepts to address societal issues is considered to be doing civil engineering. The evolution of knowledge in physics and mathematics has always been connected to the history of the profession. Since civil engineering is such a broad field, it is frequently divided into specialised sub-disciplines. As our understanding of structures, materials science, geography, geology, soils, hydrology, environmental science, mechanics, project management, and other civil engineering subfields has increased, these subdisciplines have grown in number. It can be challenging to imagine what your typical day might entail due to the broad nature of the Civil Engineering sector and the possibility that individuals have a highly specific area of expertise. Furthermore, if you want to keep your knowledge current, developing technologies need you to commit to lifelong learning.

The functions of the civil engineer can be divided into three categories: those performed before construction (feasibility studies, site investigations, and design), those performed during construction (dealing with clients, consulting engineers, and contractors), and those performed after construction (maintenance and research). Civil engineering today involves site investigations and feasibility studies, structural design and analysis, construction, and facilities maintenance. The design of engineering works requires the application of design theory from many fields (e.g., hydraulics, thermodynamics, nuclear physics). Research in structural analysis and the technology of materials such as steel and concrete has opened the way for new concepts and greater economy of materials. The engineering



ABOUT US:



Vidyavardhini's College of Engineering and Technology, Vasai is located on the sprawling campus of Vidyavardhini, spread over an area of 12.27 acres. It is a short, two minutes walk from Vasai Road (W) Railway Station. The college is also accessible by road from Mumbai. Vidyavardhini Society received approval from AICTE to start the new college of Engineering & Technology with effect from July, 1994. The college is affiliated to the University of Mumbai for the four year degree program leading to the degree of Bachelor of Engineering.

VISSION:

To be a premier institution of technical education, aiming at becoming a valuable resource for industry and society.

MISSION:

- To provide technologically inspiring environment for learning.
- To promote creativity, innovation, and professional activities.
- To inculcate ethical and moral values.
- To cater personal, professional, and societal needs through quality education.

SDP on Career Planning and Preparation for Competitive Exams

To increase self-awareness, explore career options among the young students so that they can acquire knowledge, skills and experiences that will help them in career decision making. A student development program was organized to enhance their ability. 5-day Student Development Program (SDP) on Career Planning and Preparation for Competitive Exams from 17th May 2020 to 22nd May 2020 by the alumni of Civil Engineering Department of our college. The webinar was conducted online on Zoom and it was streamed on YouTube. Setting an aim and achieving it, requires a lot of arduous work and proper direction to move in. A career plan lists short- and long-term career goals and the actions you can take to achieve them. Career plans can help you make decisions about what classes to take, and identify the extracur-

ricular activities, research, and internships that will make you a strong job candidate. It is true that competitive exams are not that easy to ace it, but it is also not something impossible. With proper guidance and hard work, you can easily crack any competitive exam. And For the same as a guidance to young graduates, we had conducted this program wherein our Civil Engineering Department Young Alumni who were focused about their career and have achieved great positions at young age had shared their experiences with the audience. How to choose an effective career path, what to study, how to study, where to get the study materials, which website to be checked for the updates, all such guidance was provided by the alumni.

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY, VASAI
FOUNDER PRESIDENT LATE. PANDURANGHAR DRAUSHAH VARTAK
(APPROVED BY AICTE AND AFFILIATED TO MUMBAI UNIVERSITY)

DEPARTMENT OF CIVIL ENGINEERING PRESENTS
5- DAYS STUDENT DEVELOPMENT PROGRAM
CAREER PLANNING AND PREPARATION FOR COMPETITIVE EXAM
17/05/2020 TO 21/05/2020
FROM 4:00 PM TO 5:30 PM

DAY 1 TUSHAR PANIGRAHI QUALIFIED RAILWAY RECRUITMENT BOARD (RRB) EXAM ASHTAVEER MHASHILKAR SUB ENGINEER (CIVIL) MUNICIPAL CORPORATION OF GREATER MUMBAI BHUSHAN JAWARKAR WATER CONSERVATION OFFICER, CIVIL AND WATER CONSERVATION DEPARTMENT, MAHARASHTRA	DAY 2 YASH RANER M.S. CONSTRUCTION MANAGEMENT, NEW YORK UNIVERSITY, U.S.A. SHIVANI MEHER MSc ENVIRONMENTAL AND RESOURCE MANAGEMENT, BRUNNEN, TECHNICAL UNIVERSITY OF BERGAMO ANKIT SHETTY MASTER OF ENGINEERING (STRUCTURAL), UNIVERSITY OF MELBOURNE, AUSTRALIA	DAY 3 CHIRAG PATIL MAKARAND PANDIT MACMA INFRA CONSULTANT, MUMBAI GAURAV PATIL C.E.O AT SAURAV ENTERPRISES, CHILPLUN, RAJASTHAN NISHANT MADHAVI CONTRACTOR AT BUILDER'S DECK, MUMBAI
DAY 4 NISHANT SAWANT MASTERS OF URBAN TRANSPORT SYSTEM (TRANSPORT PLANNING), CEPT, GUJARAT DARSHAK SUREJA ADMITTED INTO INTERNATIONAL MANAGEMENT INSTITUTE, NEW DELHI ASHUTOSH LOPES PROJECT ENGINEERING MANAGEMENT AT WOLANS, PUNE	DAY 5 MAYURESH MALEKAR M.TECH IN TRANSPORTATION SYSTEMS ENGINEERING, IIT BANGALORE SAGAR GOHIL M.TECH IN STRUCTURAL DYNAMICS, IIT ROORKEE AKSHAY PATIL M.TECH IN ENVIRONMENTAL AND WATER RESOURCES ENGINEERING, CEES, PUNE	

TELEGRAM: https://t.me/joinchat/J_p9lr3oEQqlk8u6Fv7vQ

REGISTRATION: <https://forms.gle/gBYmH51KVg7vCsy6>

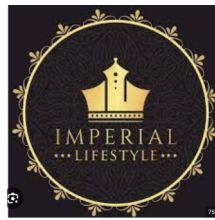
CONTACT
MRS. PUJA KADAM - 9049987618
MR. JAYDEEP CHOUGALE - 9665491512

MR. VIREN CHANDANSHIVE - 9112196004
DR. SUNIL KIRLOSAR - 9967654472

INDUSTRIAL TRAINING

List of companies Providing Industrial Training to our Students:

1. Aditya Enterprises
2. Hiranandani Group of Companies
3. HG Associates, Vasai
4. Imperial Lifestyle Pvt. Ltd.
5. Maxus Prime Realty



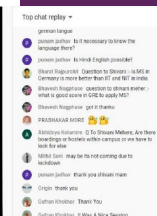
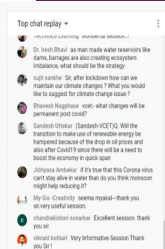
STUDENT DEVELOPMENT ACTIVITIES

"Learning is a treasure that will follow its owner everywhere." Expert technical lectures at colleges and universities teach students a lot. For the benefit of the learners, experts in their particular technical fields provide their knowledge through **Expert technical lectures.**

1. **Mr. Shreedhar Behare** delivered lectures on *"Career guidance and shared experience with Gammon India Pvt. Ltd."*.

Student Development Program

1. Five days webinar on prominent areas of civil engineering .
2. Alumni of VCET 2016 to 18 batch gave webinar on Career planning and preparation for competitive exam.
3. Webinar on advance techniques in concrete technology
4. Webinar on Worldwide climate change post COVID-19



INDUSTRIAL VISITS

Civil engineer is nothing without its practical application. For the growth of the student , department have organized various industry visit for the students which gave students an outside approach to the world of knowledge. In this context

1. Visit to **Sewage Treatment Plant** at Gokul township at Virar (W). This visit helped the students to understand

the various processes adopted for treatment of sewage water and how such water are used for further application.

STUDENTS ACHIEVEMENTS:

- ♦ **Mr. Jayprakash Gupta and Mr. Pankaj Yadav** have cleared Gate 2020 with a score of 49.35 and 36.35.
- ♦ **Mr. Vishal gupta, Mr. Ashwin Pillai and Mr. Akash Barmal** received best paper award on “Study of effect of orientation of column and position of shear wall on G+3 storey earthquake resisters structure” in VNC-2020 TASU.
- ♦ **Mr. Siraj Sabir Jamadar, Ms. Shruti Suresh Belekar, Mr. Raunak Udaykumar Singh and Ms. Jyoti Niwas Manjrekar** have received best paper award on “Application of Analytical Hierarchy Process (AHP) in Construction work” in VNC-2020 TASU
- ♦ **Mr. Kushal Patel, Mr. Sandesh Uttekar, Ms. Shreya Ghosalkar and Mr. Abhishek Parmar** have qualified the zonal level and participated in the university level for the avishkar competition by Mumbai University.
- ♦ **Mr. Loen Gonsalves** successfully completed AIESEC leadership development experience through a Global Volunteer Opportunity tackling the Sustainable Development Goal Reduced Inequalities at Kyiv, Ukraine.

SPORTS ACHIEVEMENTS

Sr. No.	Name of Student	Sport in AVAHAN	Position
1	Vishal.V.Gupta, Niraj Bhilare, Pratik Patil, PruthvirajPatil, Yuvaraj Kokare, Mehul Neman, Nikhil Patil, Lovelesh khatarkar, Yogesh Pawar, Yogesh Mule, Rishikesh Taral, Sahil Shinde, Shubham Uttekar	Boys kabbadi	Winner
2	Lovelesh khatarkar , Vishal .V.Gupta, Pruthivira patil, Mehul Nemon, Ninad kadu, Pravin Ghuge, Dhammadip Kamble, Tejas Gadekar, Ankit agaware, Gurpreet Marwaha, Chinmany pawar, Shivan Mistry, Smith Saraf.	Over arm Cricket	Runner up
3	Yogita Alave, Shreya Ghosalkar, Jyoti Manjarekar, Harshada solkar, Yukta Gharat, Anisha sapatale, Siddhi Nilesh Redkar, Rasika khedekar, Tejaswini Karudekar.	Girls Box Cricket	Runner up
4	Dhammadip Kamble and Sanket Sakpal.	Boys carrom doubles (TE CIVIL)	Winner
5	Smagy Ashok Makhwana	Girls carrom singles (BE CIVIL)	Winner
6	Riya Raut	Table tennis singles (SE CIVIL)	Winner
7	Riya Raut and Kushagra Goel	Table tennis Mixed (SE CIVIL)	Runner up
8	Dhammadip Kamble	Boys carrom singles (TE CIVIL)	Runner up
9	Siddhi Redkar	Chess Singles (SE CIVIL)	Runner up

FACULTY ACHIEVEMENTS:

- ◆ Ms. Puja Kadam has published paper on “Prediction of Coronavirus Covid 19 cases using Linear Regression and Support Vector Machine” in International Journal of Advanced Science and Technology.
- ◆ Ms. Puja Kadam has participated and presented a paper entitled, “Determination of Efficiency of Roughing Filter for Grey water Treatment”, in Vidyavardhini’s National Conference on Technical Advancements for Social Upliftment held in our college
- ◆ Ms. Anu Murali has participated and presented a paper entitled, “Coastal Protection Measures for Shoreline of Mumbai : Review and Case studies”, in Vidyavardhini’s National Conference on Technical Advancements for Social Upliftment held in our college
- ◆ Mr. Arbaz Kazi has participated and presented a paper entitled, “Experimental Investigation of Clayey Soil mixed with Rubber Flash”, in Vidyavardhini’s National Conference on Technical Advancements for Social upliftment held in our college.
- ◆ Mr. Vikrant Kothari has participated and presented a paper entitled, “Viability of Sand Alternatives”, in Vidyavardhini’s National Conference on Technical Advancements for Social Upliftment held in our college
- ◆ Mr. Viren Chandanshive has participated and presented a paper entitled, “Application of Artificial Neural Network in Environmental Engineering”, in Vidyavardhini’s National Conference on Tech-

Seminars/Workshops/STTPs/Orientation Programs Attended

SR. NO	TYPE OF PROGRAM	NO. OF COURSES	NAME OF FACULTY	DURATION
01	AICTE APPROVED FDP'S	03	Mr. VIREN CHANDANSHIVE, Mr. ARBAZ KAZI	ONE WEEK
02	NITTT TEACHER TRAINING MODULES	02	Ms. PUJA KADAM	2 MONTHS
03	ONE WEEK STTP'S	03	Mr. ARBAZ KAZI, Mr. VIREN CHANDANSHIVE, Mrs. ANU MURALI, Mr. VIKRANT KOTHARI	ONE WEEK
04	AICTE –NPTEL COURSES	03	Mr. VIKRANT KOTHARI, Mr. JAYDEEP CHOUGALE, Ms. PUJA KADAM	12-WEEKS

STUDENTS' PLACED

S.NO	Name of the Student	Company Name
1	SUSHANT SHANKAR GANGIA	INFOSYS
2	BHAVIK RAJENDRA SANKHE	INFOSYS
3	SMAGY ASHOK MAKWANA	INFOSYS
4	YOGITA BHIVA ALAVE	INFOSYS
5	ALKA JAIPAL SINGH	INFOSYS
6	VAIBHAVI DILIP BARI	INFOSYS
7	SANIKA TELANGAN	KHODIYAR GROUP
8	SHREYA GHOSALKAR	KHODIYAR GROUP
9	KUSHAL CHANDUBHAI PATEL	BYJU'S
10	PARAS KAMLAKAR VAIRAGADE	BYJU'S

ACADEMIC TOPPERS

B.E. TOPPERS

S.No	Name of the Student	Pointer
1	JAWARKAR BHUSHAN	9.52
2	NISAR PRIYANK	9.1
3	NACHANEKAR PRATHMESH	9.06

T.E. TOPPERS

S.No	Name of the Student	Pointer
1	PATEL KUSHAL	10
2	GUPTA JAYPRAKASH	9.73
3	JAMADAR SIRAJ	9.58

S.E. TOPPERS

S.No	Name of the Student	Pointer
1	JIVANI YASH	9.89
2	DARSHAN MEHTA	9.85
3	MAKWANA GURUPREET	9.33

PAMBAN BRIDGE

Pamban Bridge is a railway bridge that connects the town of Mandapam in mainland India with Rameswaram on Pamban Island. Opened on 24 February 1914, it was India's first sea bridge and was the longest sea bridge in India until the opening of the Bandra-Worli Sea Link in 2010. The rail bridge is, for the most part, a conventional bridge resting on concrete piers but has a double-leaf bascule section midway, which can be raised to let ships and barges pass through. Until 1988, the Pamban bridge was the only surface transport that connected Tamil Nadu's island of Rameswaram to the mainland India. On 23 December 2022, the bascule of this bridge was damaged due to extreme corrosion and so the sensors gave continuous warning signal which suspended transportation on the bridge for permanently. The last train which was officially ran on this bridge was Train no. 07695 Secunderabad Rameswaram Special which completed its commercial journey on the day end of 22 December 2022

In 1988, a road bridge was also constructed parallel to the rail bridge. This road bridge is also known as Annai Indira Gandhi Road Bridge. The Annai Indira Gandhi Road Bridge connects the National Highway (NH 49) with the Rameswaram island. It stands on the Palk Strait and between the shores of Mandapam (a place on the Indian mainland) and Pamban (one of the fishing towns on Rameswaram island). It was inaugurated by then Indian Prime Minister Rajiv Gandhi on 2 October 1988. This 2.345 km long bridge took close to 14 years to be completed.

The Pamban railway bridge spans a 2.06 km wide strait between the Indian mainland and Rameswaram Island. The mainland end of the bridge is located at $9^{\circ}16'56.70''\text{N}$ $79^{\circ}11'20.12''\text{E}$. The bridge is located in a corrosive marine environment, making its maintenance a challenging job. The location is also a cyclone-prone, high-wind-velocity zone.



-Prakash Panda
(Asst. Prof. Civil Engineering Department)

An Introduction to Typical Soil Nails

Ground excavations can be supported using a variety of methods. These shoring solutions for excavation support can be broadly divided into two categories: internal and external (FHWA, 1999). The usage of berms, rakers, anchors, cross-lot bracing, and cantilever walls are only a few examples of the materials that can be used in external support systems, which rely on the resistance offered by objects beyond the face of the excavation. Internal support methods make use of components like soil nails and rely on installing reinforcement into the already-existing ground.

Since its introduction in Europe in 1970, the soil nailing technique has been used for civil engineering projects in Mexico City dating back to the 1960s. Cementitious grouted drilled nails, post-grouted driven nails, percussion-driven nails, jet nails, and other types of nails have all been developed and refined during the evolution of soil nailing technology.

The fundamental idea behind soil nailing is to reinforce and fortify the existing ground by embedding narrow steel bars, or 'nails', into a slope as building takes place from the top down. Through this procedure, a strengthened piece is created that is both stable and capable of holding the earth beneath it. The reinforcements are passive, and they generate their reinforcing activity as a result of nail-ground interactions during and after construction as the ground stretches.



-By Mr. Vikrant Kothari
(Asst. Prof. Civil Engineering Department)

MOTIVATIONAL THOUGHTS FROM FACULTY OR STUDENTS



To the optimist,
the glass is half full.
To the pessimist,
the glass is half empty.
To the engineer,
the glass is twice as big
as it needs to be.