



# 2025

JUL-DEC | VOL VIII ISSUE 02

## NeOCi

***News of Civil***

**NBA Accredited**

## VISION

To provide a dynamic learning platform in the area of Civil Engineering with global perspectives, to make the students socially responsible and technically competent for innovation and entrepreneurship.

## MISSION

- To develop well-equipped modern laboratories and infrastructure for conducive teaching learning environment.
- To promote innovative education system, research and consultancy work for industrial and societal needs.
- To enhance ethically strong professional and entrepreneurship skills to manage turnkey projects.
- To inculcate the value system in the students to provide socially responsible and eco-friendly solutions in the field of construction industry.

## PROGRAM EDUCATIONAL OUTCOMES (PEO's)

- The graduates shall be able to apply technical knowledge and skill for solving real-world Civil Engineering problems.
- The graduates shall be able to engage themselves to achieve expertise in analysis and design of structures by modern Civil Engineering tools and techniques.
- The graduates shall become responsible technocrats to deliver environmental friendly sustainable solutions.
- The graduates shall become capable to demonstrate the best Civil Engineering practices through adaptations to ethics and bye-laws.
- The graduates shall be able to pursue their career as professional entrepreneur in the field of Civil Engineering.

## PROGRAM SPECIFIC OUTCOMES (PSO's)

- Graduates will be able to apply fundamental and technical knowledge to solve day-to-day societal problems related to the field of civil engineering.
- Graduates will achieve expertise in design and analysis of structures using modern civil engineering tools.
- Graduates will have lifelong learning habits to achieve functionally efficient, cost effective and safe solutions for modern infrastructure development.
- Graduates will have the ability to become skilled professionals or entrepreneurs committed to ethical practices and sustainable, eco-friendly engineering solutions.



## HoD'S MESSAGE

I warmly welcome all students and faculty members to the beginning of the new even semester, which I prefer to call the Spring Semester as it symbolizes renewal and a closer connection to nature. During this semester, our final-year students will undertake a one-semester internship, providing them with valuable exposure to industrial practices and professional work culture. Several development activities are currently underway on the campus, including the completion of a new boys' hostel and the laying of a new drainage line, reflecting our continuous efforts to improve infrastructure. The previous semester was vibrant and productive, with numerous expert lectures, as well as cultural and sports activities that contributed significantly to the holistic development of our students. I am also pleased to share that the NBA peer team recently visited the department to assess our accreditation status, and it gives me immense pleasure to inform you that the department has been accredited by NBA for the third consecutive time, valid until December 2028. I extend my heartfelt congratulations to all students and faculty members for this collective achievement and encourage everyone to continue striving for excellence.



**Dr. Navneet P. Singh**  
**Prof. & Head**  
**Civil Engineering Dept.**

**Prof. M. V. Chauhan** attended a five-day Faculty Development Program on “Recent Development in Design, Material & Construction Practices in Civil Engineering”, organized by Shantilal Shah Engineering College, Bhavnagar, from 18th to 22nd August 2025.

**Prof. P. B. Mistry** successfully completed a MOOC course on “Introduction to Seismology” during July–October 2025

**Prof. D.R. Rawat** attended and successfully completed a five-day FDP on “Application of Machine Learning in Civil Engineering (AMLCE-2025)”, organized in hybrid mode by the Department of Civil Engineering, NIT Raipur, from 22nd to 26th September 2025. She also successfully completed a MOOC course on “Carbon Accounting and Sustainable Designs in Product Lifecycle Management” during July–October 2025.

**Prof. A. N. Dave** successfully completed a MOOC course on “Basic Environmental Engineering and Pollution Abatement” during July–October 2025 and also participated in an AI workshop at I-Hub, Ahmedabad.

**Prof. Dr. U. D. Pandya** successfully completed a MOOC course on “Micro Irrigation Engineering” during July–October 2025

**Prof. Bhagyesh C. Contractor** successfully completed a 12-week online MOOC course on “Urban Utilities Planning: Water Supply, Sanitation and Drainage” during July–October 2025

● An Expert Lecture on “Advancement in RCC Mix Proportioning, Processes, Opportunities & Challenges in Current Practices” was conducted on 4th August 2025 at Visvesvaraya Auditorium (A-Block) from 2:00 PM onwards, in collaboration with Ultratech Cement Pvt. Ltd. The session was delivered by Mr. Jay Shah, Territory Manager, Ultratech Cement Pvt. Ltd., and witnessed enthusiastic participation from 160 students.

The event was coordinated by Prof. M. V. Chauhan and Dr. B. G. Buddhdev, with student coordinators Hargy Chaudhary, Tirth Rampariya, Nirav Vaghela, Nishant Prajapati (Sem 5) and Sneh Sodvadiya, Prachi Patil, Himani Chavda (Sem 3).

● VGEC's Civil Engineering Department organized an expert lecture on “Mental Health and Wellness: Building Resilience in Academic Life” on 18th September 2025 for Semester 1 and 3 students. The session, delivered by Ms. Jitakshi Bhatt, focused on stress management, emotional resilience, and the importance of mental well-being in academics. Students gained valuable insights into common mental health challenges and practical self-care strategies. The event was coordinated by Prof. D. R. Rawat and Prof. A. N. Dave, with support from the student coordinator team.

● The Applied Mechanics Department, organized a 5-Day Workshop on Software Learning: Basic to Advanced Training on STAAD Pro from 24 February to 01 March 2025 at the N Block Computer Lab.

The workshop aimed to provide students with comprehensive knowledge of structural analysis and design using STAAD Pro. Participants gained hands-on experience in modeling, loading, analysis, and interpretation of results, thereby strengthening their understanding of real-world structural engineering applications. The program successfully enhanced students' technical competence and software proficiency relevant to industry standards.





● The Applied Mechanics Department conducted a seminar on “BIM-Driven Construction Design: A Modern Approach” on 25 July 2025 at the Vishveshvariya Auditorium, A Block.

The session was delivered by Mr. Sani Choursiya, CADD Centre, Ahmedabad, who provided valuable insights into Building Information Modeling (BIM) and its role in modern construction practices. The seminar highlighted the advantages of BIM in project planning, coordination, and efficient design management. Students benefited from exposure to emerging digital technologies and current industry practices.

● An expert talk was organized on “Career Opportunities in Engineering” on 19 September 2025 at the A Block Auditorium, VGEC, from 11:30 AM to 12:30 PM. The session was delivered by Ms. Payal Chaudhari from PDPU, who shared valuable insights on diverse career paths available in the field of engineering. The talk focused on emerging opportunities, skill development, higher studies, and industry expectations, guiding students to make informed career decisions. The interactive session encouraged students to explore their interests, align their skills with industry demands, and plan their professional journey effectively.





## Another Milestone in Our Foundation

We are thrilled to share that the Civil Engineering Department of Vishwakarma Government Engineering College has successfully attained NBA (National Board of Accreditation) status for the next three academic years.

What does this mean for our VGEC Family?

**Quality Assured:** From our state-of-the-art teaching-learning module to our Outcome-Based Education (OBE) model, every aspect of our department has been vetted by the competent authorities.

**Continuous Improvement:** Drives self-reflection, innovation, and constant quality enhancement.

**Preferred by Employers:** NBA accreditation is a seal of trust that ensures our students are "Industry-Ready."

"This achievement is a testament to the tireless efforts of our faculty, the dedication of our students, and the unwavering support of our alumni. We continue to build a legacy that is as resilient as the structures we design." — Head of Department, Civil Engineering





Aayushi Shah  
SEM 6, 8.83 SPI



Krisha Nayak  
SEM 6, 8.43 SPI



Krisha Patel  
SEM 6, 8.39 SPI



Yash Badoliya  
SEM 4, 8.91 SPI



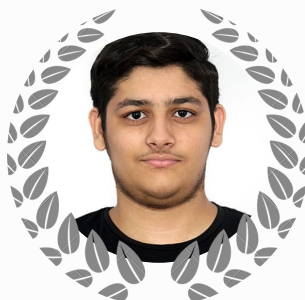
Tanvee Panchal  
SEM 4, 8.30 SPI



Ayan Mansuri  
SEM 4, 8.0 SPI



Prachi Patil  
SEM 2, 8.91 SPI



Sarthak Prajapati  
SEM 2, 8.91 SPI



Jay Gajjar  
SEM 2, 8.78 SPI

“To rank is to distill complexity into simplicity, a task both illuminating and inherently imperfect.”

# SUCCESS

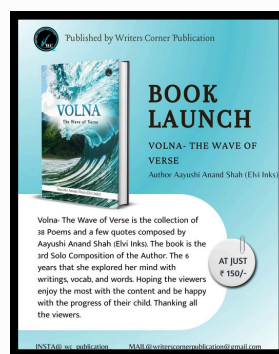


## STUDENT'S ACHIEVEMENTS

Cadet Priyanshu Joshi, a first-year Civil Engineering student and proud NCC cadet of our college, has been recommended for the 53rd TES course with an impressive AIR 10. He is currently training at MCEME, Secunderabad, and will complete his final year at IMA, Dehradun. Soon, he will be commissioned as an officer in the Indian Army—bringing pride to the entire VGEC fraternity. He shared that NCC played a major role in his achievement.



The 3rd Solo Book of Aayushi Anand Shah "Volna- The Wave of Verse" has been launched on 25th December 2025. She has compiled more than 30 books, designed one magazine (Tejasvi - The Imperishable), and has inked the collection of poems and quotes in 3 solo books (Volna- The Wave of Vocab, Volna- The Wave of Rhythm and Volna- The Wave of Verse). She also explores book cover designing and many other creative genres.



The International Experience Program (IEP) follows a well-structured procedure that ensures the smooth selection and participation of students. The process begins with applying to the IEP, after which students are shortlisted through a merit-based selection process, requiring a minimum CGPA of 7.4. Based on this criterion, a final selection list is prepared and announced. Once selected, students must obtain formal approval from their parents as well as the concerned faculty members. This is followed by the passport and visa application process, which includes completing necessary documentation and fulfilling travel requirements. After all formalities are completed, the date of flight is finalized, and students embark on their journey to Malaysia.

The experience of the trip was truly unique, enjoyable, and memorable. Visiting a new country exposed students to a different education system and culture, while also teaching them how to adapt and settle into a new environment. The program maintained a good balance between academic lectures and extracurricular activities, making learning engaging and interactive. Students also explored famous landmarks and tourist attractions of Malaysia such as the Petronas Twin Towers, Batu Caves, Genting Highlands, and Putrajaya. Although there were limited food options for vegetarians, students adjusted well and supported each other, making the overall experience enriching and rewarding.



# Who am I?

I harden when cracked,  
I heal without a doctor,  
I reduce maintenance cost.  
I am not alive, yet I repair myself.

✓ Answer: Self-healing concrete

I replace cement,  
Reduce CO<sub>2</sub>,  
Come from power plants,  
And make structures greener.

✓ Answer: Fly ash

I take compression,  
I fear tension,  
I love arches and domes,  
And I've existed since Roman times.

✓ Answer: Masonry

I get weaker in summer,  
Stronger in winter,  
Flow under load,  
And crack when too cold.

✓ Answer: Bitumen

I measure angles,  
I guide alignment,  
I sit on a tripod,  
And define precision.

✓ Answer: Theodolite

### 1. Eco-friendly Jute Geo cells Revolution

Researchers in India (NITK + industry partners) have developed industrial-scale jute geo cells to replace plastic ones in slope stabilization and road construction — stronger and up to 80% cheaper, with dramatically lower environmental impact!

### 2. AI Is Now Part of Engineering Tools

AI isn't just a concept anymore — engineers use AI for real-time structural monitoring, automated design optimization, and safety forecasting, increasing productivity by up to 20–30% on some projects.

### 3. Self-Healing Concrete

A breakthrough material trend in 2025: self-healing concrete that uses bacteria or capsules to automatically seal cracks — increasing durability and reducing repair costs.

### 4. Digital Twinning: Virtual Infrastructure

Real-world bridges, buildings, and roads are now duplicated digitally (called digital twins) that continuously monitor performance and predict maintenance needs, reducing failures and costs.

### 5. Teaching with VR in Surveying

Emerging virtual-reality platforms train students in immersive surveying skills — from leveling to drone navigation — making field training safer and more engaging.

### 6. The Rise of "Living" Infrastructure

- **The Fact:** In 2025, a Dutch startup began scaling Bioreceptive Concrete. Unlike traditional concrete that repels nature, this version encourages moss growth. The moss doesn't just look cool; it captures CO<sub>2</sub> and converts it into harmless chalk, effectively making the wall a carbon sink.
- **Student Takeaway:** We are moving from "sustainable" (doing less harm) to "regenerative" (doing active good).

### 7. Robot Bricklayers are Here

- **The Fact:** Meet Hadrian X, the world's fastest bricklaying robot. As of 2026, it can lay over 300 blocks per hour—that's roughly 5 to 6 times faster than a human. It can build the walls of a standard house in a single day.
- **The Fun Part:** It uses a specialized adhesive instead of traditional mortar, which makes the structure even stronger and provides better thermal insulation.

# CIVIL ENGINEERING WORD SEARCH

## Civil Engineering Word Search

Find 15 civil engineering terms in the grid

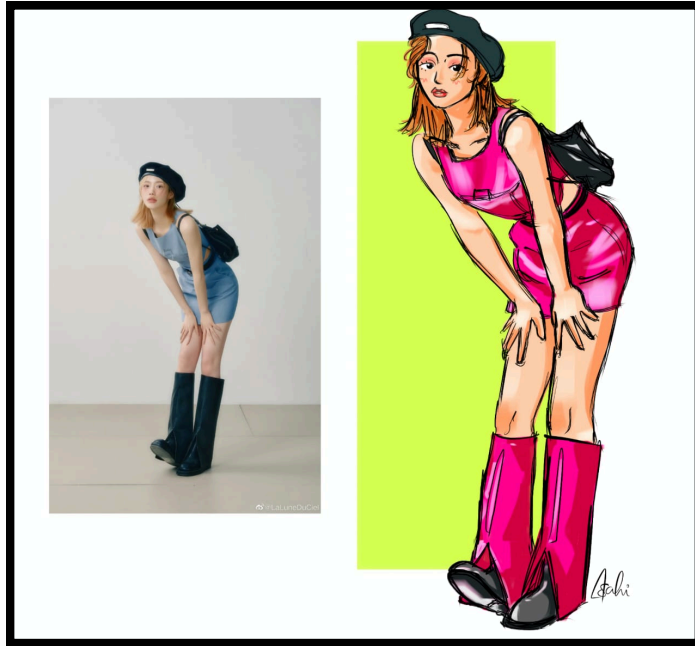
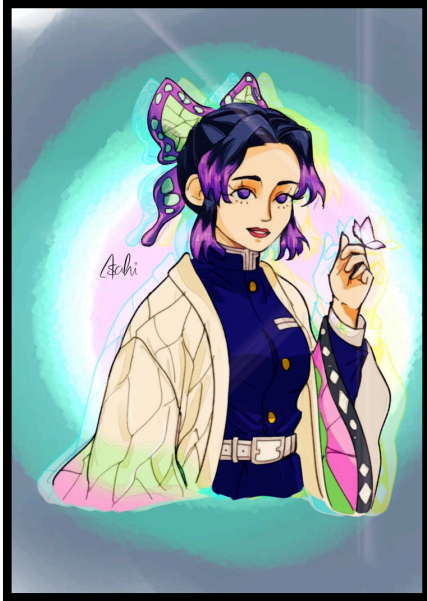
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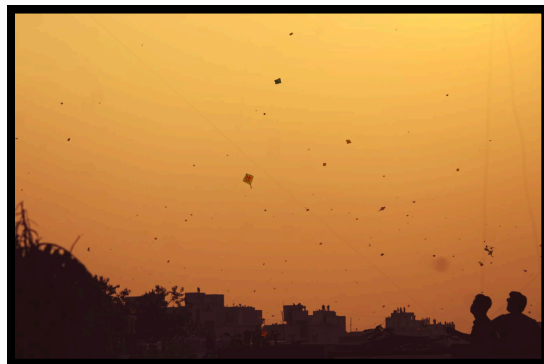
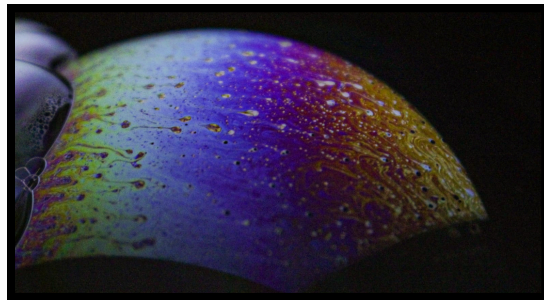
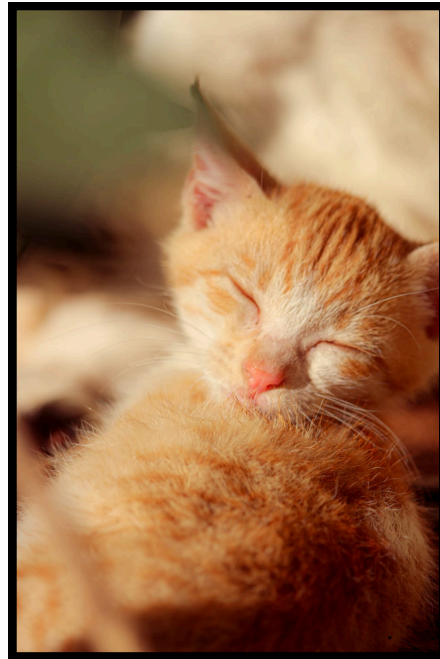
### Words to Find

**BRIDGE, CONCRETE, STEEL, FOUNDATION, BEAM,  
COLUMN, TRUSS, SURVEY, SOIL, HYDRAULIC,  
STRUCTURE, DESIGN, LOAD, STRESS, STRAIN**



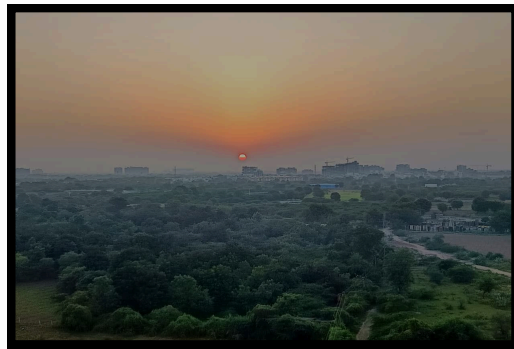
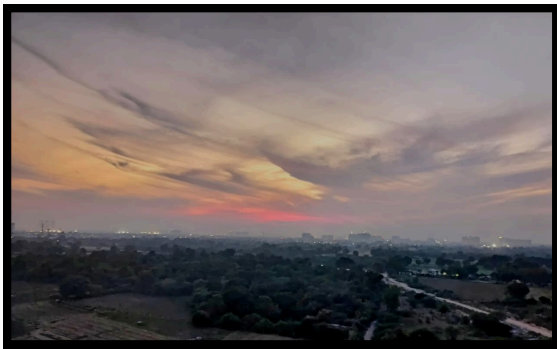
DIGITAL ART BY  
KARANSINH  
RATHOD (ASAHI)





**PHOTOGRAPHY  
CANVAS BY  
PRANJAL VINZUDA**





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