

# Department Of Civil Engineering

# CIVIL CHRONICLES

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## VISION

To grow as a globally recognized centre in civil engineering with a focus on innovation and research by combining technical and ethical qualities.

## MISSION

### M1 : Professional Skills

To provide a better environment to encourage innovative and research thinking among students.

### M2 : Life-Long Learning

Instill in students contemporary knowledge in order to achieve academic and professional excellence with global perspective through experience of lifelong learning.

### M3 : Engage with Society

Impart a sense of community responsibility and leadership qualities to better meet the challenges of sustainable growth.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

### PEO1

Achieve excellence in the professional practices of Civil Engineering by utilizing the acquired knowledge and technical skills supported by modern day tools.

### PEO2

Participation in decision making and nation building by adopting energy efficient and sustainable practices in Civil Engineering.

### PEO3

Encourage innovative thinking and entrepreneurship by research and higher studies in advanced areas of Civil Engineering.

## PROGRAM SPECIFIC OUTCOMES (PSOs)

### PSO1

To solve engineering problems related to Civil Engineering by systematic techniques, skills and tools to meet the ever growing needs of sustainable infrastructural development.

### PSO2

Design and build Civil Engineering-based systems in the context of structural, geotechnical, transportation and environmental requisites.

## PROGRAM OUTCOMES (POs)

### PO1

Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

### PO2

Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

### PO3

Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

### PO4

Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

### PO5

Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

### PO6

The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

### PO8

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

### PO10

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

### PO11

Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

### PO12

Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

# INAUGURATION OF INDIAN GEOTECHNICAL SOCIETY STUDENT CHAPTER STM



**Vandana Sreedharan inaugurates the IGS Student Chapter at STM**



**Lighting the lamp during inauguration**



**Dignitaries on dais for inaugural function**



**Ms. Vijila Balakrishnan introduces the Chief Guest**

The Department of Civil Engineering at STM proudly inaugurated the Indian Geotechnical Society (IGS) Student Chapter on February 11, 2025. This momentous occasion, organized in association with the Civil Engineering Association – SATTVA, marked the beginning of an exciting journey for aspiring geotechnical engineers.



**Dr. Vandana Sreedharan addresses the audience**

The event was graced by Dr. Vandana Sreedharan, Honorary Secretary of IGS Calicut Chapter and HOD of Civil Engineering at the Government College of Engineering, Kannur, who served as the Chief Guest. In her insightful inaugural address, she emphasized the significance of geotechnical engineering in sustainable infrastructure and encouraged students to actively

engage in research and industry collaborations. The event witnessed enthusiastic participation from students of S8 CE (2021-25), S6 CE (2022-26), and S4 CE (2023-27), along with faculty members and distinguished guests. The inauguration was led by Ms. Vijila Balakrishnan (HOD, CE) and Ms. Raveena Rajesh (Assistant Professor, CE), with a warm welcome by Ms. Adithya P. P. (Student Coordinator). Mr. Rijo Thomas Jose (CEO) delivered the felicitation address, appreciating the initiative and motivating students to leverage such platforms for skill development. The event concluded with a vote of thanks by Ms. Nandana T. V. (Student Coordinator).



**Mr. Rijo Thomas Jose addresses the audience**



**Chief Guest, Dr. Vandana Sreedharan, with STM students and staff**

This newly established IGS Student Chapter aims to bridge the gap between academics and industry by providing students with opportunities to engage in seminars, workshops, expert lectures, and site visits. With continuous support from faculty and professionals, the chapter will serve as a platform for students to innovate, collaborate, and excel in geotechnical engineering.



**Attendees at the inaugural function**



# EXPERT TALK ON UNDERSANDING SOIL BEHAVIOUR BY Dr. VANDANA SREEDHARAN



**Dr. Vandana Sreedharan delivers an expert talk on 'Understanding Soil Behaviour'**



**Dr. Vandana Sreedharan addresses the audience**



**Attendees at the inaugural function**



**Chief Guest, Dr. Vandana Sreedharan, with STM students and staff**

The expert talk on "Understanding Soil Behaviour," organized by the Civil Engineering Department in association with the IGS Student Chapter STM on February 11, 2025, was aimed at enhancing awareness and knowledge in soil mechanics and geotechnical engineering. Delivered by Dr. Vandana Sreedharan, Professor and HOD at Government College of Engineering, Kannur, and Honorary Secretary of the IGS Calicut Chapter, the session provided valuable insights into soil properties, their behavior, and their applications in various engineering fields. The event was inaugurated with a formal introduction of the IGS Student Chapter at STM, marking a significant step in fostering geotechnical learning and research among students. Dr. Vandana Sreedharan, a distinguished academic with over 26 years of experience in geotechnical and geo-environmental engineering, shared her expertise on fundamental

soil concepts, including soil formation, classification, and engineering properties, along with real-world challenges such as soil settlement, liquefaction, and slope stability. The talk highlighted key aspects like soil-water interaction, Atterberg limits, shear strength, consolidation, and bearing capacity, making the session highly interactive and informative. The event was well-received, with students actively engaging in discussions and queries, making it an enriching learning experience. The feedback from participants reflected the effectiveness of the session, with the majority rating the event as excellent in terms of content relevance, knowledge delivery, and academic quality. The expert talk successfully achieved its objective of equipping students with foundational and advanced geotechnical concepts, fostering problem-solving skills, and emphasizing the significance of soil behavior in civil engineering projects.

## SITE VISIT AT PINARAYI EDUCATIONAL HUB

The site visit to the Pinarayi Educational Hub, organized on March 5th, 2025, by the Civil Engineering Department of St. Thomas College of Engineering and Technology, provided an excellent opportunity for students to gain practical insights into construction methodologies. The hub, inaugurated by Chief Minister Pinarayi Vijayan, is a major educational initiative in Kannur, Kerala, developed with an investment of ₹285 crore across 12.93 acres. During the visit, strict safety measures were followed, including the use of personal protective equipment such as helmets, reflective vests, safety shoes, and gloves. Various construction stages were observed, including the ITI building, Polytechnic Building, Kerala Institute of Hospitality Management (KIHM), and IAS Academy. The ITI building, designed as a Ground + 7 structure, featured reinforced foundations with M35 grade concrete, shear walls for stability, and appropriate reinforcement using GI wires. Similarly, the Polytechnic Building incorporated robust waterproofing using High-Density Polyethylene (HDP) membranes to prevent water infiltration.

The KIHM building used isolated and combined foundations to ensure load distribution, while the IAS Academy was in its foundational stage with precise land surveying using Total Station equipment. Quality assurance was demonstrated using the Compression Testing Machine (CTM) for testing concrete strength, confirming that M35 and M25 grade concrete achieved strengths above their respective standards. Overall, the visit offered valuable exposure to real-world civil engineering applications, enhancing students' understanding of structural integrity, material quality, and safety management.



**Snapshot from site visit at Pinarayi Educational Hub**





Polytechnic Building



Construction stage for KIHM & IAS Academy



Total Station



Group Photo from Pinarayi Educational Hub

## IGS NEWS LETTER CUTTING

### IGS Calicut Chapter

The IGS Student Chapter STM organized a site visit on March 5, 2025, to the Pinarayi Educational Hub, giving students hands-on experience with real-world engineering applications. The visit focused on foundation construction

at this major educational initiative inaugurated by Chief Minister Pinarayi Vijayan on August 22, 2024. The ₹285 crore project spans 12.93 acres and will integrate various educational institutions with modern facilities for both domestic and international students.

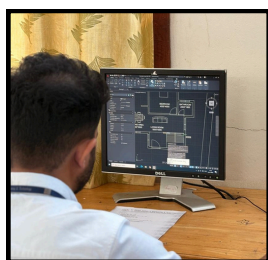
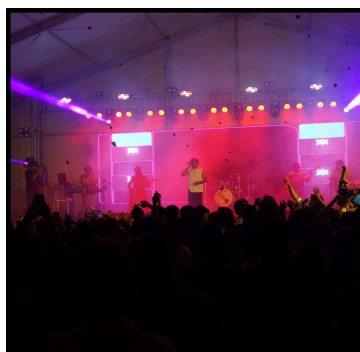
Students received a safety briefing before exploring different construction phases across multiple buildings. The site's soil, with bearing capacity exceeding 300 kN/m<sup>2</sup>, influenced the foundation design, resulting in isolated and combined footings for structural stability. Students participated in field tests including density tests and concrete compressive strength tests, gaining practical insights into construction quality control.

This enriching experience bridged the gap between theoretical knowledge and practical application, reinforcing students' enthusiasm for civil engineering and their desire for more such opportunities to enhance technical expertise.





# THE NATIONAL TECHNO CULTURAL FEST: X-TASY 2025



X-tasy 2025, the National Techno Cultural Fest, held on April 2nd, 3rd and 4th, 2025, at St Thomas College of Engineering and Technology, featuring vibrant array of technical competitions, cultural performances, leaving behind legacy creativity, and memories to cherish, and setting

The technical competitions were a highlight of the festival, with events such as Wizard, Cad Mania, Open Sim Sim, Built Xtra, Terraria, Project High Rise, Podium, Arkrete, and Tower Takedown. These events tested students' technical knowledge, problem-solving and creativity, and were judged by industry experts and faculty members.

## Technical Competitions:

### Wizard:

A technical quiz held on April 3rd, with up to 40 KTU activity points and a prize worth 3,000, that tested students' knowledge in civil engineering, with a focus on construction technology, materials science, and structural analysis.

### Cad Mania:

An AutoCAD design competition held on April 4th where students had to create innovative designs using computer-aided drafting software.

### Open Sim Sim:

A treasure hunt held on April 4th that required students to solve puzzles and clues related to civil engineering concepts.

### Built Xtra:

A bridge-making competition held on April 2nd where students had to design and build bridges using different materials and techniques.

### Terraria:

An adventure meet held on April 2nd where students had to navigate through obstacle courses and challenges related to civil engineering.

### Project High Rise:

A waste model-making competition held on April 3rd where students had to create models using recycled materials.

### Podium:

A technical debate held on April 19th where students had to discuss and argue on topics related to civil engineering and construction.

### Arkrete:

An arch-making competition held on April 4th where students had to design and build arches by using brick.

### Tower Takedown:

A Jenga challenge held on April 3rd where students had to build and demolish towers by using jenga blocks.

## Non-Technical Competitions:

### Face Painting:

A creative activity where students had to paint their faces with different designs and patterns.

### Nadan Pattu:

A traditional Kerala folk song competition where students had to sing and perform folk songs.

### Nostalgia:

A trip down memory lane where students had to create and perform skits and dances based on retro themes.

### Catch The Vibe:

A music and dance competition where students had to perform to different genres of music.

### Cinematic Dance:

A dance competition where students had to perform dances inspired by movies.

### Mehandi Design:

A henna art competition where students had to create intricate designs using henna.

### Photography:

A photography competition where students had to capture and showcase their best shots.

### Fancy Dress:

A costume competition where students had to dress up in creative and innovative costumes.

### Synchronous Dance:

A synchronized group dance competition where students had to perform in groups.

### Spot Dance:

An impromptu dance competition where students had to dance to random music.

Overall, X-tasy 2025 was a vibrant and unforgettable experience that brought together students, faculty members, and industry experts in a celebration of creativity, innovation, and technical excellence. The festival set a benchmark for future editions and left behind a legacy of memories to cherish.



# TECHNICAL SEMINAR CONDUCTED BY DEPARTMENT OF WATER RESOURCES

13/05/2025



Two groups of 2021-25 batch CE presenting their project in the Jalaharsham 2025 Technical seminar session conducted by the Water Resources Dept as a part of the fourth anniversary celebrations of the government, 'Ente Keralam'

## NATIONAL CONFERENCE ON RECENT ADVANCEMENTS IN ENGINEERING & TECHNOLOGY 2025

A two-day National Science and Technology Conference, focusing on emerging trends in technical fields, was successfully organized at St. Thomas Engineering College, Shivapuram.

The conference was formally inaugurated by Dr. Noby E.P., a distinguished scientist and Program Officer for the Deep Ocean Mission under India's Ministry of Earth Sciences. The event was presided over by Principal Dr. Shinu Mathew. Other key speakers included College CEO Rijo Thomas Jose and Dr. Gibi G. Thanikal, Project Scientist at the National Centre for Medium Range Weather Forecasting.

The event served as a major platform for academic exchange, featuring the presentation of approximately 100 selected research papers from various technical educational institutions across the country. Discussions were held across four venues, covering the latest innovations and future scope in key engineering disciplines, including Civil, Computer Science, Electronics & Communication, and Mechanical Engineering. A speaker highlighted the continued strong demand for engineers, noting that despite evolving educational paths, engineering remains a field with "good salary and good job opportunities today."



## PLACEMENT OFFERS



Fidha Fathima got selected in Base Builders & interiors



Diya T M got selected in QUSS Cooperation Ltd



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