

Department Of Civil Engineering

CIVIL CHRONICLES

Vol 4 , Issue 2

YEAR 2025-26



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.

SITE VISIT: KWA WATER TREATMENT PLANT, IRRIKUR

26/09/2025



As part of academic curriculum, S7 Civil Engineering of ST. Thomas College of Engineering & Technology, Kannur visited the Kerala Water Authority Water Treatment Plant JICA at Peruvathuparamba, Irrikur on 26th September 2025 to gain hands-on experience and insight into the water treatment process. This site visit provided a unique opportunity to explore the practical applications of theoretical concepts learned in the classroom, and to understand the importance of safe and efficient water treatment in ensuring public health and safety. This plant, with a treatment capacity of 22.5 MLD (Million Litres per Day), supplies potable water to Kannur and surrounding areas, serving a population. Our site visit aimed to gain hands-on experience and insight into the water treatment processes, including aeration, filtration, flocculation, clarification and disinfection, as well as the plant's operations and management. This report documents our observations, findings, and recommendations based on the site visit, highlighting the plant's features, challenges, and best practices in providing safe and efficient water supply to the community.

The site visited was the Kerala Water Authority Water Treatment Plant JICA, located at Peruvathuparamba, Irrikur. The visit took place on 26th September 2025. The attendees included the Students of the S7 CE (2022-2026 batch), who were accompanied by faculty members: Ms. Roopa Balakrishnan (AP, CE) and Ms. Manasa Mukundan (AP, CE). The primary objective of the visit was to gain practical knowledge and understanding about the various treatment processes at the KWA Water Treatment Plant through observation, and to gain additional knowledge about the water quality testing equipment and procedures.

The site visit to the KWA Water Treatment Plant in Peruvathuparamba, Irrikur, revealed a well-designed and efficiently operating facility, utilizing advanced treatment technologies to produce safe and reliable drinking water. The plant's commitment to regular monitoring and testing ensures the water meets international safety standards. The site visit provided valuable insights into the plant's operations and highlighted the importance of proper water treatment for public health and environmental protection.



FACULTY ACHIEVEMENT



Our Civil Engineering faculty member, Dr. Arun Kumar Selvarajan, have published their paper, "Mechanical and durability investigation of fiber effect in finer concrete with various admixtures".

The research successfully created stronger, more durable M40 concrete by partially replacing cement with industrial waste (Alcofine and calcined clay) and adding polypropylene fibre. The optimal mix yielded a 19.38% increase in compressive strength while promoting sustainability.

Publication:REVISTAMATERIA (V.30, 2025).



STUDENTS ACHIEVEMENTS



Anjali Suresh achieved Elite grade with **71%** consolidated score in the NPTEL/IIT Bombay course: "Geotechnical Engineering Laboratory", 4 week course



Mohamed Sinan achieved Elite grade with **62%** consolidated score in the NPTEL/IIT Bombay course: "Geotechnical Engineering Laboratory" ,4 week course



Aparna P achieved Elite grade with **67%** consolidated score in the NPTEL/IIT Bombay course: "Geotechnical Engineering Laboratory" ,4 week course



Meghna K K achieved Elite grade with **63%** consolidated score in the NPTEL/IIT Bombay course: "Geotechnical Engineering Laboratory" ,4 week course



Jissy V V achieved Elite grade with **54%** consolidated score in the NPTEL/IIT Bombay course: "Geotechnical Engineering Laboratory" ,4 week course

WORKSHOP: TOTAL STATION

3/10/2025

The Total Station Workshop was organized with the objective of providing hands-on training to students in advanced surveying techniques and modern data acquisition methods used in civil engineering. The workshop aimed to bridge the gap between theoretical concepts and real-world applications by introducing participants to the operation and data processing capabilities of the Electronic Total Station (ETS). During the session, students were introduced to the basic components, functions, and principle of the total station.

They were trained to perform various field tasks including area computation, measurement of horizontal and vertical distances, and topographic surveying. Emphasis was given to real-time field practice, where participants set up the instrument, took measurements, and recorded data for different terrain profiles. The workshop also covered data transfer and processing techniques, enabling participants to download the collected data into a computer using appropriate interfacing software. They learned to process the field data for contour map

preparation and topographic modeling, using CAD-based tools. The practical exposure helped the students understand the end-to-end process — from field data collection to digital map generation — thereby enhancing their technical proficiency and confidence in using modern surveying equipment. The programme served as a valuable platform for students to gain field-level experience, improve accuracy in surveying operations, and understand the application of total station technology in various civil

engineering projects such as road alignment, site grading, layout of structures, and land development works.

Mr. Ajith Lal S., Surveyor from CILL Associates, was the resource person. His guidance helped students gain knowledge in operating the Total Station. He is an experienced person with enthusiasm and practical knowledge in the field of survey. CILL Associates carries out surveying works throughout Kerala and provides training to students via workshops on Total Station and DGPS.



INDUSTRIAL VISIT

03/10/2025

As part of its continuous efforts to enhance experiential learning and industry interaction, the Department of Civil Engineering, St. Thomas College of Engineering & Technology, Sivapuram, organized an industrial visit and heritage site study during September–October 2025. The programme was designed to bridge the gap between classroom theory and real-world civil engineering practices by exposing students to modern construction sites, manufacturing industries, and historically significant structures.

The programme commenced with a site visit to Hampi, Karnataka on 01 October 2025, a UNESCO World Heritage Site renowned for its architectural and engineering excellence. Students studied the Virupaksha Temple, one of the oldest functioning temples in India, and the Hanuman (Monkey) Temple,

located atop a rocky hill. Through this visit, students gained an understanding of ancient construction methodologies such as dry masonry, interlocking stone systems, stepped structural forms, and foundation techniques adapted to natural bedrock. The visit also highlighted sustainable practices followed by ancient builders, including effective drainage systems, natural ventilation, passive cooling, and the use of locally available materials. These observations helped students appreciate how traditional engineering principles remain relevant to modern sustainable design.

Following the heritage site study, an industrial visit to Goa was conducted on 03 October 2025. The first stop was RBD Group Pvt. Ltd., Mapusa, Goa, where students visited an ongoing villa

construction project. This visit provided hands-on exposure to contemporary construction practices, including reinforcement detailing, slab systems, steel–concrete composite structures, steel deck sheets, and formwork techniques. Students also learned about site management aspects such as planning and scheduling, material procurement, quality assurance, safety measures, and coordination between contractors and vendors. Interaction with site engineers helped students understand practical challenges faced during execution and the importance of teamwork and technical precision.

The second industrial visit was to Shreenath Prestressed Pvt. Ltd., Asonora, North Goa, a well-established manufacturer of prestressed and precast concrete products. Students observed the

complete manufacturing process of prestressed concrete elements such as drainage covers, kerbstones, slabs, and girders. The visit offered detailed insights into mould preparation, placement and tensioning of steel tendons, concrete casting, curing techniques, detensioning processes, and quality control tests. The exposure helped students understand how prestressing improves strength, durability, and crack resistance in concrete structures, making it vital for modern infrastructure development.





RBD Group Goa, Industry visited by S7 students 2022-26 batch



SHREENATH PRESTRESSED PVT.LTD Goa, Industry visited by S7 students 2022-26 batch

SUSTAINABLE SOLUTIONS FOR A GREENER FUTURE

15/10/2025

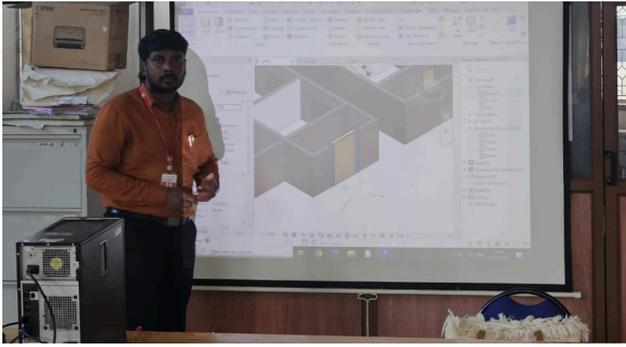
The Department of Civil Engineering at St. Thomas College of Engineering & Technology, Mattanur, in collaboration with its dedicated environmental body, the Nisarga – Nature Club, successfully organized a highly pertinent expert talk titled "Sustainable Solutions for a Greener Future" on October 15, 2025. This educational initiative was meticulously designed to deeply embed the principles of sustainability within the student community, aiming to create profound awareness regarding its crucial importance not only within the scope of engineering disciplines but also in the context of everyday personal choices. A central theme extensively elaborated upon during the session was the pivotal, forward-looking role that young, aspiring engineers must embrace in confronting and effectively addressing the complex, large-scale global environmental challenges. The talk actively promoted the adoption of innovative, scientifically sound, and ecologically sensitive solutions as the foundation for a more resilient and green future, thereby positioning the students as future leaders in environmental stewardship and technological advancement.



The discourse was expertly guided by the distinguished resource person, Ms. Resmi P. Thomas, who holds the position of Assistant Professor and Head of the Department of Botany at Nirmalagiri College, Kuthuparamba. Ms. Thomas brought to the table a wealth of knowledge, stemming from her extensive academic scholarship and significant research experience within the fields of environmental and botanical sciences. Her contribution was invaluable as she delivered meticulously structured and insightful content that transcended typical classroom instruction. She provided an elaborate exploration of practical and systemic sustainable practices, highlighting how they can be seamlessly integrated across various sectors. Furthermore, she expertly illuminated the complex, yet fundamental, interconnection that exists between technological progress, the delicate balance of nature, and inherent human responsibility. Her detailed presentation ensured that all attendees gained a comprehensive and multi-faceted perspective on how their engineering skills must be harmonized with ecological consciousness to achieve long-term, true sustainability.

BIM (BUILDING INFORMATION MODELLING) WORKSHOP

22/10/2025 & 24/10/2025



The Department of Civil Engineering successfully organized a comprehensive BIM (Building Information Modelling) Workshop for its 7th Semester Civil Engineering Students on October 22nd and 24th, 2025, expertly coordinated by Dr. S. Arun Kumar and Ms. Chithira O. P. This critical training initiative was designed to introduce final-year students to the advanced principles and practical applications of BIM technology in building construction projects. Spanning 12 hours of intensive lab sessions, the program aimed specifically to bridge the often-cited gap between academic knowledge and contemporary industry practices, ensuring students received essential hands-on experience with modern BIM tools and methodologies. The workshop's foundational objective was to provide students with a deep understanding of the fundamental concepts, principles, and the evolution of BIM within the modern construction landscape.

The program's practical component provided rigorous hands-on training in Autodesk Revit and other BIM software, enabling participants to master skills such as developing 3D models, generating floor plans and elevations, and designing realistic structural elements for complex building projects. Furthermore, a major focus was placed on equipping students with crucial practical skills necessary for designing, analyzing, and managing construction projects, emphasizing efficient workflow coordination and robust project lifecycle integration using BIM methodologies. Upon successful completion, participants were awarded a valuable certification, significantly boosting their employability and professional readiness across the civil engineering, architecture, and construction management sectors, thereby preparing them for immediate industry contribution.

SITE VISIT : SREEROSH ORCHARD, KANNUR

22/10/2025

The Department of Civil Engineering organized an industrial site visit to Sreerosh Orchard, Kannur, on 22 October 2025, in association with the Civil Engineering Association (SATTVA). The visit was attended by students of S5 CE (2023–27) and S3 CE (2024–28), accompanied by Asst. Prof. Athira B. Krishnan.

The objective of the visit was to gain practical exposure to villa planning, construction standards, material quality, and site management practices followed in a large-scale residential project. The students were welcomed by the project team and guided through various stages of construction.

Sreerosh Orchard is a premium standalone villa project developed by Sreerosh Developers, featuring modern lifestyle amenities such as a clubhouse, swimming pool, gym, indoor games, library, multipurpose turf, and children's play area. The project is strategically located with easy access to major facilities and transportation hubs.

Strict safety measures were followed during the visit. All participants were instructed to wear personal protective equipment including safety helmets, reflective vests, and safety shoes, and were guided through designated safe pathways.

The clubhouse, under construction, is a multi-level structure designed to accommodate recreational, leisure, and wellness facilities such as a multipurpose hall, games area, swimming pool, gym, yoga and meditation spaces, and association rooms.

Students were briefed on the architectural and structural layouts of different villa types:

Villas 1–5: 2800 sq.ft units , Villas 6–11: 3125 sq.ft units , Villas 12–38: Ranging from 2820 sq.ft to 3235 sq.ft

All villas follow a uniform functional layout with variations in built-up area and Vastu-based orientation, providing insights into residential planning flexibility.

The visit effectively bridged the gap between theoretical knowledge and real-world construction practices, enhancing students' understanding of modern residential development, project coordination, and site execution. Overall, the site visit was informative, well-organized, and highly beneficial for the academic and professional growth of civil engineering students.



Chala, Kerala, India
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Lat 11.864922° Long 75.446817°
Wednesday, 22/10/2025 11:16 AM GMT +05:30

IGS QUIZ COMPETITION

22/10/2025



The IGS Student Chapter, STM, organized an online technical quiz competition titled “CIVIQUEST” on 22 October 2025, aimed at enhancing students’ knowledge in Structural and Geotechnical Engineering.

The event was conducted in an interactive online format and witnessed enthusiastic participation from civil engineering students. The quiz focused on fundamental concepts, analytical thinking, and problem-solving skills related to core civil engineering subjects, encouraging healthy competition and continuous learning.

A total of 28 students participated in the online round. Due to a tie among eight participants, a final offline round was conducted to determine the winner. Ms. Adwaita S R (S7 CE) emerged as the winner after the tie-breaker round.

The event successfully provided a platform for students to test their technical knowledge, improve conceptual clarity, and engage in academic collaboration. Overall, CIVIQUEST was a well-organized and impactful initiative by the IGS Student Chapter, contributing positively to students’ academic development.

PLACEMENT OFFERS



Amegha V got selected in D Square (2021-2025 batch)



Kavya A got selected in Real One (2021-2025 batch)



Riya Sahi got selected in Natural Architects (2021-2025 batch)



Muhammed Shibili T and Muhammed Shabeeb T got selected in X-Line Builders and Land Survey (2021-2025 batch)



Anunanda A & S Sruthi got selected in Grantley Edutech Pvt.Ltd (2022-2026 batch)



Adithya P P, Sangeeth P, Ayyub Khan , Ashwathy K , Sandra P V, Anamika N, Gouri Nandana, Anjali P V got selected in Gen Z Educate Wing (2022-2026 batch)

Editorial team

Staff Editor

Ms. Deepthi K (Asst. Prof CE)

Student Editors

Rajyeshwar R (S7 CE) Adwaith P V (S7 CE)