

CIVIL CHRONICLES

The newsletter of the department of civil engineering

VOL 1- ISSUE 4

YEAR 2022

‘SATTVA’- the Dept. Association gets Inaugurated

03/12/2022



A photo from the Inauguration ceremony of the Department Association

SATTVA, the Department Association for Civil Engineering, was inaugurated on 03.12.2022, by the esteemed Er. Sabu K. Philip, alongside Dr. Shinu Mathew John and other distinguished dignitaries. This significant event, attended by both faculty and students, included the unveiling of the association's logo, which beautifully symbolizes the essence of construction and design. During the ceremony, Dr. Shinu Mathew John commended the department's numerous achievements, while Er. Rijo Thomas John emphasized the vital practical applications of civil engineering in today's world. Originally planned as a two-hour

ceremony, the event evolved into a comprehensive two-day celebration, featuring an expert talk, an insightful site visit, and a hands-on workshop. This expansion allowed for deeper engagement and learning opportunities for participants. SATTVA has now established itself as a permanent platform for departmental programs, effectively streamlining organization and minimizing repetitive efforts. The initiative is led by final-year students Adithya K. and Akash P., who serve as the main coordinators, ensuring that the association continues to thrive and support the academic and professional aspirations of civil engineering students.

VISION:

To grow as a globally recognized center 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.

Achievements



Mr. Safal Nihal and Mr. Adwaith R represented the college at KTU F zone volleyball tournament at GECK held at School of Physical Education.

Achievements



Mohammed Zahin P M was selected for the KTU F Zone table tennis team and represented his college in the men's team STM at the KTU F Zone tournament on 29/10/2022, where they secured third place. At the KTU Interzonal Table Tennis Tournament on 02/11/2022, Zahin's team reached the quarter-finals.

Site Visit- Kannur Municipal Corporation Building

03/11/2022

Beyond the entire design equations and IS recommendation, it takes a routine field visit for a civil engineering student to understand the real picture of a worksite. A regular field visit thereby couples the textbook knowledge and the practical applications. However, the site visit on 3/11/2022 provided something more than that to the entire second year crew. Mr. Biju Kumar, the executive engineer guided our students through the recently set worksite of the Kannur Municipality Corporation building. The entire engineering team and workforce under the executive engineer were ready at site, sharp at 2:00 PM when the students and faculty team reached. After a 15-minute safety class, the students along with the site engineers roamed around the proposed 10-story building complex in their



Students during the site visit

safety jackets and helmets, scribbling on their field books, asking doubts and observing things. A foundation specification observed at the site was identified by owing largely to their textbook. On the massive reinforcement case at an excavated depth of 3.52 meters, the students distinguished main bars, tension bars, double bars, etc. Some of them even attempted to sketch the reinforcement system. A shear wall at the site was demonstrated by the site engineer, Ms. Anusree A, one of the aluminees at the department of CE at STM. The practices on field may vary slightly on field based on the condition. Curing methods likely differ from those studied from the textbooks were

observed, due partly to the availability of water and convenience of labors. Equipment used for batching, mixing and compacting were demonstrated by their respective operators. The workers opened up their experiences based on the practical difficulties on field hours, along with the solution to overcome them. 'Nowadays, demonstrations are available on internet'-engineer Biju Kumar says. 'However, the actual practice may vary based on the property of soil, water availability, climate and so on, which strongly demands a direct field visit and interaction with the workers there'-he added.

Achievements

Faculties bagged teaching excellence award-2022

22/11/2022



Teaching excellence awards for the 2021-2022 academic year were given to Mrs. Greeshma C S and Mr. Harishankar N from the civil engineering department during a ceremony on 22/11/2022 at the college PTA meeting. Mr. Shinu Mathew John commended the department's outstanding academic performance, and the event was attended by parents, faculty, and students from various branches, with additional recognition for students with exceptional results.



Photos from the expert talk

Expert Talk on "Stability of Soil"

03/11/2022

An enlightening online talk session on "Stability of Soil" was held on 3rd November 2022, featuring Ms. Chinju K. Thiryan, Research Engineer at UBC, Canada, as the speaker. Conducted via Google Meet, the session brought students face-to-face with an expert in the field of soil technology, offering them invaluable insights into the subject.

Ms. Chinju captivated the audience with her engaging and interactive approach. When a curious S5 student asked why Kerala continues to face annual landslides, she provided a clear and thought-provoking answer. She explained that the issue stems not from a lack of technology but from unscientific practices, including improper earth-moving, unplanned land reclamation, and deforestation. She stressed the need for a change in the mindset of people and policymakers, advocating for sustainable practices and scientific land-use planning.

Ms. Chinju also highlighted the role of researchers in revival actions and shared her experiences in addressing these challenges. Her ability to simplify complex issues made the session highly effective and relatable for the students.

The talk underscored the importance of online platforms in fostering global knowledge exchange, proving that meaningful learning can occur regardless of physical distance.

Expert Talk on "Highway Accidents and Mitigation Measures" Marks Department Association Inauguration

04/11/2022



Photos from the expert talk

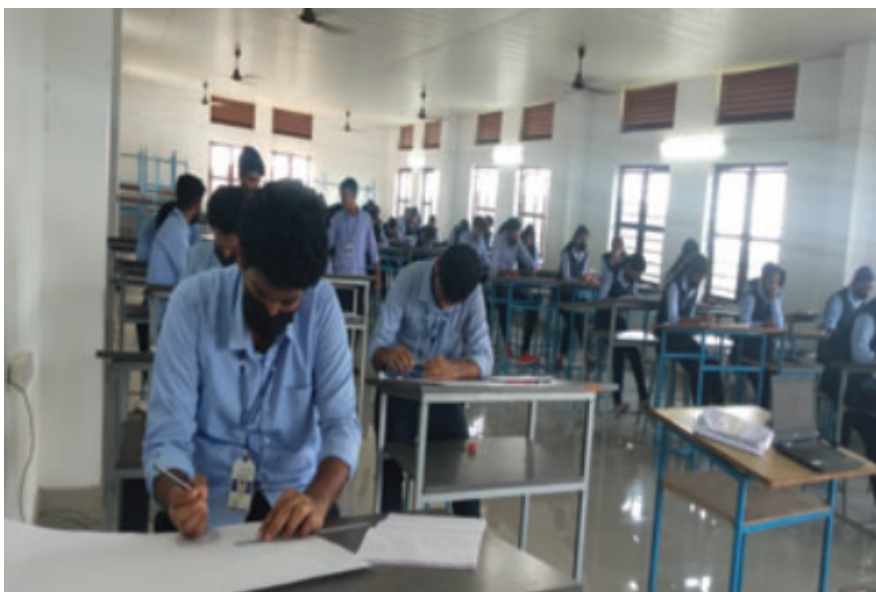
The Department Association was inaugurated on 4th November 2022 with an insightful online talk on "Highway Accidents and Mitigation Measures" by Mr. Sabu K. Phillips, retired Superintendent Engineer, PWD, MOD. With over 40 years of professional experience, Mr. Phillips provided an engaging session filled with practical insights, demonstrating the essence of his belief that "experience is the best teacher." The session covered a range of topics critical to modern highway engineering, including highway design elements, land acquisition challenges, political interventions, and unnoticed loopholes in traffic regulations. Drawing from his extensive career, Mr. Phillips shared real-world scenarios and solutions, offering students a deeper understanding of the complexities involved in ensuring road safety.

The talk was not only educational but also inspirational, as Mr. Phillips emphasized the importance of addressing these challenges to improve road infrastructure and reduce accidents. His practical demonstrations and anecdotes kept the audience engaged, making the session highly relatable and impactful.

The event set a meaningful tone for the Department Association, highlighting its commitment to bridging academic learning with real-world expertise.

Workshop for a central library

04/11/2022



Photos from the workshop

Construction requires imagination, observation, and practice. Hence, it is essential to ensure opportunities for the students to practice what they have studied in textbooks. Keeping in mind the above fact, a workshop was planned on 04/11/2020 entitled, 'Proposal of a Central Library at STM Campus'. The campus, with its verdant hilly land resources, extends a wide opportunity to civil engineering students for surveying, land measuring, and planning of new buildings on it. The workshop threw light on the various aspects of building construction such as planning, drawing, site preparation, and setting out. With their massive involvement, students of 3rd year and final year made the program into big success. The workshop comprises of an initial demonstration followed by a detailed land measurement and plan drawing. The demonstration session at the beginning was

handled by the faculties from the Civil Engineering Department and the fieldwork was coordinated by the lab staff. The site proposed for the Central Library was observed and measured by the students. The establishment of survey stations, arranging and measuring was done by the students themselves in two shifts. As it involves both fieldwork and office work, the program extended to a full day. Those who completed their fieldwork prepared drawings based on the site conditions available. The workshop turned out to be competitive once the drawings started. A handful of ideas was blossomed at the tip of their pencil, which aptly got evaluated by the expert panel during judgment. A winner was ultimately announced based on the performance on field and a prize money was given.

Achievements



Mr. Abhimanue K won the competition based on his excellent performance in proposing the central library and received a prize money.

To the survey field with a total station

10/12/2022



Photos from the workshop

On December 10, 2022, a comprehensive full-day workshop on Total Station surveying was organized specifically for second-year students of the Civil Department. This initiative aimed to bridge the gap between theoretical knowledge and practical application in the field of surveying. The workshop was expertly led by a seasoned operator from ALG Information Systems, ensuring that students gained valuable insights into the use of this sophisticated equipment.

The day began with an informative introduction to Total Station surveying, followed by live demonstrations that showcased the instrument's functionality. Students then engaged in hands-on practice on the college grounds, where they worked collaboratively in small groups to set up the Total Station. This experience allowed them to familiarize themselves with the various components and operations of the device while honing their skills in land measurement with remarkable precision.

In addition to the practical aspects, the workshop included essential training on data management. Participants learned how to interpret survey data effectively using specialized software, which is crucial for modern surveying practices. The workshop also tackled the issue of limited access to high-cost surveying equipment, thus providing students with a rare and valuable opportunity to gain practical experience that is often difficult to obtain in academic settings.

The feedback from participants was overwhelmingly positive, highlighting the significant practical skills they acquired throughout the session. This hands-on experience not only enhanced their understanding but also boosted their confidence in using surveying technology professionally. The workshop was coordinated by Mrs. Ashika K. and Mr. Srinath M. K., who ensured that everything ran smoothly. As a token of their participation, students received certificates, which further enriched their surveying competencies and improved their employability in the competitive job market.

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 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 OUTCOMES (POs)

Engineering Graduates will be able to:

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.



**St Thomas College of Engineering and Technology
Sivapuram, PO Mattanur, Kannur 670702**

EDITORIAL TEAM

Asst. Prof. Vijila Balakrishnan

Rakhil A (CE 2K20 Batch)

Siktha K C (CE 2K20 Batch)

Aiswarya Santhosh (CE 2K21 Batch)