

CIVIL CHRONICLES

The newsletter of the department of civil engineering



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.

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.

Expert talks

29/09/2022



On September 29, 2022, the Civil Engineering Department hosted an expert talk entitled "Essential Requirements and Properties of High-Performance Concrete." The session took place in person and featured Mr. Hemanth Kumar T, the State Technical Head at India Cement Ltd, as the esteemed speaker.

After extensive discussions, the department carefully selected this topic to ensure it filled curriculum gaps and aligned with educational goals. Although scheduled on a typically quiet weekday afternoon, Mr. Hemanth Kumar's engaging storytelling captivated the students. He creatively likened concrete and reinforcement to a newlywed couple, with aggregates, water, and admixtures representing supportive family members in his narrative.

Throughout the session, he addressed key concepts related to high-performance concrete, such as inflorescence, shrinkage, creep, and bleeding, illustrating these ideas with relatable examples. He underscored the evolving nature of concrete technology, emphasizing that its chemical properties and field behavior are continually changing, necessitating ongoing learning and adaptation.

Though the lecture lasted half a day, its impact was profound, with students wishing for a longer session to explore the topic further. One student remarked in her feedback that the talk was so informative and engaging that it could have easily been extended to a full day.

In summary, the talk was a resounding success, providing students with a richer understanding of high-performance concrete and its essential properties. The session concluded with a round of applause, marking it as one of the most memorable educational experiences of the semester.

A day at NAC

03/10/2022



Students during their visit at NAC Hyderabad

In order to gain first-hand experience from the industry, the final year students used to organize industrial visits. This time they made NAC Telangana as their destination for industrial visits. Standing at the verge of their course completion, the students have so much to learn from NAC- an institution for skill development; a center for quality and productivity in the construction industry. A fully dedicated single day was allocated by the students in their final year trip schedule to visit the 46.6 acres of green campus of NAC, located along the IT corridors of Telangana. Despite the enjoyment of the trip and tiredness of the long journey, students were well disciplined at their entry at NAC. Apart from the warm welcome received at the entrance, it was the brilliant demonstration from the project demonstrator at NAC, that made the day worthwhile. NAC, as proclaimed by itself, is a 'single stop shop' for providing diversified training

programs to address the skill gap requirements of human resources. The demonstrator, in his introductory remarks, mentioned that the institution provides vocational training ranging from a time span of 10 days to one entire year. Certain skills that can be acquired from the institution includes that of bar bender, site supervisor, plumber, storekeeper mason, etc. Not only the entry-level jobs, but the top-notch engineering work are also being trained at the institution. Anyone who decides to start a firm by their own can approach the institution, remarkably the visit might have made an impact on the upcoming entrepreneurs among our final years.

Achievements



Mr. Amal P, represented the college in the KTU F Zone Kabadi Tournament held at GECK, on 30/10/2022. The team qualified to semifinals and secured the fourth place thereafter.



Gokul Pramod was chosen for the KTU F Zone badminton team for the KTU Interzonal Badminton Championship. On 27/10/2022, he represented his college, helping the team win the first round and reach the semifinals in Eranakulam. Gokul ranked 9th among the 12 selected for the KTU Interzone team for the National Championship.



Ms. Shilpa P.K and Ms. Surya Sajeev, from the women's chess team- STM, found their fabulous victory at the KTU F Zone chess tournament held at VJEC Chemperi on 19/10/2022. Out of four rounds conducted for the women's team, the team won in two rounds

Along the beachside with NATPAC

04/09/2022



Syurveying team at Muzhuppilangad

The decision by NATPAC (National Transportation Planning and Research Centre) to re-engage the students of STM College for a second, crucial traffic survey underscores the professionalism and competency previously demonstrated by the students at the Chirakkuni location. This trust was cemented despite the relative proximity of the college to the initial survey site, suggesting that the quality of work was the primary driver for the continued partnership. The selected location for this follow-up assessment was the renowned Muzhapilangadu Drive-in Beach, which holds the distinction of being Asia's longest drive-in beach. This unique status, however, comes with a significant challenge: chronic traffic congestion, particularly exacerbated on weekends and during peak weekday hours, as the beach attracts visitors from extensive distances, bringing the local road network to its maximum capacity.

NATPAC's strategic selection of Sunday, September 4th, 2022, for the survey was not accidental; by choosing a weekend, they ensured the data collected reflected the absolute maximum stress placed upon the road infrastructure, providing the most critical data for future planning. The comprehensive nature of the study required a segmented approach, focusing on three distinct areas: the main beach road, the road stemming from Edakkad beach, and the vital road connecting the beach area with the national highway, NH66. To gather the depth of information needed to realize NATPAC's vision of a congestion-free atmosphere, the 16-member team of second-year students, under the expert guidance of Assistant Professor Sreenath M.K, undertook a demanding suite of transportation studies. These included detailed traffic volume studies (to quantify vehicle flow), parking surveys (to understand static vehicle i

mpact), and various types of origin and destination (O-D) studies (to trace travel patterns), all of which are notoriously manpower-intensive exercises

The 16-member student team demonstrated strong dedication, conducting the demanding traffic surveys at Muzhapilangadu from dawn until 6:00 PM. This fieldwork provided invaluable, practical experience in real-world traffic engineering, which will significantly aid their final year projects. The long day was balanced by the pleasant atmosphere, including the sunset over the Arabian Sea. The effort resulted in the successful collection and submission of a substantial volume of data to NATPAC, earning the students renewed certificates and appreciation. The text highlights NATPAC's praiseworthy decision to involve and mentor students, despite the availability of automated surveying technology.

Achievements



Ms. Shabeeba K, Ms. Shadiya Sherin, Ms. Shilpa P K, and Ms. Surya Sajeev represented the college in the Table Tennis women's team STM at KTU F Zone table tennis tournament held at Govt. College of Engineering, Kannur on 29/10/2022. The men's team secured fourth place from all the matches therein.



The students of civil department represented the college in the KTU F Zone Cricket Tournament held at GECK and they secured 3rd price.



The students of civil department represented the college in the Spike inter college football tournament held at St. Thomas College of Engineering and Technology, Chengannur and they secured first place

Placement Offers



Sandra Vasudevan P P, Sreelakshmi Nambiar K M got selected in K M ELIAS Constructions Pvt Ltd



Gokul Pramod ,Krishnendu P K got selected in Mentorow



Vipin Raj M, Athuna K, Muhammed Ashraf K S, Anjusha Anil got selected in D square Architects.

PPROGRAM 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.



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