

SAVISTHARA

SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY

CIVIL ENGINEERING DEPARTMENT

2024-2025





SCMS School of Engineering and
Technology Vidya Nagar, Palissery,
Karukutty, Ernakulam,
Kerala – 683576

 +91 4842882900

 +91 4842450330

 sset@scmsgroup.org

SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY, KARUKUTTY

Established with a vision to impart quality technical education and foster innovation, SCMS School of Engineering and Technology (SSET), Karukutty stands as one of the premier engineering institutions in Kerala. Nestled in a serene and eco-friendly campus, the college provides an ideal environment for academic excellence and holistic development.

SSET is a premier institution, upholding a tradition of excellence for over 48 years within the esteemed SCMS Group of Educational Institutions. Established in 2001 under Mahatma Gandhi University, SSET is the pioneering self-financing engineering college. SSET offers technical programmes recognised by AICTE, New Delhi.

Affiliated to APJ Abdul Kalam Technological University, SSET offers a wide range of undergraduate and postgraduate programs across various engineering disciplines. The institution is committed to nurturing technically competent professionals equipped with strong ethical values and leadership qualities.

The college boasts state-of-the-art infrastructure, including well-equipped laboratories, modern classrooms, advanced research facilities, and a rich library that supports both academic and research pursuits. Emphasis is placed not only on theoretical knowledge but also on practical exposure, ensuring students are industry-ready.

The Civil Engineering Department plays a vital role in shaping future engineers by focusing on sustainable development, innovative construction practices, and environmental responsibility. Through academic projects, field visits, workshops, and seminars, students are encouraged to address real-world challenges and contribute meaningfully to society.

SSET also promotes extracurricular and co-curricular activities, fostering creativity, teamwork, and leadership among students. With a strong placement record and collaborations with industries, the institution ensures promising career opportunities for its graduates.

Located on a sprawling 25-acre campus in Karukutty, Ernakulam District, our cutting-edge facilities are the cornerstone of a transformative learning experience. With NBA Accredited Departments and a NAAC Accreditation with two highly acclaimed Centers of Excellence—the SCMS Water Institute (SWI) and the SCMS Institute for Road Safety and Transportation (SIRST)—SSET offers a gateway to innovation and social commitment.

Driven by a commitment to excellence, SCMS School of Engineering and Technology, Karukutty continues to empower young minds to build a better and more sustainable future.



Mission

Innovative education and research for shaping techno-leaders

Vision

To be a premier institution moulding ethical and socially responsible engineers with emphasis on 'Service Learning'.

To be among the top ten institutions in India by 2040, shaping technology innovators and leaders for spearheading research relating to sustainable development goals.

Quality Policy

SCMS School of Engineering and Technology (SSET) is envisaged as a premier institution offering technology related education of exceptional quality to students by developing their total personality with due emphasis on ethical values and preparing them to meet the growing challenges of the industry and diverse societal needs of the institution.

DEPARTMENT OF CIVIL ENGINEERING

Building Foundations for Tomorrow Excellence in Civil Engineering.

The Department of Civil Engineering at SSET, established in 2001, is characterized by its dedicated and experienced faculty. It offers both undergraduate and postgraduate programs in Civil Engineering, specializing in Computer Aided Structural Engineering and Environmental Engineering. The department's teaching approach emphasizes professional ethics and service learning, integrating community service with instruction. Interactive sessions with industry experts, seminars, workshops, and conferences keep students and faculty updated on industry trends. The department's seven well-equipped laboratories support research activities and consultancy projects for government and non-government organizations. Notable projects include site surveys, road surveying, and environmental impact assessments. Additionally, the department collaborates closely with SCMS Water Institute (SWI), contributing to sustainable water management and community development. SWI's consultancy work, such as water auditing, rainwater harvesting, and disaster preparedness planning, provides students with valuable real-world experience. The success of the department's alumni in academia, industry, and government organizations globally attests to the quality of education provided. In summary, the Department of Civil Engineering at SSET is dedicated to providing a holistic education that emphasizes practical experience, community engagement, and research, benefiting both its students and the community it serves.

Vision

To be a Department of excellence providing quality education and to engage in research activities in diverse fields of Civil Engineering.

Mission

- Impart quality education to our graduates in all fields of Civil Engineering.
- Mould technically competent graduates who are prepared to meet the current global engineering challenges.
- Create socially committed and ethically responsible professionals performing cutting edge research that will positively impact and improve our profession and society.
- Instill in our graduates a passion for lifelong learning.

PROGRAM OUTCOMES

PO1 Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO 2 Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO 3 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.

PO 4 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.

PO 5 Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO 6 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.

PO 7 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.

PO 8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10 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.

PO 11 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.

PO 12 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.

PROGRAMME SPECIFIC OUTCOMES

PSO1 Graduates shall demonstrate good understanding of engineering fundamentals and demonstrate sound knowledge in analysis, design and laboratory investigations in various domains of Civil Engineering.

PSO2 Graduates will exhibit a passion for continuous self-learning and/ or pursue higher studies and engineering research.

PSO3 Graduates will possess ability to interact and function within multidisciplinary teams with competence in modern tool usage.



PROGRAM EDUCATIONAL OBJECTIVES

PEO 1 Knowledge Attainment: Graduates shall attain sound technical competency and knowledge in various fields of Civil Engineering leading to a successful career.

PEO 2 Social Responsibility: Graduates shall use the acquired skills and knowledge to solve complex Civil Engineering problems for the betterment of the society.

PEO 3 Integrity and Ethics: Graduates shall conform to professional ethics and contribute to uphold the integrity of the profession

PEO 4 Communication Skills: Graduates shall develop strong technical communication skills and intra and inter personal skills which would help inculcate in them team spirit, management and leadership qualities.



MESSAGE FROM PRINCIPAL

It gives me immense pleasure to present SAVISTHARA, the magazine of the Civil Engineering Department of SCMS School of Engineering and Technology, Karukutty. This publication is a reflection of the intellectual vitality, creativity, and technical excellence that our students and faculty consistently strive to achieve.

Civil Engineering, as a discipline, plays a pivotal role in shaping sustainable infrastructure and resilient communities. In an era where environmental concerns and rapid urbanization demand innovative solutions, it is encouraging to see our students actively engaging in meaningful academic projects, research initiatives, and practical learning experiences that address real-world challenges.

At SSET, we are committed to nurturing not only competent engineers but also responsible citizens who uphold ethical values and contribute positively to society. The department's continuous efforts in promoting academic rigor, research orientation, and industry interaction are truly commendable.

I congratulate the editorial team, faculty, and students for their dedication in bringing out this magazine. I am confident that SAVISTHARA will serve as a platform for sharing knowledge, ideas, and achievements, inspiring everyone to strive for excellence.

I extend my best wishes to all contributors and readers for continued success in their academic and professional endeavors.

**Warm regards,
Dr. Anitha G. Pillai
Principal
SCMS School of Engineering and Technology**



MESSAGE FROM HOD

It is with great pride and pleasure that I present SAVISTHARA, the departmental magazine of Civil Engineering at SCMS School of Engineering and Technology, Karukutty. This magazine is a testament to the creativity, technical knowledge, and innovative spirit of our students and faculty.

Civil Engineering is a dynamic and ever-evolving field that forms the backbone of infrastructure development and societal progress. At our department, we strive to equip students with strong fundamentals, practical exposure, and a sense of responsibility towards sustainable development. Through academic excellence, research initiatives, and industry interaction, we aim to nurture competent engineers capable of addressing real-world challenges.

SAVISTHARA serves as a vibrant platform for students to express their ideas, showcase their talents, and share their achievements. It reflects the collective efforts and dedication of our department in fostering a culture of learning, innovation, and collaboration.

I sincerely appreciate the editorial team, faculty members, and students who have contributed to making this publication a success. I am confident that this magazine will inspire readers and encourage our students to continue striving for excellence in all their endeavors.

I extend my best wishes to everyone associated with this initiative.

Dr. Sanju Sreedharan
Head of the Department
Civil Engineering Department
SCMS School of Engineering and Technology

SAVISTHARA

EDITORIAL BOARD

Department of Civil Engineering

SCMS School of Engineering and Technology, Karukutty

Faculty Editor



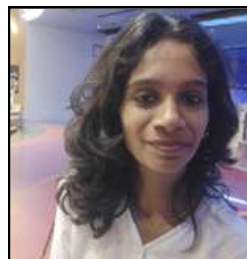
Dr. Praseeja A. V.
Associate Professor
Civil Engineering Department

Student Editor-in-Chief



Ms. Ardra Anilkumar
S8 CE

Student Associate Editor



Ms. Gowri Benesh M.
S6 CE

Design & Creative Team



Ms. Fathima Salim K
S6 CE



Ms. Fida Sathar
S4 CE

Acknowledgement

Cover page design:
Mr. Pravil Vilson
S8 CE

The Editorial Board expresses sincere gratitude to all contributors, faculty members, and students whose efforts and creativity made SAVISTHARA a success.

Editors Desk.....

It gives me great pleasure to present Savisthara, the Civil Engineering Department magazine of SCMS School of Engineering and Technology, Karukutty. This publication stands as a reflection of the creativity, technical insight, and collective efforts of our students and faculty.

The process of bringing out this magazine has been a journey of collaboration, learning, and innovation. It provides a platform for students to articulate their ideas, showcase their talents, and express their perspectives on emerging trends and challenges in Civil Engineering. From technical articles to creative contributions, Savisthara embodies the diverse capabilities of our students.

As engineers in the making, it is essential to cultivate not only technical expertise but also creativity, critical thinking, and social responsibility. I am delighted to see our students actively engaging in activities that go beyond the classroom, contributing meaningfully to both academic and societal development.

I extend my sincere appreciation to the editorial team, contributors, and faculty members for their dedication and hard work in making this publication possible. I hope this magazine inspires our students to continue exploring, innovating, and excelling in their endeavors.

Dr. Praseeja A. V
Editor, Associate Professor
Civil Engineering Department

Student Achievements



Mr. Devasurya Rameshan and Mr. Arjun K. P., B.Tech fourth semester students of Department of Civil Engineering, secured the first place in Archivia at Brahma 2025, the national techno- cultural fest of Adi Shankara Institute of Engineering and Technology, Kalady on 28-02-2025.

Semester Toppers - UG

Semester 8 (2020-2024)

REGISTER NUMBER	NAME	SGPA
SCM20CE053	SOBIN VARGHESE	9.74
SCM20CE032	KAREN MARY FRANCIS	9.41
LSCM20CE067	ASWANI P B	9.41

Semester 6 (2021-2025)

REGISTER NUMBER	NAME	SGPA
SCM21CE018	SWATHY M VIJAYAN	9.17
SCM21CE005	ANUPRIYA SHAJI	8.78
SCM21CEE001	ANNAPOORNA LEKHI	8.63
SCM21CE016	SANDRA ROSE DAVIS	7.98

Semester 4 (2022-2026)

REGISTER NUMBER	NAME	SGPA
SCM22CE010	NANDANA A S	9.05
SCM22CE012	SAFWANA V S	8.73
SCM22CE013	SHAMEEMA NAZRIN K S	8.32
SCM22CEE002	ANGELA THERESSA JOY	8.18

Semester Toppers

Semester 2 (2023-2027)

REGISTER NUMBER	NAME	SGPA
SCM23CE006	FATHIMA FARZANA	7.88
SCM23CE002	AFSAL NADARSHA	7.62
SCM23CE008	HENA JAMAL	7.38

Semester 7 (2021-2025)

REGISTER NUMBER	NAME	SGPA
SCM21CE005	ANUPRIYA SHAJI	9.3
SCM21CEE001	ANNAPOORNA LEKHI	8.97
SCM21CE016	SANDRA ROSE DAVIS	8.8
SCM21CE018	SWATHY M VIJAYAN	8.8

Semester 5 (2022-2026)

REGISTER NUMBER	NAME	SGPA
SCM22CE010	NANDANA A S	9.22
SCM22CE002	APARNA SANTOSH	9.2
SCM22CE012	SAFWANA V S	8.83
SCM22CEE002	ANGELA THERESSA	8.67

Semester 3 (2023-2027)

REGISTER NUMBER	NAME	SGPA
SCM23CE006	FATHIMA FARZANA	8.64
LSCM23CE016	NILOOFAR SULTHANA	8.23
SCM23CE011	SIVAPARVATHY K A	7.68
SCM23CE002	AFSAL NADARSHA	7.68

Semester 1 (2024-2028)

REGISTER NUMBER	NAME	SGPA
SCM24CE003	ADWAITH PRADEEPKUMAR	8.26
SCM24CE002	ADINAN SHAJI	8.16
SCM24CE008	NIRANJANA KUMAR	7.61



Semester Toppers- PG

Semester 4 (2022-2024)

BRANCH	REGISTER NUMBER	NAME	SGPA
CASE	SCM22CECS11	VINISHA VINOD	10
EE	SCM22CEEE01	ANNU ANTONY	8.5
	SCM22CEEE02	ARYA M	8.5

Semester 3 (2023-2025)

BRANCH	REGISTER NUMBER	NAME	SGPA
EE	SCM23CEEE01	ANSIDA C NOUSHAD	9
	SCM23CEEE02	PARVATHY N SURESH	8.82

Semester 2 (2023-2025)

BRANCH	REGISTER NUMBER	NAME	SGPA
EE	SCM23CEEE02	PARVATHY N SURESH	8.42
	SCM23CEEE01	ANSIDA C NOUSHAD	8.11

Semester 1 (2024-2026)

BRANCH	REGISTER NUMBER	NAME	SGPA
CASE	SCM24CECS05	SHAHANAS V N	9.33
EE	SCM24CEEE03	ARSHA K J	8.83

Faculty Achievements



Selected for the International Road Assessment Programme (iRAP) International Women in Engineering Day Grant 2024. Ms. Remya Y K is the only Indian in the list in 2024 and the second Indian to receive it after 2021.

Department Activities

Knowledge Sharing Programs



Mr. Jerry Anto

AutoCAD shortcuts for faster drafting



Ms. Sruthy S.

Water Distribution Network Analysis using EPANET



Ms. Sruthy M R

Strength and compressibility characteristics of bio-enzyme treated clayey soil



Dr. Nisha L.

Sediment Transport modeling using HEC-HMS for Kadambrayar River

Department Activities

1. Two-day training program on Life Cycle Assessment



A two-day training program on Life Cycle Assessment (LCA) was held from 07-10-2024 to 08-10-2024, led by Ms. Rakendu S from IIT Bombay, providing theoretical insights and hands-on training using OpenLCA software for M.Tech Environmental Engineering and B.Tech Civil and Environmental Engineering students.

2. Short-term training program on "Advanced Survey Techniques"



It was held on 24 September 2024 for B.Tech Civil Engineering students and hands-on drone-based surveying sessions led by Mr. Mahin, Technical Expert from Dronimagination Pvt Ltd, Kakkanad.

3. Short-term training program on "Aerial Mapping"



It was held on 25 September 2024 for B.Tech and M.Tech, providing theoretical and practical insights into aerial mapping applications, led by Mr. Vishnu, Technical Expert from Dronimagination Pvt Ltd, Kakkanad.

4. Workshop on "Career as a Builder"



Held on 27 February 2025 in association with IEDC, offering civil engineering students insights into career opportunities, industry challenges, and essential skills, with expert sessions by Mr. K. Anil Varma (Varma Homes), Er. Shyju Nair (DH Academy, ICI Kochi Chapter), and Er. Tissen Sebastian (Pullukattu Constructions)

5. Hands-on Workshop on VR-integrated structural and interior design with career guidance

A workshop on “VR-Integrated Structural and Interior Design with Career Guidance” was held on 18 February 2025 for Semester 8 Civil Engineering students by FRAMES, featuring immersive VR-based design applications and career guidance sessions conducted by TECHMAGHI, a DPIIT-recognized Ed-Tech start-up.

6. Hands on Robotic Workshop

A hands-on robotics workshop was held on 03-04-2025 in association with IEDC, IQAC, and IIC, introducing fourth semester B.Tech Civil Engineering students to robotics applications in civil engineering through theoretical learning and practical exposure to robotics and 3D modeling, led by Dr. Vinoj P. G., Associate Professor, Department of Electronics and Communication Engineering, SSET.

7. Talk on Human values

A talk on human values was held on 03-04-2025 in association with IEDC, IQAC, and IIC, where Dr. Rajesh P. Nair from Cochin University of Science and Technology delivered an insightful session on the role of human values in professional and personal life, attended by sixth semester B.Tech Civil Engineering and second semester M.Tech students.

8. Mastering Structural Analysis and Design with ETABS

The Department of Civil Engineering, SSET conducted hands-on training for M.Tech CASE students on analysis and design of building using ‘E TABS on 20-02-2025. Ms.Tennu Syriac, Assistant Professor, Department of Civil Engineering, SSET was the resource person.

9. Program On Gender Equality

A talk on Gender Equality was held on 04-04-2025 for Semester 6 B.Tech Civil Engineering students, where Mr. Deepu R., Assistant Professor, Department of Civil Engineering, SCMS School of Engineering and Technology, highlighted the importance of gender equality in individual and societal development.

10. Career Opportunities in Environmental Engineering

A talk on “Career Opportunities in Environmental Engineering” was held on 20-02-2025 for M.Tech Environmental Engineering students, where Ms. Meera Varghese, Assistant Professor, Department of Civil Engineering, SSET, provided insights into career roles, responsibilities, target companies, and essential software skills for a successful career.

11. Talk on “Exploring the Horizons of Higher Studies in Civil Engineering”

An invited talk on “Exploring the Horizons of Higher Studies in Civil Engineering” was held on 08-04-2025 in association with IEDC, IQAC, and IIC, where Dr. Sudheesh T. K., HOD, Civil Engineering, IIT Palakkad, guided M.Tech Environmental Engineering and Computer Aided Structural Engineering students on higher studies and career prospects.

12. Hands-On Training On LaTeX

A hands-on training on LaTeX was also conducted on 08-04-2025, introducing students to document preparation using LaTeX, with practical sessions on creating structured documents, equations, tables, and figures.



Virtual Reality in Construction

Ms. Namratha B Raj
S8 CE



Virtual Reality (VR) is emerging as one of the most transformative technologies in the construction industry, fundamentally changing how projects are conceived, designed, and executed. Traditionally, construction relied heavily on 2D drawings, physical models, and later 3D computer models, which, although useful, often failed to provide a complete understanding of spatial relationships and real-world functionality. VR overcomes these limitations by creating fully immersive digital environments in which users can experience a structure as if it already exists. By wearing a VR headset, engineers, architects, contractors, and clients can walk through buildings, inspect details, and interact with elements long before construction begins, leading to better decision-making and fewer errors.

One of the most significant impacts of VR is in design visualization and error detection. In large and complex projects such as airports, hospitals, and high-rise buildings, even minor design flaws can lead to costly rework. VR allows stakeholders to explore the design in real scale, making it easier to identify issues such as inadequate space planning, clashes between structural and service components, or poor accessibility. For example, in hospital construction projects, VR has been used to simulate the movement of patients, doctors, and equipment, helping designers optimize layouts for efficiency and safety. Similarly, infrastructure projects like metro stations and bridges benefit from VR by enabling engineers to assess structural configurations and user experience before actual construction begins.

Another important application of VR is in safety training, which is a critical concern in the construction industry. Construction sites are inherently hazardous, involving heavy machinery, heights, and dynamic working conditions. VR-based training programs create realistic simulations of construction environments where workers can practice tasks and experience potential hazards without any physical risk. For instance, workers can be trained to handle emergencies such as equipment failure, fire outbreaks, or structural instability within a controlled virtual environment. This type of training not only improves safety awareness but also enhances confidence and preparedness, significantly reducing the likelihood of accidents on site.

VR also plays a vital role in improving collaboration and communication among project stakeholders. Construction projects involve multiple parties, including architects, structural engineers, contractors, and clients, often working in different locations. VR enables all stakeholders to come together in a shared virtual space, where they can review designs, discuss changes, and make decisions in real time. This collaborative approach minimizes misunderstandings and ensures that everyone has a clear and consistent understanding of the project. For example, during the construction of complex commercial buildings, project teams have used VR to conduct virtual meetings inside the building model, allowing them to visualize and resolve issues collectively.

Client engagement is another area where VR has brought significant improvements. In traditional construction processes, clients often find it difficult to interpret technical drawings and imagine the final outcome of a project. VR provides an intuitive and immersive experience that allows clients to walk through their future homes, offices, or facilities and provide feedback at an early stage. This reduces the chances of dissatisfaction and costly design changes later in the project. Real estate developers are increasingly using VR to showcase properties to potential buyers, enabling them to explore apartments and amenities even before construction is completed.

In addition to design and communication, VR is also used for construction planning and simulation. Engineers can simulate construction sequences, logistics, and site operations in a virtual environment to identify potential challenges and optimize workflows. For example, in large infrastructure projects such as highway construction or dam projects, VR can be used to visualize equipment movement, material storage, and traffic management, ensuring efficient use of resources and minimizing delays. This capability is particularly valuable in projects with tight schedules and complex site conditions.

Despite its numerous advantages, the adoption of VR in construction does face certain challenges. The initial cost of VR equipment and software can be high, especially for small and medium-sized firms. Additionally, the effective use of VR requires technical expertise and integration with other digital tools such as Building Information Modeling (BIM). There may also be resistance to adopting new technologies due to lack of awareness or training. However, as technology continues to advance and become more affordable, these barriers are gradually being overcome.



Climate-Resilient Infrastructure

Ms. Shina M.S.
S4 M.Tech EE



Climate-resilient infrastructure has become a critical focus in civil engineering as the frequency and intensity of extreme weather events continue to increase due to climate change. Traditional infrastructure systems were designed based on historical climate data, assuming relatively stable environmental conditions. However, rising temperatures, unpredictable rainfall patterns, sea-level rise, floods, and storms have exposed the limitations of such designs. Climate-resilient infrastructure refers to systems that are planned, designed, constructed, and maintained to withstand, adapt to, and recover quickly from climate-related hazards, ensuring long-term functionality and safety.

The need for climate resilience is particularly evident in urban areas where population density and infrastructure demand are high. Flooding has become one of the most common challenges, especially in coastal and low-lying regions. To address this, modern cities are adopting advanced drainage systems and sustainable urban drainage solutions (SUDS), which include permeable pavements, rain gardens, and detention basins that allow water to infiltrate and reduce runoff. For example, cities like Rotterdam have implemented water plazas that serve as public spaces during dry periods and temporary water storage areas during heavy rainfall. Such innovative approaches not only mitigate flooding but also enhance urban livability.

Transportation infrastructure is also being redesigned with resilience in mind. Roads, bridges, and railways are now constructed using materials and design techniques that can withstand higher temperatures and extreme loads. For instance, heat-resistant asphalt is being used to prevent road deformation in regions experiencing intense heatwaves, while bridges are being designed with higher clearance levels and stronger foundations to endure flooding and increased water flow. In mountainous regions, slope stabilization techniques and landslide-resistant structures are incorporated to ensure uninterrupted connectivity during heavy rains.

Coastal infrastructure faces significant threats due to sea-level rise and storm surges. Engineers are developing robust coastal defense systems such as sea walls, levees, and surge barriers to protect vulnerable communities. The Netherlands provides a notable example with its Delta Works project, which integrates massive storm surge barriers and advanced water management systems to safeguard the country from flooding. In addition to hard engineering solutions, nature-based approaches such as mangrove restoration and wetland conservation are gaining attention for their ability to absorb wave energy and reduce coastal erosion while supporting biodiversity.

Water resource management is another crucial aspect of climate-resilient infrastructure. Changing rainfall patterns have led to both water scarcity and excessive flooding in different regions. To address this, engineers are designing systems for rainwater harvesting, groundwater recharge, and efficient water distribution. For example, in many parts of India, rooftop rainwater harvesting systems are being implemented to capture and store rainwater, reducing dependence on groundwater and ensuring water availability during dry periods. Similarly, smart irrigation systems are being used in agriculture to optimize water use and adapt to changing climatic conditions.

Energy infrastructure is also being adapted to ensure reliability under extreme conditions. Power plants, transmission lines, and renewable energy systems are being designed to withstand storms, heatwaves, and flooding. Decentralized energy systems such as solar microgrids are becoming increasingly popular as they provide reliable power even when centralized systems fail during disasters. This enhances community resilience and ensures continuity of essential services.

A key feature of climate-resilient infrastructure is the integration of modern technologies such as sensors, data analytics, and predictive modeling. These technologies enable real-time monitoring of infrastructure performance and early warning systems for disasters. For instance, flood forecasting systems use weather data and hydrological models to predict potential flooding, allowing authorities to take preventive measures.

Despite its importance, implementing climate-resilient infrastructure presents several challenges. The initial cost of resilient design and advanced materials can be high, which may discourage investment, especially in developing countries. Additionally, there is a need for updated design codes and standards that account for future climate scenarios rather than relying solely on past data.

IoT in Civil Engineering

Ms. Gopika S.
S8 CE

The Internet of Things (IoT) is playing an increasingly significant role in civil engineering by enabling real-time monitoring, data-driven decision-making, and smarter infrastructure management. IoT refers to a network of interconnected devices and sensors that collect, transmit, and analyze data through the internet. In the context of civil engineering, these devices are embedded in structures, construction equipment, and urban systems to continuously monitor performance, environmental conditions, and operational efficiency. This shift from traditional practices to intelligent systems is transforming how infrastructure is designed, constructed, and maintained.

One of the most impactful applications of IoT in civil engineering is structural health monitoring. Sensors installed in bridges, buildings, dams, and tunnels can measure parameters such as strain, vibration, temperature, and displacement. This data is transmitted in real time to monitoring systems, allowing engineers to assess the condition of structures and detect potential issues before they become critical. For example, in long-span bridges, IoT sensors help track structural behavior under varying loads and environmental conditions, enabling timely maintenance and preventing failures. This approach significantly improves safety while reducing maintenance costs.

IoT is also revolutionizing construction site management by enhancing efficiency and safety. Smart construction sites use connected devices to track the location and usage of equipment, monitor worker activity, and ensure compliance with safety protocols. Wearable devices equipped with sensors can alert workers and supervisors to hazardous conditions such as high temperatures, toxic gases, or unsafe movements. For instance, if a worker enters a restricted area or is at risk of fatigue, the system can generate immediate alerts. This proactive approach minimizes accidents and improves overall site productivity.

In urban infrastructure, IoT is a key component of smart city development. Sensors embedded in roads, traffic signals, and public utilities collect data on traffic flow, air quality, noise levels, and energy consumption. This information is used to optimize traffic management, reduce congestion, and improve environmental sustainability. For example, smart traffic systems can adjust signal timings based on real-time traffic conditions, reducing delays and fuel consumption. Similarly, IoT-enabled street lighting systems can automatically adjust brightness based on occupancy or time of day, leading to energy savings.

Water resource management is another area where IoT has made significant contributions. Smart water systems use sensors to monitor water levels, flow rates, and quality in pipelines, reservoirs, and treatment plants. These systems can detect leaks, contamination, or inefficiencies in distribution networks, allowing for quick corrective actions. For example, in urban water supply systems, IoT can identify pipe leaks at an early stage, preventing water loss and reducing repair costs. In flood-prone areas, water level sensors combined with weather data can provide early warnings, helping authorities take preventive measures and protect communities.

Building management systems have also become more efficient with the integration of IoT. Smart buildings use sensors to control lighting, heating, ventilation, and air conditioning (HVAC) systems based on occupancy and environmental conditions. This not only enhances occupant comfort but also reduces energy consumption. For example, sensors can automatically switch off lights and adjust temperature settings in unoccupied rooms, leading to significant energy savings in large commercial buildings.

Despite its numerous advantages, the implementation of IoT in civil engineering comes with certain challenges. One of the primary concerns is the high initial cost of installing sensors and developing data management systems. Additionally, the large volume of data generated by IoT devices requires efficient storage, processing, and analysis, which can be complex. Data security and privacy are also important considerations, as unauthorized access to infrastructure data could pose serious risks. Furthermore, there is a need for skilled professionals who can manage and interpret IoT systems effectively.

Looking to the future, the integration of IoT with other emerging technologies such as Artificial Intelligence (AI), Big Data analytics, and cloud computing will further enhance its capabilities. AI algorithms can analyze IoT data to predict failures, optimize maintenance schedules, and improve design processes. For instance, predictive maintenance systems can use historical and real-time data to forecast when a structure or component is likely to fail, allowing engineers to take preventive action. This not only extends the lifespan of infrastructure but also reduces operational costs.

.....



Captured Moments



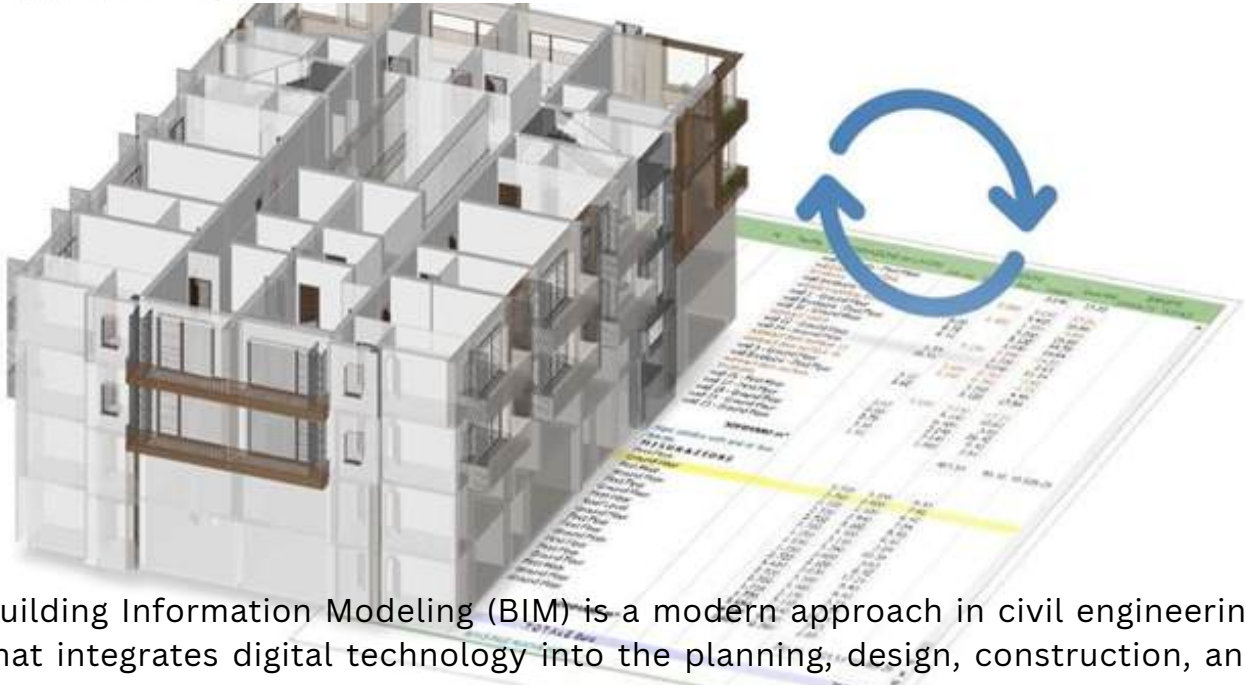


Captured Moments



Building Information Modeling

Ms. Nandita Mohan
Assistant Professor



Building Information Modeling (BIM) is a modern approach in civil engineering that integrates digital technology into the planning, design, construction, and management of infrastructure projects. Unlike traditional methods that rely on separate 2D drawings, BIM creates a comprehensive and intelligent 3D model of a structure, combining geometric design with essential data such as materials, cost, time, and performance. This digital model serves as a central platform where all stakeholders can collaborate, making the construction process more efficient and accurate.

BIM enables engineers and architects to visualize a project in a realistic manner before construction begins. Each element in the model contains detailed information about its properties, allowing for better analysis and design decisions. One of the key advantages of BIM is clash detection, where conflicts between structural, electrical, and mechanical components are identified early. For example, if a pipeline intersects with a beam, the issue can be resolved in the design stage itself, avoiding costly modifications during construction.

Another important feature of BIM is its ability to incorporate multiple dimensions. While 3D BIM represents the physical model, 4D BIM adds the time aspect, helping engineers plan and visualize construction schedules. 5D BIM integrates cost estimation, enabling real-time budget tracking as the design evolves. Advanced levels such as 6D and 7D BIM focus on sustainability and facility management, ensuring efficient operation and maintenance of the structure even after completion.

BIM greatly improves coordination and communication among project participants. Architects, engineers, and contractors can work on a shared model, reducing misunderstandings and ensuring consistency in design. This collaborative approach leads to fewer errors, reduced rework, and faster project completion. For instance, in large infrastructure projects like highways, airports, and bridges, BIM helps in managing complex data and streamlining workflows.

Despite its advantages, BIM implementation requires initial investment in software, training, and skilled professionals. However, the long-term benefits such as improved quality, reduced costs, and enhanced project control outweigh these challenges.

In conclusion, Building Information Modeling is revolutionizing civil engineering by providing a smarter and more integrated approach to construction. Its ability to combine design, analysis, and management into a single digital platform makes it an essential tool for modern infrastructure development, contributing to efficiency, sustainability, and innovation in the construction industry.

Some BIM (Building Information Modeling) companies in India

Pinnacle Infotech

A global BIM leader headquartered in India, Pinnacle Infotech specializes in 4D/5D BIM, MEP coordination, and large-scale international infrastructure projects.

Neilsoft Ltd

Neilsoft is an Autodesk Platinum Partner offering multi-disciplinary BIM, digital engineering, and global AEC solutions with strong international delivery capability.

L&T Construction

L&T Construction integrates BIM through its PARIMAAN platform to manage large infrastructure projects with advanced 4D/5D simulation and lifecycle modeling.

Advenser

Advenser is a Kochi-based BIM firm known for precise MEP modeling, facade engineering, and point-cloud-to-BIM conversion services

Clove Technologies

Clove Technologies is a leading BIM outsourcing company offering scan-to-BIM and GeoBIM-integrated solutions for enhanced project accuracy.

nCircle Tech

nCircle Tech is recognized for delivering global-standard BIM, CAD, and engineering design solutions to diverse industries.

.....

The Bridge of Responsibility

Mr. Nipun A. S2 M.Tech CASE

Ravi stood at the edge of the unfinished bridge, watching the river rush below. Just six months ago, this had been nothing more than lines on paper—his final-year project. Now, it was turning into reality.

Fresh out of college, Ravi had joined a construction firm and was assigned to this rural bridge project. The villagers had been waiting years for it. During monsoon, the river would swell, cutting them off from schools, hospitals, and markets. For Ravi, this wasn't just another job—it was a chance to prove himself.

One evening, while reviewing the site, Ravi noticed small cracks forming in a newly cast pier. The senior engineer dismissed it as minor shrinkage, but Ravi felt uneasy. He spent the night rechecking calculations, soil reports, and load estimates. Something didn't add up.

The next morning, he gathered the courage to present his concerns. After some hesitation, the team agreed to investigate further. Tests revealed a weakness in the foundation due to unexpected soil conditions. If ignored, the bridge could have failed in the future.

The design was revised, the foundation strengthened, and the construction continued safely. Months later, the bridge was completed. On inauguration day, Ravi watched as children crossed the bridge laughing, and elderly people walked across with relief in their eyes.

His senior engineer patted his shoulder and said, "A true civil engineer doesn't just build structures—he builds trust and ensures safety."

Ravi smiled, realizing that civil engineering wasn't just about concrete and steel. It was about responsibility, courage, and the lives that depend on every decision made.



An Interview with a Site Engineer in Kerala

Mr. Pranav K. S.
S6 CE



Interviewer: Good morning! Can you introduce yourself?

Site Engineer: Good morning. I'm Arjun Nair, working as a site engineer for a residential and small commercial construction firm in Kerala. I have around four years of experience in the field.

Interviewer: What does a typical day at your site look like?

Site Engineer: My day usually starts early. I check the ongoing work, verify drawings, and ensure that materials and labor are available. I supervise activities like concreting, brickwork, or finishing works depending on the project stage. I also coordinate with contractors, suppliers, and sometimes clients.

Interviewer: What are the major responsibilities of a site engineer?

Site Engineer: A site engineer is responsible for executing the project as per drawings and specifications, maintaining quality, ensuring safety, and managing time schedules. We also handle measurements, billing, and reporting progress to senior engineers.

Interviewer: What challenges do you face while working in Kerala?

Site Engineer: Weather is a big challenge, especially during the monsoon. Heavy rains can delay work and affect quality. Also, labor availability can fluctuate. In some areas, soil conditions and waterlogging create difficulties during foundation work.

Interviewer: How do you ensure quality on site?

Site Engineer: Quality is ensured through regular inspections and tests. For example, we check concrete mix proportions, curing practices, and alignment of structures. Following proper standards and documentation is very important.

Interviewer: What role does technology play in your work?

Site Engineer: Technology is becoming more important now. We use software for drawings and quantity estimation, and sometimes mobile apps for site reporting. In larger projects, tools like BIM and drones are also used.

Interviewer: How do you handle safety on site?

Site Engineer: Safety is a top priority. We ensure workers use personal protective equipment like helmets and safety shoes. We also conduct briefings about safe work practices and monitor risky activities closely.

Interviewer: What advice would you give to civil engineering students?

Site Engineer: Focus on practical knowledge along with theory. Try to visit construction sites, understand drawings, and learn basic site practices. Communication and problem-solving skills are equally important.

Interviewer: Finally, what do you enjoy most about your job?

Site Engineer: The satisfaction of seeing a structure rise from the ground is the best part. It's rewarding to know that our work directly impacts people's lives.

Interviewer: Thank you for your time!

Site Engineer: Thank you! It was a pleasure.



Career opportunities for Civil Engineers

Mr. Jerry Anto
Assistant Professor

Career opportunities for civil engineers in 2025 are expanding rapidly due to the combined influence of urbanization, technological advancements, and the growing emphasis on sustainable development. Civil engineering is no longer limited to traditional construction activities; it has evolved into a dynamic field that integrates digital technologies, smart systems, and environmental considerations.

The core areas of civil engineering continue to offer strong employment prospects. Roles such as site engineers, structural engineers, geotechnical engineers, transportation engineers, and water resource engineers remain fundamental to infrastructure development. Major infrastructure and construction companies such as Larsen & Toubro, Tata Projects, Shapoorji Pallonji Group, and DLF Limited are among the leading recruiters in this sector, offering opportunities in large-scale and complex projects.

With the integration of advanced technologies, new and specialized roles are emerging in the field. Building Information Modeling (BIM) engineers are in high demand as companies adopt digital tools for planning, design, and coordination. Construction technologists and infrastructure data analysts are also gaining importance, as they use software, data analytics, and automation to improve project efficiency. Global companies such as AECOM, Jacobs Engineering Group, Bechtel, and Fluor Corporation are at the forefront of adopting these technologies and offer diverse career opportunities worldwide.

Sustainability has become a key focus area in 2025, creating new roles for civil engineers in environmental and green construction fields. Engineers are now involved in designing energy-efficient buildings, managing waste, conserving water, and reducing carbon footprints. Companies specializing in sustainable infrastructure and green buildings are actively recruiting professionals with expertise in these areas. This shift not only opens new career avenues but also highlights the role of civil engineers in addressing global environmental challenges.

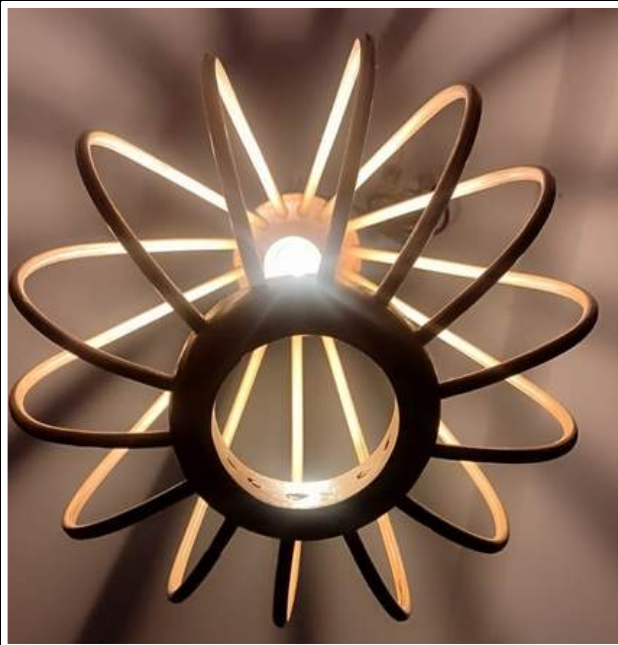
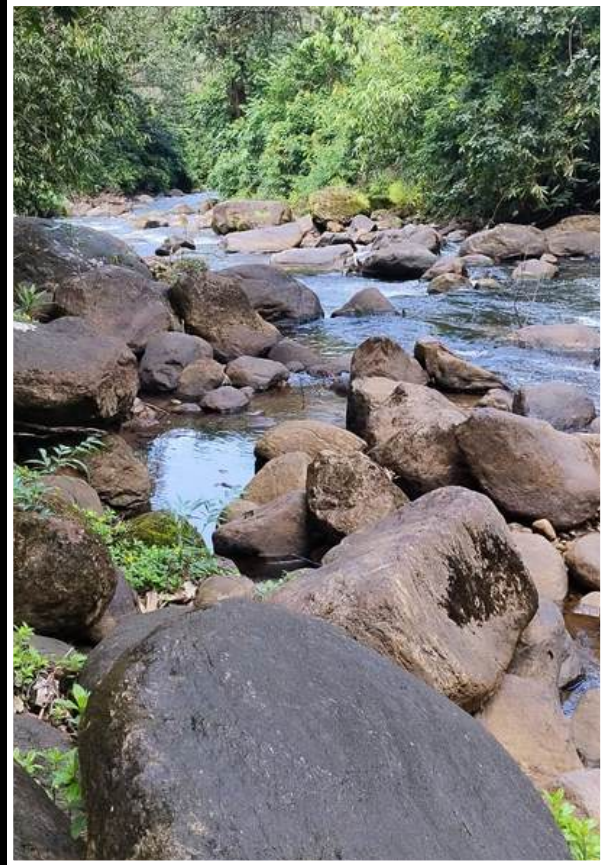
Government sector jobs continue to attract many civil engineers due to their job security and opportunity to contribute to public welfare. Opportunities exist in public works departments, railways, irrigation departments, and municipal bodies, where engineers are involved in the development and maintenance of essential infrastructure. These roles are crucial for national development and provide long-term career stability.

The career landscape for civil engineers in 2025 is broad and promising, offering opportunities in both traditional and emerging fields. With the rise of technology, sustainability, and global infrastructure development, civil engineers have the potential to build not only structures but also a sustainable and innovative future.

Frames of Memories



Ms. Asha Lakshmi
S2 CE



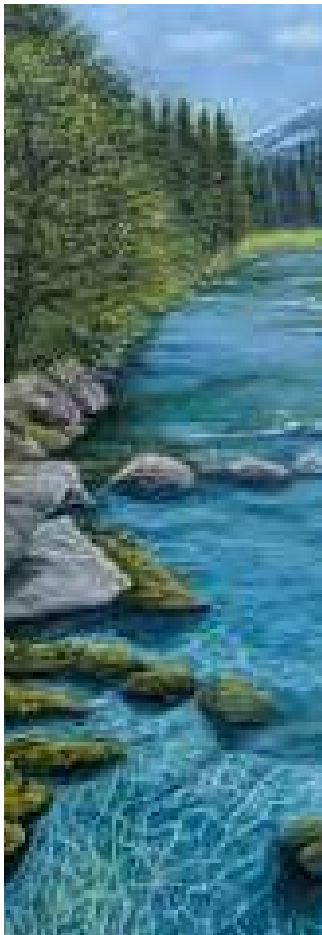
Ms. Asha Lakshmi
S2 CE

ദർശനം

സ്വപ്നങ്ങളുടെ ചിറകിലേറി
ദൂരങ്ങൾ തേടി പറക്കുമ്പോൾ,
മറഞ്ഞിരിക്കുന്ന വഴികളിലും
ദർശനം വെളിച്ചമാകുന്നു.
ഇന്നിന്റെ ചെറു ചുവടുകൾ
നാളെയുടെ വലിയ പാതയായി,
മനസിലെ ഉറച്ച ദൃഢത
വിജയത്തിന്റെ വിളക്കാവുന്നു.
കാറ്റുകൾ തടസ്സമാകുമ്പോഴും
കാൽപ്പാടുകൾ നിർത്താതെ,
ഹൃദയം മുന്നോട്ട് നീങ്ങുമ്പോൾ
ലക്ഷ്യം കൈവരാം തീർച്ചയായും.
ദർശനം വെറും സ്വപ്നമല്ല,
അതൊരു ശക്തിയാണ് ജീവിതത്തിൽ,
കാണാത്ത ലോകങ്ങൾ തുറക്കുന്ന
വിശ്വാസത്തിന്റെ വഴിയിലാണ് അത്.



Ms. Fathima Farsana
S4 CE

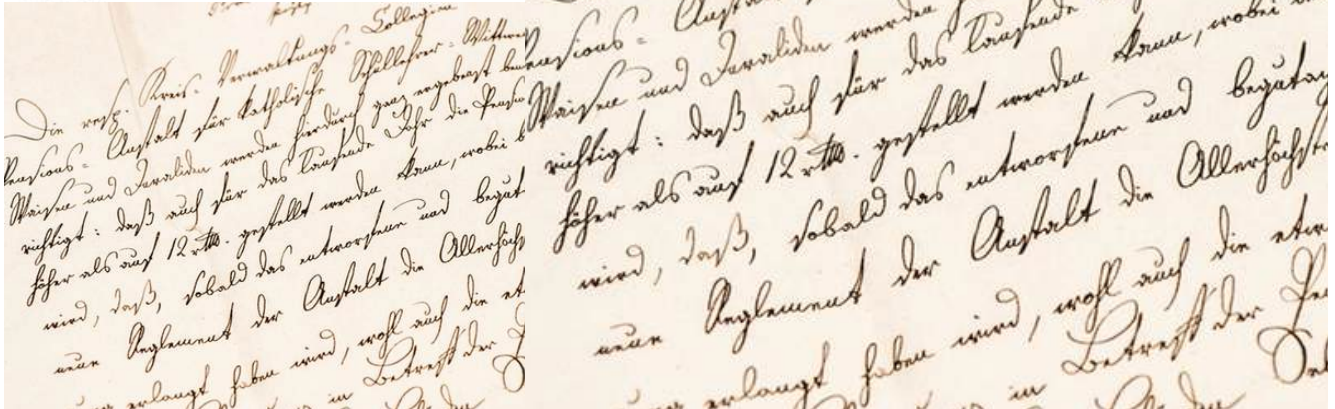


നദിയുടെ നാട്യം

മേഘങ്ങളുടെ ഗർഭത്തിൽ മിന്നലായി മുറുകി ജനിച്ച നീ,
മലമുടികളുടെ മടിയിൽ മഞ്ഞുതുള്ളിയായി ചിതറിപ്പോയി.
അരുവികളുടെ അരളിപ്പാട്ടിൽ അലങ്കാരമായി ഒഴുകി,
അമ്പരത്തിന്റെ കണ്ണുനീരായ് ഭൂമിയെ ചേർത്ത് പിടിച്ചു.
കാടുകളുടെ കണ്ണണിയായ് കാറ്റിനൊപ്പം ചിരിച്ചു നീ,
കല്ലുകളുടെ കഠിനഹൃദയം പോലും കരയിപ്പിച്ചു നീ.
പച്ചപ്പിൻ പാവാടയിൽ പുഞ്ചിരിച്ചൊരു കന്യകയായി,
പുഴയെന്ന പേരിൽ ലോകത്തെ മോഹിപ്പിച്ചു നീ.
വെളിച്ചത്തിന്റെ വാളാൽ വെള്ളിമണിയായി തിളങ്ങി,
ചന്ദ്രന്റെ ചുംബനത്തിൽ ചായംപൂശിയ സുന്ദരിയായി.
ഗ്രാമങ്ങളുടെ ഗാനം നീ, ജീവിതത്തിന്റെ ശ്വാസം നീ,
കർഷകന്റെ കൈകളിൽ സ്വപ്നമായി വിരിഞ്ഞ നീ.
കോപത്തിന്റെ കിരീടം ചൂടി പ്രളയമായി പൊങ്ങിയപ്പോൾ,
കരകൾ കുലുങ്ങി, മനുഷ്യഹൃദയം വിറച്ചുപോയി.
ശാന്തിയുടെ ശീതളതയിൽ താലോലിച്ചു നീ പിന്നെ,
സമുദ്രത്തിന്റെ സ്നേഹത്തിൽ അവസാനിച്ചു നീ യാത്ര.
എന്നാലും നിന്റെ നാദം നിശ്ശബ്ദത്തിൽ നൃത്തം ചെയ്യും,
നദിയായ നീ ഒരിക്കലും നിശ്ചലമാവുകയില്ല.

The Last Letter

Ms. Devananda Mooppil
S4 CE



On a quiet evening, when the sky was painted in fading shades of orange and grey, Aarav found an old letter tucked between the pages of a forgotten book. It wasn't his book. It wasn't even from his time. The paper was yellowed, its edges fragile, and the ink slightly smudged—as if someone had once held it with trembling hands.

He hesitated before opening it, as though it belonged to a memory that wasn't his to touch.

But curiosity won.

The letter began simply:

"If you are reading this, then time has done what I could not."

Aarav frowned. Who writes like that?

He sat by the window as the evening breeze drifted in, carrying the scent of rain. Outside, the world moved as usual—cars passing, people talking, life continuing. But inside that small room, time seemed to slow as he read on. The letter was from a woman named Meera, written nearly thirty years ago. It was addressed to someone named Dev. She spoke of small things—shared laughter, unfinished conversations, a promise to meet again at a train station that neither of them had returned to.

"I waited," she had written. "Not because I thought you would come, but because I hoped you would."

Aarav felt something tighten in his chest.

He didn't know these people, yet their story felt strangely close. The letter spoke of misunderstandings, of words left unsaid, of a love that had quietly slipped away—not with anger, but with silence.

At the bottom of the page, there was one final line:

"If this letter ever finds its way to someone else, I hope you are braver than we were."

Aarav read that line again. And again.

The rain had started now, tapping gently against the glass. He looked at his phone lying on the table. There was a name on the screen—someone he hadn't spoken to in months. Not because he didn't want to, but because he didn't know how to begin.

He had told himself there would be time. That someday, he would call. Someday, he would explain. Someday, he would fix what had quietly broken. But the letter in his hands whispered a different truth.

Someday doesn't always come.

Without overthinking, Aarav picked up his phone. His fingers hesitated for a moment before pressing the call button. His heart raced as he listened to the ringing tone.

Once. Twice.

Then, a voice.

"Hello?"

For a second, he couldn't speak. All the words he had planned seemed too small. Too late.

But then he remembered the letter.

"I... I just wanted to say I'm sorry," he said, his voice unsteady. "And I didn't want to wait anymore."

There was silence on the other end.

Then, softly, *"I'm glad you called."*

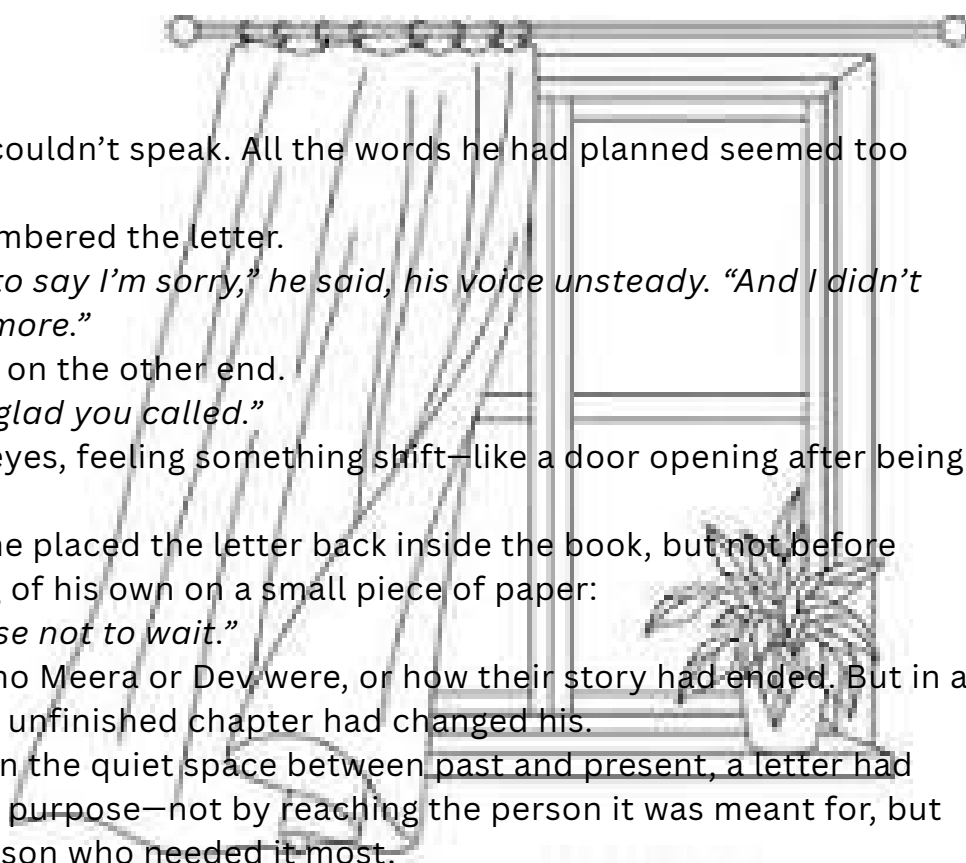
Aarav closed his eyes, feeling something shift—like a door opening after being shut for too long.

Later that night, he placed the letter back inside the book, but not before adding something of his own on a small piece of paper:

"Thank you. I chose not to wait."

He didn't know who Meera or Dev were, or how their story had ended. But in a strange way, their unfinished chapter had changed his.

And somewhere, in the quiet space between past and present, a letter had finally fulfilled its purpose—not by reaching the person it was meant for, but by finding the person who needed it most.



The Timeless Beauty of Handwriting

Ms. Niranjana Kumar
S2 CE

In an age dominated by keyboards and touchscreens, handwriting remains a quiet yet powerful form of personal expression. It is more than just a method of writing words—it is an art, a reflection of individuality, and a bridge between thought and emotion. The beauty of handwriting lies not only in how it looks, but in what it represents.

Every person's handwriting is unique. Just as no two voices sound exactly alike, no two styles of writing are identical. The curves, slants, spacing, and pressure of letters subtly reveal aspects of a person's personality. Some handwriting appears bold and confident, while others are soft and delicate. This individuality transforms ordinary words into something deeply personal, something that cannot be replicated by digital fonts.

Handwriting also carries a sense of authenticity that typed text often lacks. A handwritten letter, for instance, feels more intimate and meaningful than a typed message. It shows effort, time, and intention. When someone writes by hand, they are fully present in the moment, carefully shaping each letter. This process creates a stronger emotional connection between the writer and the reader, making the message more memorable.

Moreover, the act of writing itself has a calming and reflective quality. It slows down the mind, allowing thoughts to flow more naturally. Many people find that writing by hand improves focus, creativity, and memory. It encourages deeper thinking, as each word is formed deliberately rather than typed quickly. In this way, handwriting becomes not just a skill, but a mindful practice.

The aesthetic appeal of handwriting is another reason for its enduring charm. From elegant cursive scripts to artistic calligraphy, handwriting can be visually captivating. Beautifully written notes, journals, and letters can turn simple content into something visually pleasing and inspiring. This is why handwritten invitations, greeting cards, and personal notes continue to hold value even in modern times.

However, with increasing reliance on technology, the importance of handwriting is slowly diminishing. Many people rarely write by hand, except for quick notes or signatures. As a result, the skill and beauty of handwriting risk being overlooked. Preserving this art is essential, not only for practical purposes but also for cultural and personal expression.

In conclusion, handwriting is much more than a basic skill—it is a form of art, a means of connection, and a reflection of the human touch. While technology continues to evolve, the charm of handwritten words remains timeless. By valuing and practicing handwriting, we keep alive a tradition that carries both beauty and meaning, reminding us that sometimes, the simplest forms of expression are the most powerful.

Life at SSET

Ms. Malavika R.
S8 CE



Life as a third-year civil engineering student at SCMS School of Engineering and Technology is a unique blend of responsibility, learning, and memorable experiences. By the time we reach the third year, the excitement of entering college has settled, and we begin to understand what it truly means to be an engineer in the making.

The academic journey becomes more focused and intense. Subjects like structural analysis, geotechnical engineering, transportation engineering, and environmental engineering demand not just understanding, but application. Classes are no longer about simply taking notes; they are about questioning, analyzing, and solving real-world problems. Assignments, seminars, and internal exams keep us constantly engaged, pushing us to stay disciplined and consistent.

Practical exposure plays a major role in shaping our learning. Lab sessions and fieldwork are often the most exciting parts of our routine. Whether it is working with surveying instruments, testing materials in the lab, or visiting construction sites, these experiences help us connect theory with practice. They give us a glimpse into the professional world and prepare us for the challenges ahead.

At the same time, student life at SCMS is not limited to academics. The campus is vibrant, filled with opportunities to grow beyond textbooks. Technical events, workshops, and activities organized by student bodies like IEDC and other clubs allow us to explore our interests and develop new skills. Participating in these activities helps build confidence, teamwork, and leadership qualities.

Friendships form the heart of college life. By the third year, classmates become more like family. We share notes, help each other during exams, and spend countless hours together—whether in classrooms, labs, or the canteen. These moments of laughter and support make even the most stressful days manageable and create memories that last a lifetime.

भावनाएँ

दिल के कोने में कुछ बातें रहती हैं,
खामोशी में भी जो आवाज़ें कहती हैं।
कभी खुशी बनकर चेहरे पर मुस्काती,
कभी दर्द बन आँखों में उतर आती।

भावनाएँ रंग हैं जीवन के सारे,
कभी अपने, कभी लगते हैं प्यारे।
माँ की ममता में जो सुकून मिलता,
दोस्त की हँसी में हर ग़म है खिलता।

कभी क्रोध बन आग सी जलती,
कभी उम्मीद बन राहें बदलती।
प्रेम की बारिश जब मन को छू जाती,
सूखी सी धरती भी महक उठ जाती।

अकेलापन भी कुछ सिखा जाता है,
हर आँसू इंसान को मजबूत बनाता है।
भावनाएँ ही तो हमें इंसान बनाती हैं,
टूटे दिलों में भी नई रोशनी जगाती हैं।

Ms. Archana K Dinesh
S8 CE



നാളെയുടെ നിഴൽ

Ms. Durga V. Nair
S8 CV



അവൾ തന്റെ പഴയ വീട്ടിന്റെ വരാന്തയിൽ ഇരിക്കുകയായിരുന്നു. കൈയിൽ ഒരു ചെറിയ ഡയറി. അതിൽ എഴുതിയിരുന്നത് ഒരു വാക്ക് മാത്രം – “നാളെ”. അവൾക്ക് ആ വാക്ക് എന്നും ഒരു ചോദ്യമായിരുന്നു. നാളെ എന്താണ്? അത് വരുമോ, അല്ലെങ്കിൽ നമ്മൾ തന്നെയാണോ അതിനെ സൃഷ്ടിക്കുന്നത്? അനന്യ എന്ന പെൺകുട്ടിക്ക് ചെറുപ്പം മുതൽ ഭാവിയെക്കുറിച്ചുള്ള കൗതുകം കൂടുതലായിരുന്നു. മറ്റുള്ളവർ ഇന്നിനെക്കുറിച്ച് സംസാരിക്കുമ്പോൾ, അവൾ നാളെയെക്കുറിച്ച് സ്വപ്നം കണ്ടിരുന്നു. ഒരുദിവസം അവൾ തീരുമാനിച്ചു – “ഞാൻ എന്റെ ഭാവിയെ കാണണം.”

അവൾ തന്റെ അച്ഛന്റെ പഴയ മുറിയിൽ പോയി. അവിടെ ഒരു പഴയ കമ്പ്യൂട്ടർ ഉണ്ടായിരുന്നു. അതിൽ ചില വിചിത്രമായ പ്രോഗ്രാമുകൾ. അച്ഛൻ ഒരിക്കൽ പറഞ്ഞിരുന്നു, “സാങ്കേതിക വിദ്യ മനുഷ്യന്റെ സ്വപ്നങ്ങളെ പോലും കാണിക്കും.” ആ ഓർമ്മ മനസ്സിൽ വന്നു. അവൾ കമ്പ്യൂട്ടർ ഓൺ ചെയ്തു. സ്ക്രീനിൽ ഒരു ചോദ്യം തെളിഞ്ഞു:

“Do you want to see your future?”

അവൾ നിമിഷം മടിച്ചു. പിന്നെ “Yes” അമർത്തി.

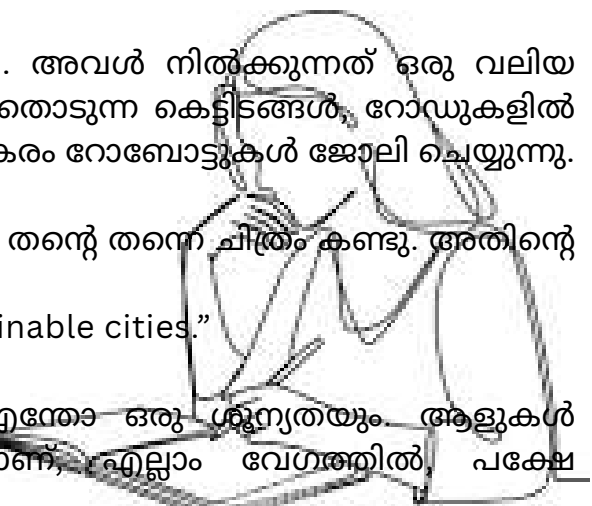
അവളുടെ ചുറ്റുമുള്ള ലോകം മാറിത്തുടങ്ങി. അവൾ നിൽക്കുന്നത് ഒരു വലിയ നഗരത്തിൽ. എല്ലാം പുതുമ. ആകാശത്തെ തൊടുന്ന കെട്ടിടങ്ങൾ, റോഡുകളിൽ ശബ്ദമില്ലാത്ത വാഹനങ്ങൾ, മനുഷ്യർക്ക് പകരം റോബോട്ടുകൾ ജോലി ചെയ്യുന്നു. “ഇതാണ് ഭാവി?” അവൾ സ്വയം ചോദിച്ചു.

അവൾ നടക്കുമ്പോൾ ഒരു വലിയ സ്ക്രീനിൽ തന്റെ തന്നെ ചിത്രം കണ്ടു. അതിന്റെ കീഴിൽ എഴുതിയിരുന്നത്:

“Dr. Ananya – Scientist who changed sustainable cities.”

അവൾ അത്ഭുതപ്പെട്ടു. “ഞാനോ?”

അവൾക്ക് സന്തോഷം തോന്നി, പക്ഷേ എന്തോ ഒരു ശൂന്യതയും. ആളുകൾ തമ്മിൽ സംസാരിക്കുന്നില്ല, ചിരി കുറവാണ്, എല്ലാം വേഗത്തിൽ, പക്ഷേ ഹൃദയമില്ലാതെ



അപ്പോൾ ഒരു ചെറിയ കുട്ടി അവളുടെ അടുത്തേക്ക് വന്നു.
 “ചേച്ചി, നിങ്ങൾ സന്തോഷവതിയാണോ?”
 ആ ചോദ്യത്തിന് അവൾക്ക് മറുപടി കിട്ടിയില്ല.

അവൾ പെട്ടെന്ന് തിരിച്ചറിഞ്ഞു – ഭാവി സാങ്കേതിക വിദ്യ മാത്രം അല്ല. അത് മനുഷ്യരുടെ വികാരങ്ങളും ബന്ധങ്ങളും ചേർന്ന ഒന്നാണ്. അവൾ വീണ്ടും ആ സ്ക്രീനിലേക്ക് നോക്കി. “Back” എന്ന ബട്ടൺ അവിടെ ഉണ്ടായിരുന്നു.

അവൾ അത് അമർത്തി.
 വീണ്ടും അവൾ തന്റെ വീട്ടിലെ വരാന്തയിൽ. കൈയിൽ ഡയറി. രാത്രി ആകാശം നിശ്ശബ്ദമായി.

അവൾ വീണ്ടും ആ ഒരു വാക്ക് നോക്കി – “നാളെ”.
 ഈപ്പം അവൾ അതിന് താഴെ കുറിച്ചു:
 “നാളെ നമ്മൾ ഉണ്ടാക്കുന്നതാണ്.”
 അവൾ ചിരിച്ചു.



ഇപ്പോൾ അവൾക്ക് ഭാവിയെ കാണാനുള്ള ആവശ്യമില്ല. കാരണം, അവൾക്ക് മനസ്സിലായി – നല്ലൊരു നാളെ ഉണ്ടാകാൻ, ഇന്നാണ് മാറ്റം തുടങ്ങേണ്ടത്.

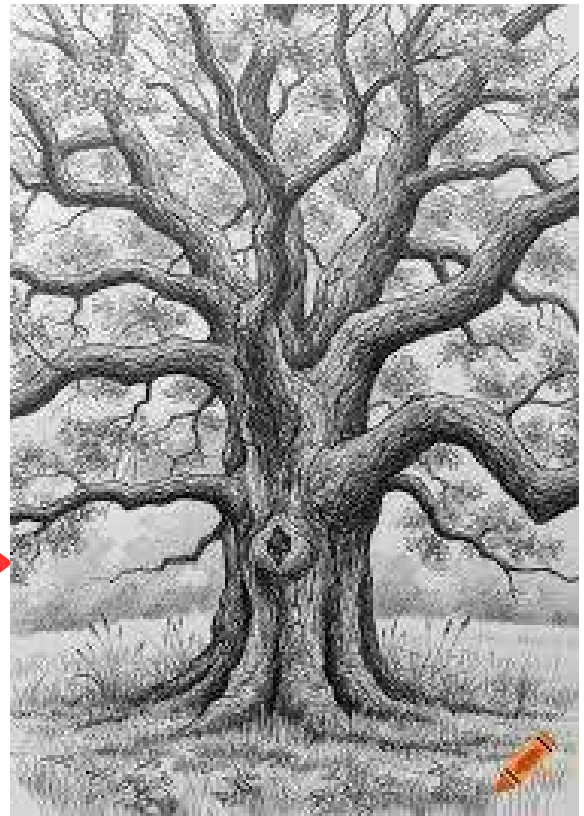
.....



Congratulations on completing your B.Tech in Civil Engineering—may your future be as strong and enduring as the structures you build. Wishing you great success, innovation, and fulfillment as you step into the professional world.



Ms. Nandana A. S.
S8 CE



Mr. Arjun K. P.
S4 CE





Ms. Fathima Salim K.
S8 CE

SAVISTHARA

SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY

CIVIL ENGINEERING DEPARTMENT



SCMS

School of Engineering & Technology

a department of
CIVIL ENGINEERING
association.