

SDG PORTFOLIO

Sustainable Development Goals

**SCMS SCHOOL OF ENGINEERING AND
TECHNOLOGY**

Civil Engineering Department



B.Tech Civil Engineering

Batch: 2021–2025





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. The Department of Civil Engineering encourages students to contribute toward sustainable development through academic projects, environmental activities, field studies, outreach programs, and innovative engineering solutions aligned with Sustainable Development Goals.

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.



SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY

Civil Engineering Department



No. of Academic Projects: 2



No. of Department Activities: 7



No. of Academic Projects: 1
No. of Department Activities: 5



No. of Academic Projects: 2
No. of student Internships: 17
No. of Department Activities: 6



No. of Academic Projects: 3
No. of student Internships: 17
No. of Department Activities: 1



No. of Academic Projects: 2
No. of Department Activities:



No. of Academic Projects: 1
No. of Department Activities: 2

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SDGs addressed in Academic Projects

Sl. No	Project Title	Student Name	Brief Description	Relevant SDG(s)	Justification
1	Effect of Flooding on Properties of Soil	Ms. Malavika R, Mr. Mohammad Adhil, Ms. Namratha Raj, Mr. Nishab K, Ms. Sandra Rose Davis	Study investigates how prolonged flooding alters soil strength, permeability, and stability, affecting construction and land use.	SDG 11 – Sustainable Cities and Communities SDG 13 – Climate Action	Understanding flood-induced soil degradation helps improve resilience of infrastructure in flood-prone regions, contributing to safe settlements and climate adaptation.
2	Crash Risk Mapping & Star Rating of Major Roads in Edapally Municipality	Ms. Gopika S Mr. Pravil Vilson Ms. Archana K Dinesh Mr. Mohammed Anas M K	Assesses crash-prone zones using road safety audit techniques and assigns star ratings to identify priority improvement areas.	SDG 3 – Good Health and Well-Being SDG 11 – Sustainable Cities and Communities	Enhances road safety, reduces accidents, and improves overall community well-being through safe transportation systems.
3	Sediment Transport Analysis of Muvattupuzha River Basin Using HEC-RAS and HEC-HMS	Ms. Aardra Amrith Kumar Ms. Anagha Sadhan K S Ms. Anupriya Shaji Ms. Swathy M Vijayan	Analyses river flow, sediment load, and flood behaviour to support basin management and flood forecasting.	SDG 6 – Clean Water and Sanitation SDG 13 – Climate Action	Supports river conservation, reduces flood risks, and promotes sustainable watershed management, contributing to environmental protection.
4	Rollover Stability of Trucks on Reverse Curves: Effect of Curve Geometry	Mr. Arif Muhammed Ms. Aysha Nourin Mr. Sanat Sanilkumar Mr. K P Vishnu Panicker	Studies how curve radius, super elevation, and speed influence rollover risk of heavy vehicles.	SDG 3 – Good Health and Well-Being SDG 9 – Industry, Innovation, and Infrastructure	Improves transport safety and helps design safer road infrastructure, reducing accidents and supporting sustainable industrial logistics.
5	Slope Stability Analysis of Geo-grid Reinforced Embankment Constructed with Marginal Materials Using Geo5	Ms. Punnya M Mr. Sarankumar V S Ms. Aiswarya Harilal Mr. Mohammed Jafer I	Evaluates slope stability improvement when geo-grids reinforce embankments using low-quality soils.	SDG 9 – Industry, Innovation and Infrastructure SDG 12 – Responsible Consumption and Production	Encourages use of marginal/local materials, reducing environmental impact and supporting innovative, cost-effective infrastructure solutions.



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6	Development of A Pollution Potential Index(PPI) for Ranking Existing Dumpsites	Ms. Annapoorna Ms. Durga	Creates an index-based model to assess and rank dumpsites based on pollution risk for better waste-management planning.	SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production	Helps municipalities prioritize remediation, reduce pollution, and improve public health and urban sustainability.

SDGs addressed in Student Industrial Training

Sl. No.	Student Name	Industry / Organization	Area of Training	Relevant SDGs	Justification
1	Ms. Aardra Amrith Kumar	Angamaly Municipality	Municipal engineering practices, permit processing, site inspection	SDG 9, SDG 11	Supports sustainable urban infrastructure development and efficient municipal engineering practices.
2	Ms. Anupriya Shaji	Angamaly Municipality	Municipal engineering practices, permit processing, site inspection	SDG 9, SDG 11	Promotes sustainable city planning and responsible public infrastructure management.
3	Mr. Mohammed Jafar I	Angamaly Municipality	Municipal engineering practices, permit processing, site inspection	SDG 9, SDG 11	Enhances knowledge in urban infrastructure planning and municipal engineering systems.
4	Ms. Gopika S	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Supports sustainable building construction practices and resilient infrastructure development.
5	Ms. Malavika R	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Encourages quality construction practices aligned with sustainable urban growth.
6	Mr. Muhammed Adhil	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Contributes to infrastructure development through effective site supervision and quality management.

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Sl. No.	Student Name	Industry / Organization	Area of Training	Relevant SDGs	Justification
7	Ms. Namratha B Raj	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Promotes safe and sustainable building construction practices.
8	Ms. Punnya M	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Supports resilient infrastructure development and construction quality assurance.
9	Ms. Sandra Rose Davis	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Enhances sustainable construction practices through site monitoring and supervision.
10	Mr. Sarankumar V S	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Contributes to sustainable infrastructure through practical construction management exposure.
11	Ms. Aiswarya Harilal	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Supports sustainable and safe construction techniques through quality control practices.
12	Ms. Archana K Dinesh	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Promotes sustainable infrastructure and effective site execution practices.
13	Mr. K P Vishnu Panicker	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Encourages responsible construction practices and resilient urban infrastructure development.
14	Mr. Muhammed Anas M K	Cheriyam Parambil Constructions	Building construction, site supervision, quality control	SDG 9, SDG 11	Supports sustainable construction and infrastructure quality management practices.
15	Mr. Nishab K	PWD (Bridges), Tirur	Bridge works, road construction, site measurement	SDG 9, SDG 11	Contributes to transportation infrastructure development and sustainable public connectivity systems.
16	Ms. Anagha Sadan	Genzee Technologies	Interior design, CAD and 3D modeling	SDG 9, SDG 11	Promotes innovative and sustainable design solutions using modern digital technologies.
17	Ms. Swathy M Vijayan	Genzee Technologies	Interior design, CAD and 3D modeling	SDG 9, SDG 11	Encourages sustainable and technology-driven design practices in the built environment.



SDGs addressed in Department Activities

Sl. No.	Department Activity	Month & Year	SDG Mapping	Justification
1	Onam pookkalam design competition with the theme “Match with nature”	Aug-23	SDG 11; SDG 13	Promoted environmental sustainability and eco-friendly cultural practices.
2	Field visit to Chalakudy River Diversion Scheme at Thumburmuzhy	Sep-23	SDG 6	Provided practical exposure to irrigation and water management systems.
3	Technical Talk on “Quality Management in Concrete Construction”	Mar-24	SDG 9	Improved understanding of sustainable and quality infrastructure practices.
4	Water Day organised by FRAMES	Mar-24	SDG 6	Encouraged water conservation awareness among students.
5	Expert talk by Mr. Ravisankar P	Apr-24	SDG 4	Enhanced professional and technical knowledge through expert interaction.
6	Hands-on workshop on “Advanced Survey Techniques”	Sep-24	SDG 9	Introduced modern surveying methods used in infrastructure projects.
7	Hands-on workshop on “Aerial Mapping”	Sep-24	SDG 9	Familiarized students with drone-based mapping and smart infrastructure technologies.
8	Orientation session – GATE and other competitive examinations	Oct-24	SDG 4	Motivated students towards higher education and competitive learning.
9	A Day Outside the Classroom – Visit to Chimmoni Dam	Oct-24	SDG 6	Helped students understand dam operations and water conservation systems.
10	Water treatment plant visit, KWA Aluva	Oct-24	SDG 6	Provided practical exposure to water purification and supply systems.
11	Add on course – MS Office	Nov-24	SDG 4	Improved digital literacy and office productivity skills.
12	Introduction to GIS and Data Processing in QGIS	Dec 2024 – Mar 2025	SDG 9	Introduced geospatial data analysis tools for engineering applications.
13	A session on “How to face an interview in a civil related company”	Jan-25	SDG 4	Improved communication, confidence, and employability skills.

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Sl. No.	Department Activity	Month & Year	SDG Mapping	Justification
14	Inquizitive 25 – Technical Quiz Competition	Jan-25	SDG 4	Encouraged technical learning and knowledge sharing among students.
15	Alumni Talk – Roles and Responsibilities of a Civil Engineer in Construction Industry	Jan-25	SDG 4	Strengthened industry awareness and professional ethics.
16	VR-Integrated Structural and Interior Design with Career Guidance	Feb-25	SDG 9	Introduced innovative digital technologies in design and construction.
17	Online session on Language and Communication Skills	Mar-25	SDG 4	Enhanced communication and interpersonal skills of students.
18	Beyond Pollution Control: The Role of Engineers in Environmental Sustainability	Mar-25	SDG 13	Increased awareness on environmental sustainability and climate responsibility.
19	Visit to Dr. Fixit learning centre	Mar-25	SDG 9	Exposed students to modern construction chemicals and building technologies.
20	Photography contest Threads of water ties of life	Mar-25	SDG 6	Promoted awareness regarding water conservation through creative activities.

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