FOUNDATION

Department of Civil Engineering

Annual Report 2025



Editor
Professor Dr. SM Shirazi, CEng

Eastern University

Road 6, Block B, Ashulia Model Town
Birulia, Savar, Dhaka -1345

January 2026

FOUNDATION

Annual Report 2025

Department of Civil Engineering

Panel of Editors:

Dr. SM Shirazi, CEng

Mohammad Ibna Anwar

Asif Raihan

Arif Mohammad Aziz

Md. Mahmud

Road 6, Block B, Ashulia Model Town
Birulia, Savar, Dhaka -1345

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Prof. Dr. Farid A. Sobhani

Vice Chancellor

MESSAGE

It is with great pride that I present this message to the Third Annual Report of the Department of Civil Engineering. The achievements recorded over the past year are a testament to the department's unwavering commitment to academic excellence, research, innovation, and professional relevance.

Civil engineering remains fundamental to national development, shaping the infrastructure that sustains economic growth, public safety, and societal well-being. I am encouraged by the department's continued progress in advancing high-quality research, embracing emerging technologies, and producing graduates equipped to meet contemporary engineering challenges. The department's contributions in the areas of sustainability, disaster resilience, and advanced construction practices reflect a forward-looking approach that aligns strongly with national priorities and global expectations.

I commend the faculty members, students, and staff for their dedication and collective efforts in achieving the milestones. Their commitment not only enhances the reputation of the Department of Civil Engineering but also strengthens the university's mission to contribute meaningfully to society through education, research, and innovation.

As the Vice-Chancellor, I remain confident that the department will continue to uphold the highest standards of academic and professional excellence, fostering innovation and leadership that will leave a lasting impact on the engineering profession and the communities we serve.

Hoping for the best.

Professor Dr. Md. Mahfuzur Rahman
Dean
School of Engineering and Technology

MESSAGE

It is a privilege to present this message for the Third Annual Report of the Department of Civil Engineering. Over the past year, the department has demonstrated commendable growth, innovation, and resilience, further strengthening its position as a center of excellence in engineering education and research.

Through collective commitment and collaboration, the department has achieved significant milestones, ranging from impactful research initiatives to meaningful community engagement. Our students continue to distinguish themselves through strong academic performance and extracurricular accomplishments, reflecting the department's emphasis on leadership, creativity, and ethical responsibility. At the same time, our faculty members have made notable contributions to knowledge advancement, actively engaging in interdisciplinary research and fostering productive collaborations with industry and academic partners to address pressing real-world challenges.

As we reflect on these achievements, we remain firmly committed to our mission of educating and mentoring the next generation of engineers who will lead the development of a sustainable, resilient, and technologically advanced future. I extend my sincere appreciation to our faculty, students, alumni, and industry partners for their continued dedication, support, and collaboration.

Together, let us build upon these successes and continue to elevate the Department of Civil Engineering to greater heights.

Professor Dr. SM Shirazi, CEng

Head of the Department

MESSAGE

It is with great pride and optimism that I present this message for the Third Annual Report of the Department of Civil Engineering. Over the past year, the department has continued to advance its mission of delivering high-quality and outcome-driven education, impactful research, meaningful community engagement, in alignment with the university's strategic priorities and national accreditation frameworks.

In an era of rapid technological advancement and increasing societal demands on the engineering profession, our department has made significant progress in strengthening academic rigor, modernizing curricula, and expanding research and industry collaboration. Our programs are carefully designed to ensure alignment with accreditation requirements, emphasizing technical competence, ethical responsibility, sustainability, and lifelong learning. The achievements highlighted in this report including innovative research initiatives reflect our commitment to continuous improvement and institutional excellence.

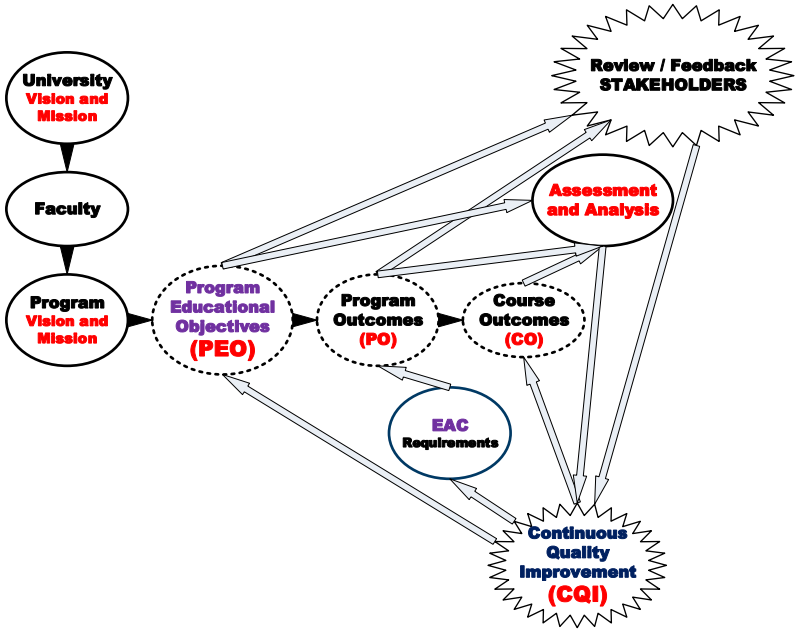
We have placed particular emphasis on integrating sustainability, resilience, and innovation into teaching and learning, ensuring that our graduates are well prepared to address complex infrastructure challenges at local, national, and global levels. Through systematic assessment, faculty development, and stakeholder engagement, the department remains focused on achieving measurable outcomes that support both academic excellence and professional relevance.

I extend my sincere appreciation to our faculty members, students, staff, and industry partners for their dedication, trust, and continued collaboration. Their collective efforts are central to the department's progress and continuous growth.

As we look ahead, let us remain inspired by our shared purpose to educate responsible engineers, advance knowledge, and contribute to sustainable development. Together, we will continue to build a future defined by excellence, innovation, and societal impact.

2. Mission and Vision

The Department of Civil Engineering offers a 4-year undergraduate Program of Bachelor of Science in Civil Engineering. To become a graduate in this field one has to complete 160 credit hours. It is utmost necessity to enhance the quality of higher education in Bangladesh for national and global context. Eastern University (EU) is one of the private universities trying to maintain quality education for creating the leader of the leaders since 2003. Department of Civil Engineering has projected itself as one of the vital departments of the faculty of engineering and technology. Experienced and learned teachers teach the courses based on Outcome Based Education (OBE) system. Eastern University is well equipped with necessary lab facilities for test, and research works. The academic programs of this University are continually being updated and improved to reflect the latest development in engineering education. The mission of Civil Engineering department is to become a department of quality and distinction enabling students to flourish academically, personally, and socially through obtaining soft skill by OBE system.



Flow chart of Continuous Quality Improvement

Vision:

- Graduates are competent, innovative and entrepreneurial in acquiring and applying knowledge towards solving Civil Engineering problems.
- Graduates possess leadership qualities, able to work, manage in diverse teams and serve the society in multi-disciplinary environment.
- Graduates demonstrate professionalism and uphold ethical values with emphasis on sustainable development.
- Graduates are able to communicate effectively, possess strong self-confidence and recognize the need for life-long learning.

3. Faculty Members and Officials

Professor

Dr. SM Shirazi, CEng

Dr. Zakia Begum

Dr. Sharmin Islam

Dr. Amena Ferdousi

Dr. Gulshan Khatun

Associate Professor

Mohammad Ibna Anwar

Md. Abdur Rob

Dr. Iqbal Mahmud

Assistant Professor

Asif Raihan

Arif Mohammad Aziz

Abdullah-Al-Fahad

Lecturer

Md. Mahmud

Md. Rajaur Rahman

Lab Assistant

Khandaker Ahad

4. Research Activities

Development of Environmental Flow Framework for Flora and Fauna at Turag River Basin in Dhaka

Prof. Dr. SM Shirazi, CEng
Head of the Department
Department of Civil Engineering
Eastern University

Water crises may have two main reasons; one belongs to management and other predominately attached to the resource itself. The climate change effects on human beings and on terrestrial ecosystems will further aggravate water crisis in future. The shortage of water resources is not yet the main issue behind temporary water shortage in some regions in Dhaka, but the fragmental way of water resource management in the country has caused temporary water shortages in some regions. An integrated resource management strategy should be developed to avert any water shortages in Bangladesh. The concept of integrated water resources management (IWRM) has been surfaced for last more than one decade but its application in managing water resources in Bangladesh still lacks methodology support that can translate IWRM concept into practice. The present study plans to link environmental flow (including ecological flow, maintenance flow, conditioning flow, compensation flow, and minimum river flow) to catchment developments (including human activities and nature impacts). The proposed methodology will consider environmental flow for requirement of water by whole ecosystem, aquatic life, and human beings which are closely dependent on water availability in a watershed. Turag River Basin will use as a case study to build, run, and implement the environmental flow model.

Objectives

The overall objective of the study is to develop a framework for determining environmental flow for Turag River Basin in Dhaka. The framework will be based on a scientific grouping of ecological, hydrological, and environmental baseline data. The scientific grouping of the above factors will include an assessment of changes resulting from anthropogenic effects which occurred in the basin. The specific objectives of the study include:

1. To assemble and synthesize the information which is necessary for enabling stakeholders and river basin managers to develop environmental flow recommendations for the basin.
2. To develop an inclusive database for monitoring environmental flow and to evaluate the environmental flow guidelines.

Statistical Predictive Modelling of Compressive Strength of Concrete: Insights from Ready-Mix Concrete Factories in Bangladesh

Mohammad Ibna Anwar
Associate Professor
Department of Civil Engineering
Eastern University

Overview

Concrete compressive strength (CS) is a key property that defines structural integrity and significantly impacts construction planning and time management. Accurate CS prediction is vital for structural safety and effective resource optimisation. While 28-day CS remains the industry standard, understanding early-age strength development (e.g., at 7 days) is imperative for quality control and streamlining construction schedules [1]. Ready-mix concrete (RMC) factories are primary suppliers, making consistent and reliable product quality paramount.

This research statistically analyzes 7-day and 28-day CS data from multiple RMC factories to investigate strength variability and identify influencing factors. This analysis enhances the understanding of real-world concrete strength development, informing improved quality control and predictive modelling within the RMC industry [2]. Consequently, these findings will benefit both RMC producers and construction engineers, leading to more reliable and efficient concrete usage.

Specifically, this research investigates the compressive strength of RMC produced in Bangladesh. The research objectives are as follows:

To perform a rigorous statistical analysis of 7-day and 28-day compressive strength data collected from a representative sample of RMC factories nationwide.

To quantify the variability in compressive strength across different RMC factories and various target strength grades.

To identify and quantify the influence of key material properties and mix design parameters on compressive strength.

References

[1] Peng X, Zhuang Z, Yang Q. ***"Predictive Modelling of Compressive Strength For Concrete At Super Early Age"***. Materials. 2022;15(14):4914.

[2] Aggarwal R, Kumar M, Sharma RK, Sharma MK. ***"Predicting Compressive Strength of Concrete"***. Int J Appl Sci Eng. 2015;13(2):171-85.

GIS-based Bivariate Analysis of the Impact of Climate on the Abu Dhabi (UAE) Mangrove National Park

Asif Raihan
Assistant Professor
Department of Civil Engineering
Eastern University

Mangroves are essential natural assets that support both human needs and marine ecosystems while providing a vital defense against natural disasters. While much research has focused on how mangroves mitigate climate change; there is a lack of understanding on how local microclimate factors—specifically heat—affect the mangroves themselves.

This study investigated how Land Surface Temperature (LST) influenced the health of the Abu Dhabi Mangrove National Park between 2015 and 2020. By analyzing Landsat 8 satellite imagery through Local Bivariate Analysis, relationship between surface heat and vegetation health (NDVI) was measured.

The findings revealed that mangrove health has declined as surface temperatures have increased. The study identified several types of relationships between heat and health, including linear and non-linear (concave/convex) patterns. Notably, the statistical link between temperature and mangrove health became significantly stronger in 2020 compared to 2015, reaching a high coefficient of determination ($R^2 = 0.8512$). This suggests that rising temperatures are becoming an increasingly dominant factor in the degradation of these coastal forests.

Objectives

1. **To assess the impact of microclimate factors:** Specifically, to determine how Land Surface Temperature (LST) affects the health of mangrove forests over a period of five years.
2. **To model spatial relationships:** To identify the specific nature of the relationship (e.g., Positive Linear, Negative Linear, Concave, or Convex) between temperature and vegetation of Abu Dhabi mangrove forest.

GIS and Artificial Neural Network–Based Landslide Susceptibility Assessment and Geotechnical Mitigation Planning for Hilly Regions of Bangladesh

Arif Mohammad Aziz
Assistant Professor
Department of Civil Engineering
Eastern University

Landslides represent a critical geotechnical hazard in the hilly regions of Bangladesh, particularly in areas such as the Chattogram Hill Tracts, Cox's Bazar, and surrounding urbanizing slopes. These regions are characterized by complex geology, weak soil formations, steep slopes, intense monsoon rainfall, and increasing anthropogenic intervention due to rapid urbanization and infrastructure development. The recurring occurrence of rainfall-induced landslides poses serious threats to human life, transportation networks, residential developments, and essential infrastructure.

This research aims to develop a data-driven landslide susceptibility assessment and mitigation planning framework using Artificial Neural Networks (ANN) integrated with Geographic Information Systems (GIS). The proposed approach incorporates critical geotechnical parameters including soil type, shear strength characteristics, slope geometry, lithology, groundwater conditions, rainfall intensity, land-use patterns, and proximity to roads and cut slopes alongside topographic and environmental factors. ANN will be employed to model the complex, non-linear interactions among these parameters, enabling more accurate prediction of landslide-prone zones compared to traditional deterministic or statistical methods. By effectively handling data uncertainty, spatial variability, and incomplete datasets, the model will enhance the reliability of landslide susceptibility mapping. The resulting maps will provide a scientific basis for identifying high-risk areas and supporting geotechnical mitigation planning, including slope stabilization measures, surface and subsurface drainage design, bio-engineering techniques, and land-use control strategies.

Objectives

Unplanned hill cutting, inadequate drainage systems, deforestation, and climate-induced increases in extreme rainfall events have significantly heightened landslide risk in Bangladesh's hilly regions. Addressing these challenges requires predictive, spatially explicit tools that integrate geotechnical engineering principles with modern data-driven techniques. The specific objectives of this research are:

1. Developing a GIS-based landslide susceptibility model using Artificial Neural Networks for hilly regions of Bangladesh, with a focus on rainfall-induced slope failures.
2. Identifying and evaluating the key geotechnical, hydrological, and anthropogenic factors governing landslide occurrence in the study area.
3. Proposing practical geotechnical landslide mitigation and risk reduction strategies such as slope stabilization, drainage improvement, and land-use planning to support safer infrastructure development and disaster resilience.

Superparamagnetic Behaviour of MnZn Ferrite Nanoparticles

Md. Mahmud
Lecturer, Department of Civil Engineering
Eastern University

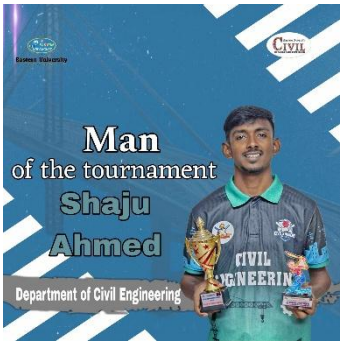
This paper delves into the intriguing realm of nanoscale magnetic materials by investigating the super paramagnetic behavior of MnZn ferrite nanoparticles. These nanoparticles have garnered significant attention due to their unique magnetic properties, which stem from their small size and high surface-to-volume ratio. The study begins with a comprehensive review of the existing literature on superparamagnetism. The obtained results reveal the Superparamagnetic nature of the MnZn ferrite nanoparticles, focusing on their response to external magnetic fields and their potential applications in various fields. The findings suggest that the nanoparticles' magnetic behavior transitions from superparamagnetic to blocked as the temperature decreases, leading to potential applications in data storage, biomedical imaging, and targeted drug delivery. The implications of these findings extend beyond the realm of fundamental research, opening doors for technological advancements. By understanding and harnessing the superparamagnetic behavior of MnZn ferrite nanoparticles, researchers can design novel devices with enhanced functionalities. However, challenges related to size distribution, stability, and surface modification need to be addressed to fully exploit the potential of these nanoparticles.

Objectives

1. To analyze the different structural properties and comparative study of MnZn ferrite.
2. Analyzing superparamagnetic characteristics of nanoparticles.
3. To find out whether MnZn ferrite nanoparticles show superparamagnetic property.
4. To understand the feasibility of future uses of MnZn nanoparticles.

5. 2nd Inter Department Cricket Tournament

The Department of Civil Engineering actively participated in the 2nd Inter-Departmental Cricket Tournament, held in April 2025 at the Eastern University Playground. The event provided a vibrant platform for fostering teamwork, sportsmanship, and interdepartmental collaboration among students and faculty members. The enthusiastic participation of the Civil Engineering team reflected the department's commitment to holistic development, encouraging a healthy balance between academic excellence and extracurricular engagement.



6. Iftar Mahfil of the Department of Civil Engineering

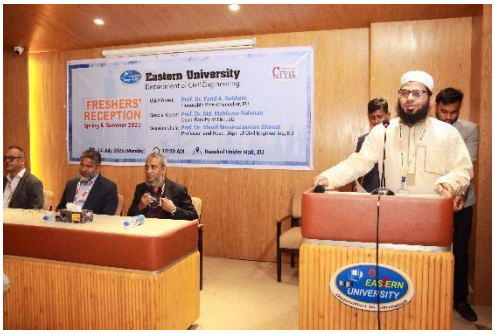
The Department of Civil Engineering organized an Iftar Mahfil on March 9 at Eastern University's permanent campus. The event welcomed students, faculty members, and staff members. The Iftar featured a heartfelt gathering where participants prayed for humanity's well-being.

7 Club Carnival of Club Engagement Week

The Civil Engineering students actively participated in the Club Carnival on July 26, 2025, where they showcased various civil engineering structures and equipment through interactive displays and models. The exhibition highlighted practical applications of engineering principles, allowing students to demonstrate creativity, technical knowledge, and hands-on skills. The event served as an engaging platform to promote awareness of civil engineers' role in infrastructure development and innovation among the wider university community.

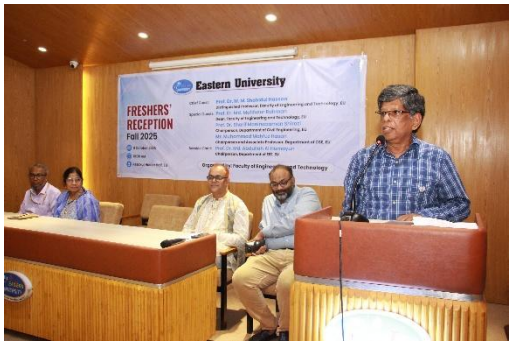
8 Freshers' Reception Programs

The Freshers' Reception Programs for the Civil Engineering Department were held on 14th July for summer 2025 intake and on 11th October for fall 2025 intake with great enthusiasm, warmly welcoming the newly admitted students into the academic community. The event provided an opportunity for freshers to interact with faculty members and senior students, fostering a sense of belonging and departmental identity. The program reflected the department's commitment to creating a supportive and engaging learning environment from the very beginning of students' academic journey.




Eastern University
FRESHERS'
RECEPTION
Fall 2025


Eastern University
FRESHERS'
RECEPTION
Fall 2025


Eastern University
FRESHERS'
RECEPTION
Fall 2025

9 1st Inter Departmental Football Tournament

The Department of Civil Engineering proudly participated in the 1st Inter-Departmental Football Tournament 2025, held at the Eastern University Playground during the months of October and November. The enthusiastic involvement of students demonstrated strong team spirit, discipline, and sportsmanship. The event provided an excellent opportunity to promote physical well-being and foster sociability among students, reflecting the department's commitment to holistic student development beyond academics.

10 Eastern University Road Construction

The newly constructed Eastern University Road stands as a significant achievement in campus infrastructure development, with faculty members from the Department of Civil Engineering serving as the consulting engineers for the project. Their expertise guided the planning, design, and quality assurance during construction processes, ensuring that the roadway meets required engineering standards for safety, durability, and functionality. This project highlights the department's practical engagement with real-world engineering challenges and its contribution to sustainable infrastructure development within the university.


Eastern University
Ashulia Model Town, Savar, Dhaka

11 Seminar on Understanding Earthquake Risk in Bangladesh

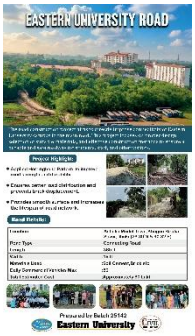
The Department of Civil Engineering and the Civil Engineering Club at Eastern University successfully organized an insightful seminar titled "Understanding Earthquake Risk in Bangladesh: Preparedness for the Next Disaster" on 6 December 2025 at Rezakul Haider Hall. The event aimed to raise awareness about Bangladesh's seismic vulnerability and highlight the importance of preparedness, resilience, and scientific understanding. The keynote presentation was delivered by A.K.M. Sajadur Rahman, Senior Research Engineer at the Housing & Building Research Institute (HBRI). He discussed Bangladesh's geological risks, regional fault lines, urban vulnerabilities, and practical strategies to reduce earthquake impacts. His presentation highlighted how structural safety, scientific awareness, and proactive planning can significantly minimize future losses.

12 New Building Construction

The ongoing construction of the new single-story building beside the male hostel marks a significant milestone in campus development, with faculty members from the Department of Civil Engineering serving as consultants for the project. Their professional guidance in planning, structural design review, and construction monitoring ensured compliance with engineering standards, safety requirements, and quality assurance. This involvement reflects the department's strong industry-oriented expertise and its commitment to applying academic knowledge to real-world infrastructure projects. This new building will house the cafeteria and the photocopy shop.

13 Poster Presentation on Recent Infrastructural Development at Eastern University

Students of the Civil Engineering Department at Eastern University showcased their creativity and technical skills through a poster presentation on the newly constructed Eastern University Road on 30th December. The event highlighted various aspects of the project, including design considerations, project details, budget, project benefits, and construction operations. Attendees appreciated how the students effectively combined theoretical knowledge with practical insights, demonstrating a clear understanding of modern civil engineering practices.




EASTERN UNIVERSITY ROAD
FEATURES
Shorter distance
Faster travel
Direct route
Improved accessibility
Enhanced connectivity
Supports development
Promotes the development of areas adjacent to the road.
Eastern University


Eastern University Road


Eastern University Road
Eastern University

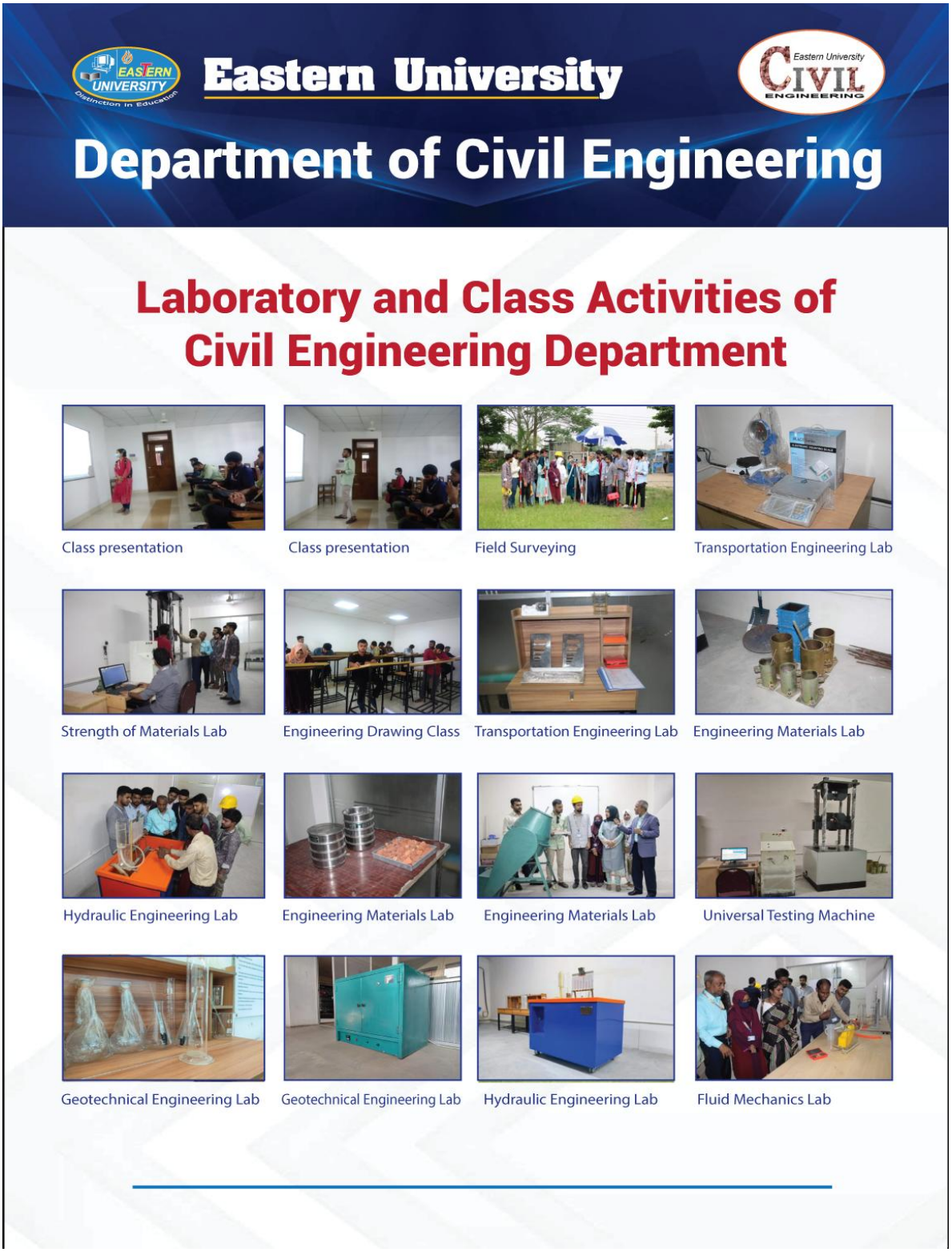
14 Construction Site Visit of the Students of Department of Civil Engineering

On December 28, 2025, students of the Department of Civil Engineering, with the guidance of faculty members, participated in visiting the construction site of the new building for the cafeteria and photocopy shop at the Eastern University premises. This practical visit to the construction site provided the students with a unique opportunity to learn civil engineering beyond the classroom.

15 Participation in the Battle of Traders - Season 5

Students of the Department of Civil Engineering participated in the "Battle of Traders" competition held on 29th and 30th December at the Eastern University premises, showcasing their business skills.

16 Display Board



Laboratory and Class Activities of Civil Engineering Department

Eastern University

Department of Civil Engineering

Board of Accreditation for Engineering and Technical Education (BAETE)

The Institution of Engineers, Bangladesh (IEB)

Eligibility for Accreditation

- Program approved by UGC
- A duration of four years after twelve years of schooling
- At least one cohort has graduated from the program
- Program pedagogy follows outcome-based education (OBE) system.
- Requires a minimum of 130 total credit hours (Definition of semester each credit hours – Lecture Classes: a minimum of 750 minutes of formalized classroom instruction in a semester; Laboratory Classes: a minimum of 1500 minutes laboratory contract hours in a semester).

IEB Accreditation Criteria

- Organization and Governance
- Financial and Physical Resources
- Faculty
- Students
- Academic Facilities and Technical Support
- Curriculum and Teaching – Learning Process
- Program Educational Objectives (PEO)
- Program Outcomes (PO) and Assessment
- Continuous Quality Improvement
- Interactions with the Industry

IEB Accreditation Criteria

Eastern University Civil Engineering Club

EUCEC

An academic club is essential for conducting co- and extracurricular activities of the Civil Engineering department to achieve leadership in the civil engineering arena. Eastern University Civil Engineering Club (EUCEC) was founded on 1 January 2023.

Objectives

- To foster leadership, communication skills, and creativity conducive to effective entrepreneurial awareness.
- The vision of the Civil Engineering Club is to be a renowned Civil Engineering Club that produces leaders who can contribute to economic emancipation and sustainable development of the country.
- The mission of the Civil Engineering Club is "to advance engineering knowledge and learning through extra-curricular activities in the pursuit of the fulfilling aspiration of the University and the nation."

Activities

The regular arrangement of seminars, workshops, social activities, project competitions, and field visits related to Civil Engineering.

Committee

- Coordinator
- President
- Vice President
- General Secretary
- Treasurer
- Organizing Secretary
- Joint Secretary
- Membership Development Secretary
- Office Secretary
- Event Secretary
- Publication Secretary
- Publicity Secretary
- IT Secretary
- Executive Members

Eastern University

Eastern University Civil Engineering Club

17 Faculty Members' Views

Asif Raihan

Assistant Professor

I am truly honored to be a part of the distinguished Civil Engineering faculty at Eastern University. I extend my appreciation to the department for its outstanding work in compiling the annual progress report, which clearly shows the key accomplishments and developments over the past year. As we look ahead, let us embrace new opportunities to spark innovation and strengthen our shared commitment to excellence. By working together, we can pave the way for a new chapter of advancement in teaching and research, further enriching the field of Civil Engineering at Eastern University.

Arif Mohammad Aziz

Assistant Professor

I am deeply honored to be a member of the esteemed Civil Engineering faculty at Eastern University. I sincerely commend the department for its excellent work in preparing the annual progress report, which effectively highlights the notable achievements and advancements of the past year. As we move forward, let us seize new opportunities to foster innovation and reinforce our collective commitment to excellence. Through collaboration, we can usher in a new era of growth in teaching and research, further advancing the field of Civil Engineering. Looking ahead, let us embrace innovation and collaboration to a brighter future for Civil Engineering at Eastern University.

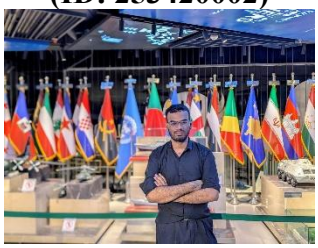
18 Students' Views

Yasir Arafat
(ID: 253420001)

The lectures delivered by our faculties are truly transformative, bridging complex civil engineering concepts with practical, real-world applications. They not only deepen students' understanding but also spark creativity and innovation, showing how knowledge gained in the classroom can shape and improve engineering projects in practice.

Md Abdullah Al Shohan
(ID: 253420002)

Professors at Eastern University go beyond teaching. They are true catalysts of inspiration, sparking curiosity and nurturing a deep passion for civil engineering. Under their guidance, we delve into the art and science of designing structures that not only endure but also set new standards for innovation, resilience, and excellence.



Sha Md Shafaet Bin Attiq
(ID: 253420007)

The workload can be intense, and tackling complex equations alongside the intricacies of engineering mechanics is no easy task. Each challenge feels heavier than the last, yet with determination and resilience, I'm learning to navigate them, turning every obstacle into an opportunity to grow stronger and more capable.

Eastern University

A Leader in Quality Education

Faculty of Engineering

Department of Civil Engineering

B.Sc in Civil Engineering Program

Course Outline (Trimester)

Sl No.	Course Code	Courses Title	Credits	Type	Dep	Contact Hours / Week	Pre Requisite Course
		Year: 01 - Semester: 01					
1	02312109	Writing Skills	3.0	Th	GED	3	
2	05331101	Physics I	3.0	Th	CE	3	
3	05331102	Physics I Lab	1.0	Lab	CE	3	
4	07321103	Engineering Geology & Geomorphology	3.0	Th	CE	3	
5	05411101	Calculus I	3.0	Th	CE	3	
		Total	13.0				
		Year: 01 - Semester: 02					
6	07321101	Civil Engineering Drawing I	1.5	Lab	CE	3	
7	06131203	Computer Programming	3.0	Th	CSE	3	
8	06131204	Computer Programming Lab	1.5	Th	CSE	3	
9	07321201	Surveying	3.0	Th	CE	3	
10	05411203	Calculus II	3.0	Th	CE	3	
11	03142111	Introduction to Sociology	3.0	Th	GED	3	
		Total	15.0				
		Year: 01 - Semester: 03					
12	07321102	Engineering Mechanics	3.0	Th	CE	3	
13	05331203	Physics II	3.0	Th	CE	3	05331101
14	07131203	Electrical Circuit	3.0	Th	EEE	3	
15	07131204	Electrical Circuit Lab	1.5	Lab	EEE	3	
16	02321101	Bangla Language and Literature	3.0	Th	GED	3	
17	07322105	Field Surveying	1.5	Lab	CE	3	07321201
		Total	15.0				
		Year: 02 - Semester: 04					
18	02221205	Emergence and History of Bangladesh	3.0	Th	GED	3	
19	07322101	Engineering Materials	3.0	Th	CE	3	
20	07322103	Mechanics of Solids I	3.0	Th	CE	3	07321102
21	05412105	Differential Equations, Geometry and Complex Variables	3.0	Th	CE	3	
22	07322104	Civil Engineering Drawing II	1.5	Lab	CE	3	07321101
		Total	13.5				
		Year: 02 - Semester: 05					
23	07322201	Mechanics of Solids II	3.0	Th	CE	3	07322103
24	07322106	Fluid Mechanics	3.0	Th	CE	3	
25	07322204	Fluid Mechanics Lab	1.5	Lab	CE	3	
26	05412207	Linear Algebra and Statistics	3.0	Th	CE	3	
27	07322102	Engineering Materials Lab	1.5	Lab	CE	3	07322101
28	07322205	Irrigation and Flood Control	3.0	Th	CE	3	
		Total	15.0				

Eastern University

A Leader in Quality Education

Faculty of Engineering

Department of Civil Engineering

B.Sc in Civil Engineering Program

Course Outline (Trimester)

Sl No.	Course Code	Courses Title	Credits	Type	Dep	Contact Hours / Week	Pre Requisite Course
		Year: 02 - Semester: 06					
29	07322202	Determinate Structures	3.0	Th	CE	3	07322103
30	07322203	Structural Mechanics and Materials Lab	1.5	Lab	CE	3	07322103
31	04112200	Fundamentals of Accounting	3.0	Th	GED	3	
32	07323102	Water Supply Engineering	3.0	Th	CE	3	
33	05312205	Chemistry	3.0	Th	EEE	3	
34	05312206	Chemistry Lab	1.0	Lab	EEE	3	
		Total	14.5				
		Year: 03 - Semester: 07					
35	07323101	Reinforced Concrete Structures I	3.0	Th	CE	3	07322201
36	07323103	Soil Mechanics	3.0	Th	CE	3	
37	07323104	Geotechnical Engineering Lab	1.5	Lab	CE	3	
38	07323107	Indeterminate Structures I	3.0	Th	CE	3	07322202
39	04133102	Fundamentals of Business	3.0	Th	GED	3	
		Total	13.5				
		Year: 03 - Semester: 08					
40	07323201	Reinforced Concrete Structures II	3.0	Th	CE	3	07323101
41	07323202	Foundation Engineering	3.0	Th	CE	3	07323103
42	07323205	Transport and Traffic Design	3.0	Th	CE	3	
43	07323206	Water Supply Engineering Lab	1.5	Lab	CE	3	07323102
44	07323106	Open Channel Flow	3.0	Th	CE	3	
		Total	13.5				
		Year: 03 - Semester: 09					
45	07323204	Reinforced Concrete Structure Sessional	3.0	Lab	CE	3	07323201
46	07323207	Waste Water and Solid Waste Management	3.0	Th	CE	3	
47	07323105	Quantity Surveying	3.0	Lab	CE	3	
48	07323203	Hydrology	3.0	Th	CE	3	
49	07323208	Open Channel Flow Lab	1.5	Lab	CE	3	07323106
		Total	13.5				
		Year: 04 - Semester :10					
50-1	07324100	Thesis / Project	1.0	Lab	CE	3	
51	07324101	Highway and Railway Engineering	3.0	Th	CE	3	
52	07324102	Indeterminate Structures II	3.0	Th	CE	3	07323107
53	03884101	Engineering Economics	3.0	Th	GED	3	
54	07324104	Transportation Engineering Lab	1.5	Lab	CE	3	
55	07324201	Project Planning and Management	3.0	Th	CE	3	
		Total	14.5				

Eastern University

A Leader in Quality Education

Faculty of Engineering
Department of Civil Engineering
B.Sc in Civil Engineering Program
Course Outline (Trimester)

Sl No.	Course Code	Courses Title	Credits	Type	Dep	Contact Hours / Week	Pre Requisite Course
		Year: 04 - Semester: 11					
50-2	07324100	Thesis / Project	2.0	Lab	CE	3	
56	07324216	Engineering Ethics and Professional Practice	3.0	Th	CE	3	
57	07324***	Elective Course 01	3.0	Th	CE	3	
58	07324***	Elective Course 02	3.0	Th	CE	3	
		Total	11.0				
		Year: 04 - Semester: 12					
50-3	07324100	Thesis / Project	2.0	Lab	CE	3	
59	07324***	Elective Course 03	3.0	Th	CE	3	
60	07324***	Elective Course 04	3.0	Th	CE	3	
		Total	8.0				
		Total	160				

List of Elective Courses

Sl No.	Course Code	Courses Title	Credits	Type	Dep	Contact Hours / Week	Pre Requisite Course
01	07324105	Pre-Stressed Concrete	3.0	Th	CE	3	07323201
02	07324106	Indeterminate Structures II Sessional	3.0	Th	CE	3	07324102
03	07324107	Steel Structures	3.0	Th	CE	3	07324102
04	07324108	Fire Safety for Building Structures	3.0	Th	CE	3	
05	07324202	Steel Structures Sessional	3.0	Th	CE	3	
06	07324203	Structural Safety	3.0	Th	CE	3	
07	07324204	Seismic Design of Structure	3.0	Th	CE	3	
08	07324205	Environmental Pollution Control	3.0	Th	CE	3	
09	07324206	Climate Change and Disaster Management	3.0	Th	CE	3	
10	07324207	Environmental Impact Assessment and Sustainability	3.0	Th	CE	3	
11	07324209	Soil Water Interaction	3.0	Th	CE	3	
12	07324210	Earth Retaining Structures	3.0	Th	CE	3	
13	07324211	Intelligent Transportation System	3.0	Th	CE	3	
14	07324212	Urban Transportation Planning and Management	3.0	Th	CE	3	
15	07324214	Ground Water Engineering	3.0	Th	CE	3	
16	07324215	River Engineering	3.0	Th	CE	3	
17	07324217	Elementary Soil Dynamics	3.0	Th	CE	3	