



**ZIAUDDIN  
UNIVERSITY**

Sustainability Report

2025



### Executive Summary

Ziauddin University's Faculty of Engineering Science and Technology (FEST) plays a vital role in promoting sustainability through education, research, and innovation that address global and local development challenges. The Department of Civil Engineering conducts seminars, technical trainings, expert lectures, and project exhibitions focused on sustainable infrastructure, renewable energy, waste reduction, and ethical engineering practices. By integrating modern technologies and fostering industry collaborations, FEST ensures that students develop competencies that align with the principles of sustainable design, energy efficiency, and responsible use of resources.

These multidisciplinary initiatives collectively advance several United Nations Sustainable Development Goals (SDGs) — including SDG 3: Good Health and Well-being, SDG 4: Quality Education, SDG 5: Gender Equality, SDG 6: Clean Water and Sanitation, SDG 7: Affordable and Clean Energy, SDG 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation, and Infrastructure, SDG 11: Sustainable Cities and Communities, SDG 12: Responsible Consumption and Production, and SDG 13: Climate Action. Through these efforts, FEST contributes to building resilient infrastructure, fostering innovation, and nurturing a new generation of engineers committed to environmental stewardship and sustainable societal progress.



### Introduction:

Ziauddin University (ZU) remains steadfast in its commitment to advancing the United Nations Sustainable Development Goals (SDGs) through integrated academic, operational, and community-driven initiatives. The University has strategically aligned its policies, infrastructure, and research with the global sustainability agenda, ensuring that social responsibility and environmental stewardship are embedded in every aspect of institutional practice. From renewable energy adoption and inclusive education programs to healthcare accessibility and gender equity initiatives, ZU's actions reflect a holistic approach to sustainable development. This report presents a comprehensive overview of the University's contributions across all 17 SDGs, highlighting key initiatives, measurable performance indicators, and tangible outcomes that collectively demonstrate ZU's role as a leading model of sustainability in higher education within Pakistan and beyond.

### MoU Signing Ceremony between Grow Safe (Private) Limited & Ziauddin University

**Event:** MoU Signing Ceremony with Grow Safe (Private) Limited (GSPL)

**Venue:** Ziauddin University Clifton Campus

**Organized by:** Department of Civil Engineering, Ziauddin University

**Date:** 9<sup>th</sup> January 2025

#### Participants from GSPL:

1. Mr. Saad Abdul Wahab (Director/CEO)
2. Mr. Anas Khan (Director Finance & Supply Chain)
3. Mr. Abdul Hadi (GM Technical & Inspection)
4. Mr. Sohail Anjum Khan (Head of HR, OD & Admin)
5. Mr. Usman Dawood Barry (Head of International Trainings & Consultancy)
6. Mr. Mushtaq Ahmad (Manager Environment & Sustainability)
7. Mr. Muzzamil Safdar (Deputy Manager HSE & HR Operations)

#### Participants from ZU:

1. Dr. Fahad Azim (Dean ZUFESTM)



2. Dr. Samia Tariq (Associate Chairperson & Associate Professor, DCE)
3. Ms. Rahima Tahir (Manager Linkages & Outreach, ORIC ZU)
4. Ms. Laraib Khan (Manager Projects & Grants, ORIC ZU)

**Event Summary:**

The MoU signing ceremony between Ziauddin University and Grow Safe (Private) Limited (GSPL) marked the formal beginning of a strategic partnership to foster mutual growth and success. The event was held at the Ziauddin University Clifton Campus on 9th January 2025, with representatives from both organizations in attendance.

**Purpose of the MoU:**

The primary objective of the MoU is to promote collaboration between ZU and GSPL in areas such as Health, Safety, and Environment (HSE) practices, sustainability, training programs, and research. This partnership aims to enhance academic and industry standards, driving innovation and sustainable development initiatives.

**Targeted Sustainable Development Goals (SDGs):****Key Highlights:**

- The Grow Safe team, comprising seven distinguished members led by their CEO, Mr. Saad Abdul Wahab, arrived promptly for the event.



- The ceremony commenced with an introduction to the MoU objectives and the scope of collaboration.
- Dr. Fahad Azim, Dean ZUFESTM, and Mr. Saad Abdul Wahab, Director/CEO of GSPL, formally signed the MoU, solidifying the partnership.
- All members actively engaged in discussions, identifying various potential areas of collaboration where both organizations could work together to achieve shared goals.

**Impact of the Collaboration:**

This partnership aligns with Ziauddin University's vision of academic excellence and practical innovation. By leveraging GSPL's expertise in HSE and sustainability, the collaboration will enhance research capabilities, academic learning, and professional training for both organizations. The event concluded with a networking session, fostering strong relationships between the teams from GSPL and ZU, setting a promising foundation for future collaborations.

**Acknowledgment:**

The Department of Civil Engineering is grateful to all participants for making this event a success and looks forward to achieving mutual growth and excellence through this partnership.







### Poster and Project Competition 2024 - Speak In Seconds

**Event Title:** Poster and Project Competition 2024 - Speak in Seconds

**Organized by:** Department of Civil Engineering, Ziauddin University

**Date:** 6<sup>th</sup> December 2024

**Venue:** Department of Civil Engineering Hall and Seminar Hall 1, Education City Site, Ziauddin University.

**Participants:**

Approximately 50 students from BE Civil Engineering and BS Civil Engineering Technology programs.

**Resource Persons:**

1. Engr. Kashif Rafique Memon (Mentor)
2. Engr. Bushra Fatima (Mentor)

**Event Summary:**

The Poster and Project Competition 2024 – Speak in Seconds provided a dynamic platform for students to showcase their innovative ideas and engineering expertise. This competition aimed to highlight Final Year Projects (FYPs) and other innovative research ideas of the students in the domains of civil engineering, technology, and sustainable development. Participants presented their projects through posters while adhering to strict time constraints, demonstrating their ability to communicate complex ideas concisely and effectively.

**Aims of the Competition:**

1. To provide students with a platform to showcase their Final Year Projects and innovative ideas.
2. To promote innovative thinking and practical application of civil engineering concepts.
3. To encourage students to address real-world engineering challenges in alignment with Sustainable Development Goals (SDGs).
4. To foster teamwork, collaboration, and effective communication skills.

**Targeted Sustainable Development Goals (SDGs):**



## Event Content and Key Highlights:

### Introduction to the Competition:

The Poster and Project Competition 2024, titled "Speak in Seconds," was organized by the Department of Civil Engineering to provide students with a platform to showcase their Final Year Projects (FYPs) and innovative research ideas. Participants presented posters focusing on real-world engineering challenges and sustainable solutions.

### Competition Categories:

Projects were categorized into FYP and non-FYP groups, covering a range of topics including:

- Structural and Material Engineering
- Construction Management
- Transportation Engineering
- Water Resource Management
- Geo-Technical Engineering

Non-FYPs addressed critical themes such as Sustainable Building Materials, Digital Construction, Climate Resilience, Smart Cities, and Soil Stabilization.

### Alignment with Sustainable Development Goals (SDGs):

Each project highlighted its relevance to at least three SDGs, emphasizing the importance of sustainability and innovation in modern engineering practices.

### Poster Presentation Guidelines:

Students adhered to strict presentation guidelines for their posters. FYPs included comprehensive sections like the title, abstract, introduction, literature review, methodology, results, conclusions, and references. Non-FYP posters were allowed creative freedom but required details such as targeted SDGs.

### Judging Process:

The competition featured live judging by an esteemed panel, including internal evaluators from the Department of Civil Engineering and an external evaluator.

**Evaluators Panel:**

Internal Evaluators:

1. Dr. Abdul Aziz Ansari (Chairperson, DCE)
2. Dr. Samia Tariq (Associate Chairperson & FYP Convener)
3. Dr. Gul Muhammad (Assistant Professor, DCE)

**External Evaluator:**

Engr. Aqeel Ahmed Jokhio (Town Officer, Town Municipal Corporation, Gulshan-e-Iqbal)

**Student Engagement:**

Participants showcased their projects confidently and effectively, focusing on concise and impactful presentations. The live judging process encouraged students to refine their communication and critical thinking skills.

**Evaluation and Prizes:**

Prizes were awarded for the best posters and project presentations in each category, recognizing students' creativity, technical expertise, and innovation.

**Closing Remarks:**

Assistant Professor Dr. Samia Tariq commended the participants for their exceptional efforts and highlighted the importance of applying their engineering knowledge to real-world challenges.

**Certificates & Mementos:**

The Chairperson, Dr. Abdul Aziz Ansari, and Associate Chairperson, Dr. Samia Tariq, presented certificates and mementos to the evaluators and organizing team as a token of appreciation. Cash Prize of PKR 5000 was awarded to 1<sup>st</sup> Position holders.

**Feedback and Outcomes:**

The competition was highly appreciated by participants, faculty, and evaluators alike. It provided a platform for students to demonstrate their technical and problem-solving skills, aligning their projects with global sustainability goals.



## Impact on Students:

The competition provided a unique opportunity for students to enhance their technical, analytical, and presentation skills. It encouraged them to think critically and apply their engineering knowledge to address contemporary challenges in civil engineering. The event also emphasized the importance of aligning projects with SDGs, reinforcing the department's commitment to sustainable development and academic excellence.

## Acknowledgment:

The Department of Civil Engineering extends its gratitude to ZQD Construction for co-sponsoring the event and supporting student initiatives. Special thanks to the resource persons, Engr. Kashif Rafique and Engr. Bushra Fatima, for their invaluable guidance and support in organizing the event.





## DEPARTMENT OF CIVIL ENGINEERING ZIAUDDIN UNIVERSITY

FYP/PC 2.0

### POSTER AND PROJECT COMPETITION 2024

Sponsored By **ZQD** CONSTRUCTION

Resource Persons:  
Engr. Kashif Rafique  
Engr. Bushra Fatima

# Speak in Seconds

Friday | 6th December 2024  
11:00 am | DCE Hall

COMPETITION CATEGORY	INSTRUCTION FOR POSTER
<p><b>FYPs</b></p> <p>A1: Structure / Material Engineering A2: Construction Management A3: Transportation Engineering A4: Water Resource Management A5: Geo-technical Engineering</p> <p><b>NON-FYPs</b></p> <p>B1: Sustainable Building Materials B2: Digital Construction B3: Climate Resilience B4: Smart Cities B5: Soil Stabilization</p>	<p><b>FYPs</b></p> <ul style="list-style-type: none"> <li>● Size of poster 2.50' * 4.00'</li> <li>● Header (University's logo + University name)</li> <li>● Title + Abstract + Introduction</li> <li>● Literature Review</li> <li>● Methodology + Result / Discussion</li> <li>● Conclusion</li> <li>● References</li> </ul> <p><b>NON-FYPs</b></p> <ul style="list-style-type: none"> <li>● Visual Display as per your Choice</li> <li>● Group member name with Enrolment number</li> <li>● SDGs targeted (minimum 3)</li> <li>● Name of Focal Person / Name of Supervisor</li> </ul>

**Why to attend**

- Explore Cutting-Edge Projects of Final year students
- Live Judging
- Prizes for the Best Poster or Project Presentation in each category

**INTERNAL EVALUATOR**



Dr. Akhbar Agha Inayat  
Prof. & Chairman  
ZQD



Dr. Saeeda Farid  
Academic Chairperson  
FYP Coursework



Dr. Qazi Muhammad  
Assistant Professor  
DCE

**EXTERNAL EVALUATOR**



Engr. Inayat Inayat  
Dean Office  
Ziauddin University  
Kashif & Fatima

Before 4th December 2024





Sponsored By 





### Seminar on Construction Safety: Social and Legal Expectations

**Date:** 28<sup>th</sup> November 2024

**Organized by:** Department of Civil Engineering, Ziauddin University

**Collaborated by:** Grow Safe Pvt. Ltd- GSPL

#### **Introduction:**

The seminar titled “**Construction Safety Legal and Social Expectations**” aimed to provide students with a comprehensive understanding of ILO Convention on construction projects. The event was organized by the Department of Civil Engineering at Ziauddin University in collaboration with Grow Safe Pvt. Ltd, a reputable company in the field of HSE Training and Consultancy Services.

#### **Guest Speaker Profile:**

- Saad Abdul Wahab
- Director GSPL

**Experience:**

- Over 10 years of experience in HSE Training
- IRCA Certified
- Currently serving as Director at GSPL.

**Resource Person:**

*Engr. Minza Mumtaz*

Lecturer,

Department of Civil Engineering,

Ziauddin University

**Participants:**

Approximately 100 students from BE Civil Engineering and BS Civil Engineering Technology programs.

**Venue:** Seminar Hall 1, Ground Floor, Department of Civil Engineering, Link Road Campus, Ziauddin University.

**Time:** 11:00 AM - 12:30 PM

**Seminar Content and Key Highlights:****1. Introduction of ILO Framework:**

The guest speaker elaborated the ILO Framework, emphasizing on ILO Convention 155 and ILO Convention 164 as the foundation of Legal and Social Framework.

**2. Understanding Legal Expectations:**

The session highlighted the difference between Civil and Criminal Law to understand the legislative process.

**3. Understanding Social Expectation:**

It involves the critical discussion on stakeholders like non-regulatory disciplines, industrial standards, insurance companies and client's requirements, trade association and SOPs.



#### **4. Reason to understand Global Industry:**

The presentation included detailed insights on reasons to understand Global Industry due to its direct impact on GDP.

#### **5. Control Measures:**

Control measures and their regulatory bodies were highlighted to ensure health and safety in construction and other industries.

#### **6. Session Activity:**

The session involves small activities for participants to analyze the hazards in the pictures or videos.

#### **7. Student Engagement:**

Students actively participated in the Q&A session, raising questions on complexities in real-world scenarios.

#### **Targeted Sustainable Development Goals (SDGs):**



#### **Closing Session:**

Assistant Professor Dr. Gul Muhammad appreciated the informative session and encouraged students to apply the knowledge in their academic and professional pursuits.

#### **Certificates & Mementos:**

Dean ZUFESTM, Dr. Fahad Azim, and Associate Chairperson, Dr. Samia Tariq, presented certificates and mementos to the guest speaker and resource person as a token of appreciation.



### Feedback and Outcomes:

The seminar was highly appreciated by participants, who expressed their gratitude for the opportunity to learn from an industry expert. The session bridged the gap between academic learning and professional practice, equipping students with practical knowledge of health and safety.

### ACKNOWLEDGEMENT

The Department of Civil Engineering extends its heartfelt gratitude to Grow Safe Private Limited for their collaboration, and to the guest speaker, Saad Abdul Wahab, for his valuable contribution. Special thanks to Engr. Minza Mumtaz for her efforts in organizing and coordinating the event.

### SESSION SCHEDULE

10:45 am	Gathering Students
11:00 am	Welcoming Guests
11:05 am	Recitation of Quran
11:10 am	Opening Remarks <b>DR. SAMIA TARIQ</b> Associate Chairperson CED
11:15 am	Session Delivered By <b>SAAD ABDUL WAHAB</b> Director Grow Safe (Pvt) Ltd.
12:10 pm	Q/A Session
12:20 pm	Certificate/Souvenir Distribution
12:35 pm	Closing Remarks <b>PROF. DR. FAHAD AZIM</b> Dean ZUFESTM
12:45 pm	Lunch



### Department of Civil Engineering

Technical Session On..

## CONSTRUCTION SAFETY LEGAL AND SOCIAL EXPECTATIONS

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Grow Safe Pvt. Ltd - GSPL, a leading name in HSE Trainings and Consultancy Services. Grow Safe (Pvt) Ltd., has been formed and registered under the Companies Ordinance, 1984, and incorporated with SECP (under Section 16 of the Companies Act 2017) as an "HSE Trainings and Consultancy Services" ISO Certified  
 ISO 14001:2015: Environmental Management  
 ISO 45001:2018: Occupational Health and Safety Management  
 ISO 9001:2015: Quality Management

This is a unique opportunity to learn about legal and social expectations for construction safety from industry experts.

**GSPL Team**  
 Saad Abdul Wahab (Director GSPL – Guest Speaker)  
 Sohail Anjum Khan (Head of HR & OD)  
 Talha Shahid (Senior Manager)  
 Usman Dawood Barry (Head of International Trainings & Consultancy)  
 Muzammil Saifur (Quality Manager HSE)

SPEAKER:  
**Saad Abdul Wahab**

Resource Person :  
Engr. Minza Mumtaz

📅 **Thursday, 28th November 2024**  
 ⌚ **11:00am - 12:30pm**  
 📍 **Seminar Hall 1, ZUFESTM, Link Road Campus**

Collaborated By: 







## Industrial Visit to New Dynamic Ready Mix Concrete Batch Plant

**Industrial Visit:** Dynamic Ready Mix Concrete Batch Plant

**Location:** Northern Bypass, Karachi

**Organized by:** Department of Civil Engineering, Ziauddin University

**Date:** 25<sup>th</sup> November 2024

### Participants:

Approximately 50 students from B.E. Civil Engineering and BS Civil Engineering Technology programs.

### Faculty Accompanied:

5. Engr. Kashif Rafique Memon (Mentor)
6. Mr. Syed Mahfooz (Lab Incharge)

### Event Summary:

Students from the Department of Civil Engineering visited the Dynamic Ready-Mix Concrete (Dmix) Batch Plant in Karachi on November 25, 2024. This field visit offered students a firsthand look at the advanced technologies and processes involved in manufacturing ready-mix concrete. During the visit, students explored the QCI-certified plant, gaining insights into the production and dispatch processes, as well as the importance of quality control in ensuring consistent and reliable concrete performance. The facility's innovative solutions and expertise in designing concrete tailored to specific project needs provided students with valuable exposure to industry best practices.

### Aims of Participation:

1. To familiarize students with the production processes of ready-mixed concrete.
2. To enhance understanding of quality control systems and their importance in construction materials.
3. To provide insights into the logistics and tracking involved in concrete dispatch and delivery.

**Targeted Sustainable Development Goals (SDGs):****Key Highlights:**

- Students observed the end-to-end production process at the plant, including batching, mixing, and quality testing.
- The visit demonstrated the role of technology in achieving optimal concrete performance tailored to project requirements.
- Students gained an understanding of the importance of efficient dispatch systems and timely deliveries in large-scale construction projects.

**Impact on Students:**

The visit bridged the gap between theoretical knowledge and practical applications in concrete production. Students learned about the critical role of quality assurance, advanced production techniques, and logistics in ensuring reliable construction materials. This experience enhanced their understanding of ready-mix concrete's significance in modern construction projects.

**Acknowledgment:**

The Department of Civil Engineering extends its sincere gratitude to the team at Dynamic Ready-Mix Concrete (Dmix) for hosting this informative visit. Special thanks to Mr. Muhammad Aamir for his guidance and in-depth explanations of the plant's operations and technologies. We also thank the faculty members for their support and coordination in organizing this valuable learning opportunity.

**Participation in SSUET for Frisbee Competition - 13<sup>th</sup> and 21<sup>st</sup> November**

**Name of University:** Sir Syed University of Engineering and Technology (SSUET)

**Department:** Civil Engineering

**Event Attended:** Frisbee Competition

**Organized by:** ACI-SSUET Student Chapter

**Dates:** 13<sup>th</sup> and 21<sup>st</sup> November 2024

**Team Members:**

1. Tanveer Zaman (Student)
2. Usama Khan (Student)
3. Aneeq Butt (Student)
4. S. M. Taha Ahmed (Student)

**Faculty Accompanied:**

1. Engr. Bilal Faisal (Mentor)



**Event Summary:**

On November 13<sup>th</sup> and 21<sup>st</sup>, 2024, students from the Department of Civil Engineering, **The Concrete Squad**, represented Ziauddin University at the **ACI-SSUET Frisbee Competition** hosted by **Sir Syed University of Engineering and Technology, Karachi**. The team showcased exceptional talent and innovative thinking, earning an impressive **3rd position** in the competition. Their efforts were recognized with a cash prize of PKR 5000, reflecting their expertise in lightweight concrete applications and commitment to both academic and practical excellence.

**Aims of Participation:**

1. To apply theoretical knowledge to practical challenges in innovative construction materials.
2. To promote creative problem-solving and team collaboration in competitive settings.
3. To enhance the understanding of students on the application of lightweight concrete technology.

**Key Highlights:**

- The team's expertise in lightweight concrete applications stood out, showcasing their practical understanding of advanced material design.
- This achievement demonstrates the department's emphasis on blending theoretical learning with hands-on experiences to prepare students for real-world challenges.
- The innovation and dedication of students were key to their success in a competitive environment.

**Impact on Students:**

Participating in this competition provided the students with an opportunity to demonstrate their technical skills and innovative approaches to construction materials. It also reinforced their ability to excel in practical applications, fostering confidence and teamwork.

**Achievement:**

**3rd Position** – Frisbee Competition, ACI-SSUET Chapter.

**Prize Won** – Cash Prize of PKR 5000.

**Acknowledgment:**

The Concrete Squad's participation highlights the Department's focus on producing well-rounded graduates equipped with the skills needed to excel in competitive and professional environments.







### Industrial Visit to Jhimpir Power Energy Farm

**Date:** 8th July 2024

**Organized by:** Department of Civil Engineering, Ziauddin University

**Introduction:**

An industrial visit to Jhimpir Wind Energy Farm was conducted on July 8th, 2024, as part of the Department of Civil Engineering's efforts to enhance students' practical understanding of renewable energy and environmental management systems. This visit aligned with the department's ongoing industrial collaboration with Jhimpir Power Ltd.

**Participants:**

12 final-year students from two project groups.

**Faculty Members:**

Engr. Minza Mumtaz (Focal Person)

Engr. Sumaira Ismail (Departmental Coordinator)

Engr. Kashif Rafique Memon (Member, Industrial Visit Committee)

**Objectives of the Visit:**

The primary goal was to expose students to real-world applications of sustainable development, including renewable energy production and innovative wastewater treatment practices at the Jhimpir Wind Energy Farm.

**Key Activities and Observations:****1. Wind Energy Operations:**

Students gained insight into the functioning of wind turbines, energy generation, and the operational challenges of managing a wind energy farm. The site survey was conducted by Waqar H. Minhas, PE, TSP(BCSP), EHS Lead, who provided an overview of safety protocols and environmental standards implemented at the farm.

**2. Pilot Wetland Project:**

Students observed an innovative wastewater treatment system in which wastewater generated from the wind energy farm was processed using a constructed wetland. Treated water was repurposed for irrigation, highlighting the importance of resource conservation and water management.



### 3. Honey Bee Project:

The treated water from the wetland project was utilized to irrigate plants that attracted local bees, resulting in honey production. This initiative not only supports biodiversity but also serves as a model for integrating renewable energy projects with local environmental and economic sustainability.



#### Impact on Students:

- The visit provided students with hands-on experience and knowledge about integrating engineering solutions with environmental sustainability.
- Students understood the application of wastewater treatment techniques and their role in achieving circular economy principles.
- The exposure to real-world challenges and sustainable practices inspired students to consider innovative solutions in their own design projects.

#### Acknowledgement:

The Department of Civil Engineering expresses its gratitude to Jhimpir Power Ltd. for facilitating the visit and providing an enriching learning experience. Special thanks to **Waqar H. Minhas**, EHS Lead, for his comprehensive site survey, and to the faculty members for their coordination and support.





## Participation in the Bridge Building Competition

**Name of University:** Sir Syed University of Engineering and Technology (SSUET)

**Department:** Civil Engineering

**Event Attended:** Bridge Building Competition

**Organized by:** ACI-SSUET Student Chapter

**Date:** 11<sup>th</sup> June 2024

### Team Members:

1. Mr. Tanveer Zaman (Student)
2. Mr. Usama Khan (Student)
3. Mr. Aneeq Butt (Student)
4. Mr. S. M. Taha Ahmed (Student)

### Faculty Accompanied:

1. Engr. Wishah Qaiser (Mentor)
2. Mr. Syed Mahfooz (Lab Incharge)



### Event Summary:

On June 11, 2024, the Final Year B.E. Civil Engineering team, **Structural Squad**, representing Ziauddin University, demonstrated remarkable ingenuity and engineering expertise at the Bridge Building Competition organized by the ACI-SSUET Student Chapter. The team demonstrated exceptional ingenuity, creativity, and technical expertise in structural engineering, showcasing the high standards of ZUFESTM's Civil Engineering program.

### Aims of Participation:

1. To provide students with hands-on experience in bridge design and construction.
2. To encourage innovative thinking and practical application of structural engineering concepts.
3. To foster teamwork, collaboration, and critical problem-solving skills.

**Key Highlights:**

- The team's design was commended for its innovation and technical precision.
- Their participation underscores the department's commitment to academic excellence and fostering a culture of innovation in structural engineering.
- The guidance and mentorship of Engr. Wishah Qaiser and the support of Mr. Syed Mahfooz played a vital role in the team's success.

**Impact on Students:**

This competition offered the students a platform to bridge the gap between theory and practice. It enhanced their technical skills, reinforced the principles of structural engineering, and encouraged them to think creatively in addressing engineering challenges.

**Achievement:**

**3rd Position** – Bridge Building Competition, ACI-SSUET Chapter.

**Prize Won** – Cash Prize of PKR 4000.

**Acknowledgment:**

The Structural Squad's participation highlights the Department's focus on producing well-rounded graduates equipped with the skills needed to excel in competitive and professional environments.







## Seminar on Construction Project Tendering - Impact on Construction Execution & Closing

**Seminar Title:** Construction Project Tendering and Its Impact on Construction Execution and Closing

**Organized by:** Department of Civil Engineering, Ziauddin University

**Sponsored by:** HMC Innovative Construction

**Venue:** Seminar Hall 1, Ground Floor, Department of Civil Engineering, Link Road Campus, Ziauddin University.

**Date:** 11<sup>th</sup> June 2024

**Time:** 11:00 AM - 12:30 PM

### Participants:

Approximately 50 students from B.E. Civil Engineering and BS Civil Engineering Technology programs.

### Guest Speaker Profile:

Engr. Syed Humayoun Jahanzaib  
Professional Engineer (P.E.)

### Education:

Bachelor of Civil Engineering, NED University of Engineering & Technology  
Masters in Construction Management, NED University of Engineering & Technology

### Experience:

- Over 9 years of experience in construction and project management
- Notable projects include Paragon Emaar Towers and Rafique Stadium
- Currently serving as Senior Coordinator Engineer at JN & Co.

### Resource Person:

Engr. Minza Mumtaz (Senior Lecturer)

**Event Summary:**

The Poster and Project Competition 2024 – Speak in Seconds provided a dynamic platform for students to showcase their innovative ideas and engineering expertise. This competition aimed to highlight Final Year Projects (FYPs) and other innovative research ideas of the students in the domains of civil engineering, technology, and sustainable development. Participants presented their projects through posters while adhering to strict time constraints, demonstrating their ability to communicate complex ideas concisely and effectively.

**Aims of the Competition:**

5. To provide students with a platform to showcase their Final Year Projects and innovative ideas.
6. To promote innovative thinking and practical application of civil engineering concepts.
7. To encourage students to address real-world engineering challenges in alignment with Sustainable Development Goals (SDGs).
8. To foster teamwork, collaboration, and effective communication skills.

**Targeted Sustainable Development Goals (SDGs):**



## Seminar Content and Key Highlights:

### Introduction to Seminar:

The seminar titled “Construction Project Tendering and Its Impacts on Construction Execution and Closing” aimed to provide students with a comprehensive understanding of the tendering process and its critical role in construction projects. The event was conducted by the Department of Civil Engineering at Ziauddin University and was sponsored by HMC Innovative



Construction, a reputable company in the field of construction and project management.

#### 1. Understanding Tendering:

The guest speaker elaborated on the definition of tendering, emphasizing it as a formal process for inviting bids for construction projects, ensuring transparency, and selecting contractors at fair and reasonable prices.

#### 2. Steps Before Tendering:

The session highlighted essential pre-tendering steps, including the role of public representatives, PC-1 approvals, and ADP schemes in project initiation.

#### 3. Types of Tenders and Contracts:

Tenders: Open competitive bidding (local and international), closed tendering, and direct contracting.

Contracts: Fixed price, cost-plus, time and materials, unit price, and DFBOT (PPP) contracts.



#### 4. Tendering Process:

The presentation included detailed insights into the tendering stages, from bidding document preparation and bid submission to evaluation and award of contracts.

#### 5. Regulatory Frameworks:

Key differences between the Public Procurement Regulatory Authority (PPRA) and the Sindh Public Procurement Regulatory Authority (SPPRA) were discussed, providing students with an understanding of the legal and procedural guidelines.

#### 6. Practical Procedures:

A step-by-step explanation of practical tendering procedures was presented, covering NIT preparation, technical and financial proposals, bid evaluation reports, complaint redressal, and final contract award.



**Organized By:**  
FACULTY OF ENGINEERING, SCIENCE  
TECHNOLOGY & MANAGEMENT  
ZIAUDDIN UNIVERSITY

**Sponsored By**  
HMC  
HUMAN CAPITAL CONSTRUCTION

**Seminar on**  
**CONSTRUCTION PROJECT TENDERING  
AND ITS IMPACT ON CONSTRUCTION  
EXECUTION AND CLOSING**

**SPEAKER**  
**SYED HUMAYOUN JAHANZAIB**  
P.E. and Project Coordinator, JN. and Co.,  
M.E. Construction Management, NEDUET, 2020  
B.E. Civil Engineering, NEDUET, 2016

*"JN and Co. Is a Contracting firm doing various infra structure projects in Sindh since 2003. The project of prime importance "Malir Expressway" is also under execution by JN and Co. "*

**Location**  
**at 11 a.m., Seminar Hall 1, ZUFESTM, Link Road, campus**

**FOCAL PERSON**  
**ENGR. MINZA MUMTAZ**  
Lecturer, CED

#### Student Engagement:

Students actively participated in the Q&A session, raising questions on tendering complexities and their application in real-world scenarios.

**Closing Remarks:**

Assistant Professor Dr. Gul Muhammad appreciated the informative session and encouraged students to apply the knowledge in their academic and professional pursuits.

**Certificates & Mementos:**

The Chairperson, Dr. Abdul Aziz Ansari, and Associate Chairperson, Dr. Samia Tariq, presented certificates and mementos to the guest speaker and resource person as a token of appreciation.

**Feedback and Outcomes:**

The seminar was highly appreciated by participants, who expressed their gratitude for the opportunity to learn from an industry expert. The session bridged the gap between academic learning and professional practice, equipping students with practical knowledge of tendering processes.

**Acknowledgment:**

The Department of Civil Engineering extends its heartfelt gratitude to HMC Innovative Construction for their sponsorship, and to the guest speaker, Syed Humayoun Jahanzaib, for his valuable contribution. Special thanks to Engr. Minza Mumtaz for her efforts in organizing and coordinating the event.



### Field Visit for Practical Understanding of GPS Surveying Technology

**Field Visit:** Practical Understanding of GPS Surveying Technology

**Location:** Education City, Karachi

**Organized by:** Department of Civil Engineering, Ziauddin University

**Date:** 16<sup>th</sup> February 2024

**Participants:**

Approximately 40 students from B.E. Civil Engineering and BS Civil Engineering Technology programs.

**Faculty Accompanied:**

1. Engr. Kashif Rafique Memon (Mentor)
2. Mr. Syed Mahfooz (Lab Incharge)



**Event Summary:**

Civil Engineering students participated in a field visit focused on GPS Surveying Technology at Education City, Karachi, on February 16, 2024. The visit aimed to provide practical exposure to advanced surveying techniques. The activity centered on a topographic survey of the area, during which students helped establish 32 benchmark locations for future development.

Notably, the elevation recorded was 91 meters above Mean Sea Level, highlighting the precision of the GPS technology used.

**Aims of Participation:**

1. To familiarize students with GPS-based topographic surveying techniques.
2. To enhance their understanding of establishing benchmark locations and recording elevations.
3. To provide hands-on learning opportunities aligned with real-world engineering practices.

**Targeted Sustainable Development Goals (SDGs):****Key Highlights:**

- Students actively participated in marking coordinates and elevations using GPS technology.
- The survey emphasized the importance of benchmarks for ensuring accuracy in future development projects.
- The practical application of GPS tools provided students with valuable insights into modern surveying methodologies.

**Impact on Students:**

The visit enabled students to bridge the gap between theoretical knowledge and practical applications, deepening their understanding of GPS technology in engineering.



It also enhanced their technical and problem-solving skills, preparing them for real-world challenges.

**Acknowledgment:**

The Department of Civil Engineering extends its sincere gratitude to Mr. Suhail Ahmed Siddiqui, Chief Surveyor of the CBD Education City Project, for facilitating the visit and sharing his expertise. Special thanks are also due to the faculty members for their coordination and support in making this visit a success.

**Field Visit for Practical Understanding of Drone Surveying Technology**

**Field Visit:** Practical Understanding of Drone Surveying Technology

**Location:** Education City, Karachi

**Organized by:** Department of Civil Engineering, Ziauddin University

**Date:** 12<sup>th</sup> January 2024

**Participants:**

Approximately 30 students from B.E. Civil Engineering and BS Civil Engineering Technology programs.

**Faculty Accompanied:**

1. Engr. Kashif Rafique Memon (Mentor)
2. Mr. Syed Mahfooz (Lab Incharge)

**Event Summary:**

On January 12, 2024, students from all batches of the Department of Civil Engineering participated in a field visit focused on Drone Surveying Technology at Education City, Karachi. The visit aimed to provide hands-on exposure to the latest advancements in drone technology and its applications in surveying and development projects. During the visit, a total of 19 Ground Control Points (GCPs) were established across the extensive survey area of approximately 9000 acres. These GCPs are critical for ensuring accuracy, precision, and geo-referencing of the aerial imagery collected using the Mavic 2 Enterprise Advanced drone.

**Aims of Participation:**

1. To provide students with practical exposure to advanced drone surveying technologies.
2. To enhance understanding of GCP establishment and its role in aerial data accuracy and precision.
3. To encourage students to apply theoretical concepts in real-world scenarios, fostering innovative thinking and problem-solving.

**Targeted Sustainable Development Goals (SDGs):**

**Key Highlights:**

- The survey area covered approximately 9,000 acres, showcasing the scale and utility of drone surveying in large-scale projects.
- The students actively participated in the process of GCP establishment and learned about its role in geo-referencing aerial imagery.
- The Mavic 2 Enterprise Advanced drone's capabilities and advancements were demonstrated, providing students with valuable insights into modern surveying technologies.

**Impact on Students:**

This visit offered a unique opportunity for students to bridge the gap between theoretical knowledge and practical applications. It deepened their understanding of drone technology, enhanced their technical skills in surveying, and encouraged them to think critically about its future applications in engineering projects.



**Acknowledgment:**

The Department of Civil Engineering sincerely thanks Mr. Suhail Ahmed Siddiqui, Chief Surveyor of the CBD Education City Project, for facilitating the Drone Surveying Technology visit. His insights into modern surveying techniques, including GCP establishment and drone applications, provided students with an enriching learning experience. Appreciation is also extended to the faculty members for their coordination and support.





## Comprehensive Overview of Ziauddin University's SDG-linked Initiatives and Achievements

SDG	Goal Title	Key University Initiatives	Performance Indicators	Outcomes / Impact
<b>SDG 1: No Poverty</b>	End poverty in all its forms everywhere	<ul style="list-style-type: none"> <li>Subsidized shuttle service for students &amp; staff across all campuses.</li> <li>Health outreach clinics in low-income areas.</li> <li>Student financial aid and community development engagement.</li> </ul>	<ul style="list-style-type: none"> <li>17.9% of annual university budget allocated to sustainability &amp; community welfare.</li> <li>5,000+ beneficiaries of subsidized health and education support programs annually.</li> </ul>	Reduces financial barriers, enhances community well-being, and promotes inclusive access to education and healthcare.
<b>SDG 2: Zero Hunger</b>	End hunger, achieve food security, and promote sustainable agriculture	<ul style="list-style-type: none"> <li>Campus orchards, greenhouses, and livestock farms at Link Road &amp; Sukkur.</li> <li>Compost-based vegetable and fruit farming for internal use.</li> </ul>	<ul style="list-style-type: none"> <li>&gt;75% of conservation initiatives implemented.</li> <li>Over 10,000 m<sup>2</sup> allocated to orchards &amp; greenhouse food cultivation.</li> <li>100% organic composting for soil enrichment.</li> </ul>	Enhances food security, supports agricultural research, and provides practical agri-learning environments.
<b>SDG 3: Good Health and Well-being</b>	Ensure healthy lives and promote well-being for all	<ul style="list-style-type: none"> <li>5 major Dr. Ziauddin Hospitals integrated into campus operations.</li> <li>On-campus gyms, wellness centers, daycare, and first aid units.</li> <li>Smart Airborne Infection Isolation Rooms (All).</li> </ul>	<ul style="list-style-type: none"> <li>24/7 emergency medical access.</li> <li>100% staff covered under medical insurance.</li> <li>Hospital collaboration with Rescue &amp; Civil Defence certified for safety.</li> </ul>	Strengthens healthcare accessibility and public health resilience, fostering a healthy learning community.



**SDG 4:  
Quality  
Education**

Ensure inclusive and equitable quality education

- Smart classrooms and CMS-integrated learning management systems.
- Virtual Reality simulation labs (Dental, Anatomy).
- ZU Digital Library reducing physical material use.

- >90% classrooms ICT-integrated.
- Over 20,000 digital resources available via e-library.
- Reduced paper usage by ~40% through digitalization.

Expands equitable access to modern education and enhances sustainability through reduced resource consumption.

**SDG 5:  
Gender  
Equality**

Achieve gender equality and empower all women and girls

- Daycare centers, maternity policy, girls' common rooms.
- Programs on women's leadership and well-being.

- 100% compliance with maternity benefits.
- 52% of enrolled students are female.
- Gender-responsive spaces on every campus.

Promotes female empowerment, participation, and equality in education and employment.

**SDG 6: Clean  
Water and  
Sanitation**

Ensure availability and sustainable management of water

- RO plants, wastewater reuse, and sprinkler irrigation systems.
- 110,224 m<sup>2</sup> water absorption areas for infiltration.
- Water efficiency systems integrated into smart buildings.

- 23.34% of total area designated for water absorption.
- 100% campuses have treated drinking water.
- 30% of irrigation from recycled greywater.

Improves water sustainability, enhances reuse efficiency, and supports clean water access for all.

**SDG 7:  
Affordable  
and Clean  
Energy**

Ensure access to affordable, reliable, sustainable energy

- 700+ kW solar PV across campuses.
- Co-generation and biomass systems.
- Energy-

- 97.12% renewable energy ratio.
- 7.28 million kWh clean energy generated annually.
- 82% appliance efficiency average.

Minimizes carbon emissions, lowers grid dependence, and sets a national benchmark for



**SDG 8:  
Decent Work  
and  
Economic  
Growth**

Promote inclusive economic growth and employment

efficient LED, inverter-based HVAC.

- Sustainability-focused budget and projects.
- On-campus employment for green maintenance teams.
- Technical training in renewable and ICT sectors.

- 17.9% of annual budget invested in sustainability.
- Dozens of jobs created under green campus programs.

green energy in education.

Drives green employment, supports Pakistan's SDG-8 targets, and fosters economic resilience.

**SDG 9:  
Industry,  
Innovation,  
and  
Infrastructure**

Build resilient infrastructure and foster innovation

- Smart building systems, automation, and IoT environmental sensors.
- Renewable energy R&D (Vertical Axis Wind Turbine project).

- 100% of new buildings integrate at least 5 smart features.
- 6 IoT monitoring devices deployed.
- 2 national-level innovation awards in energy efficiency.

Advances sustainable engineering innovation and promotes climate-smart infrastructure.

**SDG 10:  
Reduced  
Inequalities**

Reduce inequality within and among countries

- Accessibility infrastructure (ramps, elevators, Braille signage).
- Scholarships for marginalized students.
- Regional expansion to interior Sindh (Sukkur Campus).

- 100% buildings accessible to special needs individuals.
- 100+ students benefit annually from inclusive education programs.

Improves inclusion and equity in access to education and facilities.

**SDG 11:  
Sustainable  
Cities and  
Communities**

Make cities inclusive, safe, resilient, and sustainable

- Green campus design (472,262 m<sup>2</sup> total area; 90% open).
- Urban forests and green

- 425,045 m<sup>2</sup> open green space (90.05%).
- Response time <5 minutes for emergencies.
- 7 campuses certified

Develops resilient, eco-friendly, and safe academic communities.



<p><b>SDG 12: Responsible Consumption and Production</b></p>	<p>Ensure sustainable consumption and production</p>	<p>mobility systems.</p> <ul style="list-style-type: none"> <li>• Fire safety and disaster response compliance.</li> <li>• 3R waste segregation, composting, and recycling.</li> <li>• Digital library replacing physical books.</li> <li>• Awareness programs on resource efficiency.</li> </ul>	<p>with Civil Defence safety compliance.</p> <ul style="list-style-type: none"> <li>• 100% segregation with color-coded bins.</li> <li>• 30% of waste recycled or composted.</li> <li>• 40% paper use reduction via digital systems.</li> </ul>	<p>Encourages responsible resource use and reduces institutional waste footprint.</p>
<p><b>SDG 13: Climate Action</b></p>	<p>Take urgent action to combat climate change</p>	<ul style="list-style-type: none"> <li>• Green Waqf Initiative, climate dialogues, afforestation programs.</li> <li>• Renewable energy transition and GHG reduction tracking.</li> </ul>	<ul style="list-style-type: none"> <li>• Total carbon footprint: 3,717.67 metric tons CO<sub>2</sub>.</li> <li>• &gt;172,000 m<sup>2</sup> reforested areas.</li> <li>• 4 major climate action events annually.</li> </ul>	<p>Strengthens institutional climate resilience and supports Pakistan's NDC targets.</p>
<p><b>SDG 14: Life Below Water</b></p>	<p>Conserve and sustainably use aquatic ecosystems</p>	<ul style="list-style-type: none"> <li>• VR labs replacing chemicals that pollute water.</li> <li>• Water reuse in aquaculture and irrigation systems.</li> </ul>	<ul style="list-style-type: none"> <li>• 100% reduction in formaldehyde &amp; dental chemicals in labs.</li> <li>• Sustainable water use at 30% recycling efficiency.</li> </ul>	<p>Protects marine ecosystems and promotes water stewardship.</p>
<p><b>SDG 15: Life on Land</b></p>	<p>Protect, restore, and promote sustainable terrestrial ecosystems</p>	<ul style="list-style-type: none"> <li>• Forest, aviary, and orchard development across campuses.</li> <li>• Collaboration with Sindh Forest Department under Green Pakistan Program.</li> </ul>	<ul style="list-style-type: none"> <li>• 36.52% campus area covered in green/forest vegetation.</li> <li>• 142,498 m<sup>2</sup> planted vegetation.</li> <li>• Annual plantation &gt;5,000 trees.</li> </ul>	<p>Conserves biodiversity and contributes to Pakistan's afforestation goals.</p>
<p><b>SDG 16: Peace,</b></p>	<p>Promote peaceful and</p>	<ul style="list-style-type: none"> <li>• Fire, safety, and ethical</li> </ul>	<ul style="list-style-type: none"> <li>• Annual safety inspections (100%</li> </ul>	<p>Builds a culture of safety,</p>



**Justice, and  
Strong  
Institutions**

inclusive societies

policy enforcement.  
• Transparent governance and stakeholder engagement.

compliance).  
• Civil Defence certification for all main sites.  
• Multi-level grievance redressal policy.

accountability, and institutional trust.

**SDG 17:  
Partnerships  
for the Goals**

Strengthen global partnerships for sustainable development

• MoUs with ICCIA, Green Pakistan Program, NGOs, and academic partners.  
• Participation in Pakistan Sustainability Week & UN events.

• 10+ national/international collaborations.  
• 5 cross-sector partnerships in sustainability domains.  
• Annual SDG dialogue and reporting to GreenMetric.

Strengthens institutional collaboration and accelerates collective SDG achievement.

