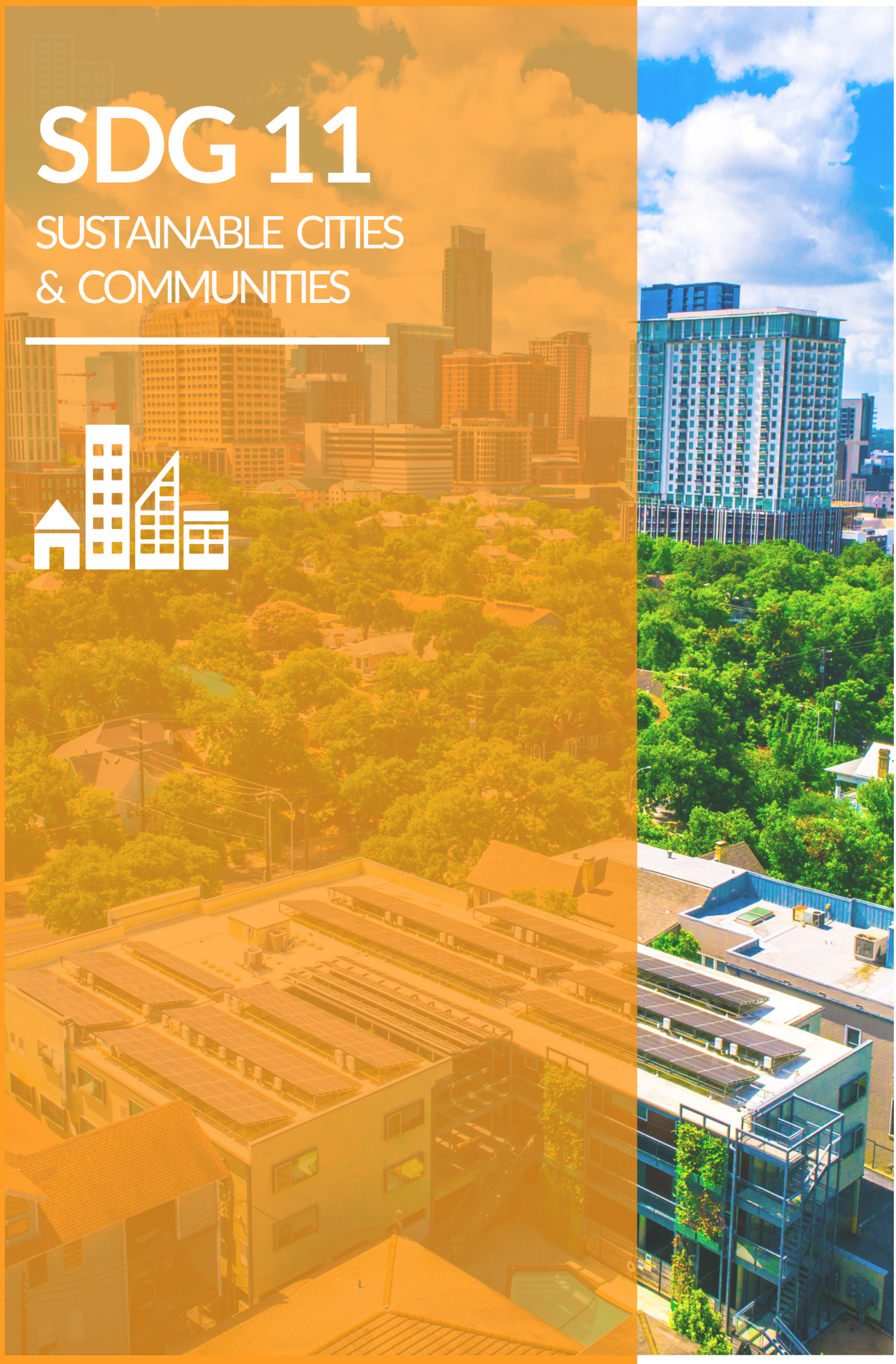
SDG 11

SUSTAINABLE CITIES & COMMUNITIES



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ACTIVITY 01:

AWARENESS DESK ON GREEN INFRASTRUCTURE

Organized By:
The Department of Civil Engineering

ACE organized an Awareness Desk focused on green infrastructure, highlighting its essential role in developing sustainable urban environments. The event also linked to SDG 9, which emphasizes building resilient infrastructure and fostering innovation. By educating students about integrating green infrastructure such as green roofs, urban forests, and permeable pavements, ACE highlighted the importance of nature-based solutions in enhancing urban resilience and addressing climate change. This initiative aligns with SDG 9.1, which focuses on developing quality, reliable, sustainable, and resilient infrastructure. This initiative encouraged students to consider their roles in creating sustainable infrastructure that benefits both communities and the environment.

ACTIVITY 02:

AWARENESS WALK ON GREEN INFRASTRUCTURE

Organized By:
The Department of Civil Engineering

ASCE, in collaboration with DSE, organized an Awareness Walk to promote green infrastructure and nature-based solutions. This initiative aligned with SDG 11, aiming to create inclusive, safe, resilient, and sustainable cities, particularly through Target 11.3, which promotes participatory and sustainable urbanization. The event also emphasized on resilient infrastructure and innovation. By educating students about green infrastructure like green roofs, urban forests, and permeable pavements, ASCE highlighted the importance of nature-based solutions for enhancing urban resilience and addressing climate change. Overall, this initiative engaged students with the critical components of SDG 11, encouraging them to consider their roles in creating sustainable infrastructure that benefits both communities and the environment.

ACTIVITY 03:

AI REVOLUTIONIZING CIVIL ENGINEERING

Organized By:
The Department of Civil Engineering

ASCE organized a seminar on the topic “AI Revolutionizing Civil Engineering”. This initiative aligned with SDG 11, aiming to create inclusive, safe, resilient, and sustainable cities, particularly through Target 11.3, which promotes participatory and sustainable urbanization. By educating engineers and students about AI-powered solutions for water management, such as predictive maintenance, optimized distribution systems, and water quality monitoring, the seminar highlighted the importance of technology in ensuring sustainable water resources. Additionally, the seminar contributed to SDG 11.2, which focuses on providing access to safe, affordable, accessible, and sustainable transport systems. By discussing AI-powered traffic management and urban planning solutions, the event emphasized the role of technology in creating sustainable and resilient cities. Overall, this initiative engaged participants with the critical components of SDG 11, encouraging them to consider their roles in creating a sustainable future.

ACTIVITY 04:

SAFETY IN CONSTRUCTION: THE ROLE OF INNOVATION

Organized By:
The Department of Civil Engineering

ASCE in collaboration with OSH Student Club organized a seminar on the topic “Safety in Construction: The Role of Innovation.” This initiative directly aligned with SDG 11, specifically Target 11.3, which aims to enhance inclusive and sustainable urbanization and promote participatory and integrated urban and regional planning and management. By focusing on innovative safety solutions, the seminar encourages the development of more sustainable and efficient construction methods. This includes technologies that minimize waste, reduce environmental impact, and improve worker safety. thereby contributing to the creation of safer and more inclusive urban environments. Overall, this initiative engaged participants with the critical components of SDG 11, encouraging them to consider their roles in creating a safer, more sustainable, and inclusive construction industry.

ACTIVITY 05:
BRIDGE BUILDING COMPETITION

Organized By:
The Department of Civil Engineering

ACE organized a bridge-building competition, an initiative that directly aligns with Sustainable Development Goal (SDG) 11: Sustainable Cities and Communities. This competition challenged students to design and construct innovative and sustainable bridges, fostering practical solutions to address infrastructure challenges and contribute to achieving this critical SDG. The initiative specifically connects to Target 11.2 of SDG 11, which aims to provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety and expanding public transport by 2030. By encouraging students to design bridges that are not only structurally sound but also environmentally sustainable, the competition promotes the development of infrastructure that supports resilient and inclusive communities. Through this initiative, ACE has inspired students to address real-world infrastructure challenges while empowering them to contribute to building sustainable cities and communities for future generations.

ACTIVITY 06:

SITE VISITATION AT MAIN ADVALA ROAD

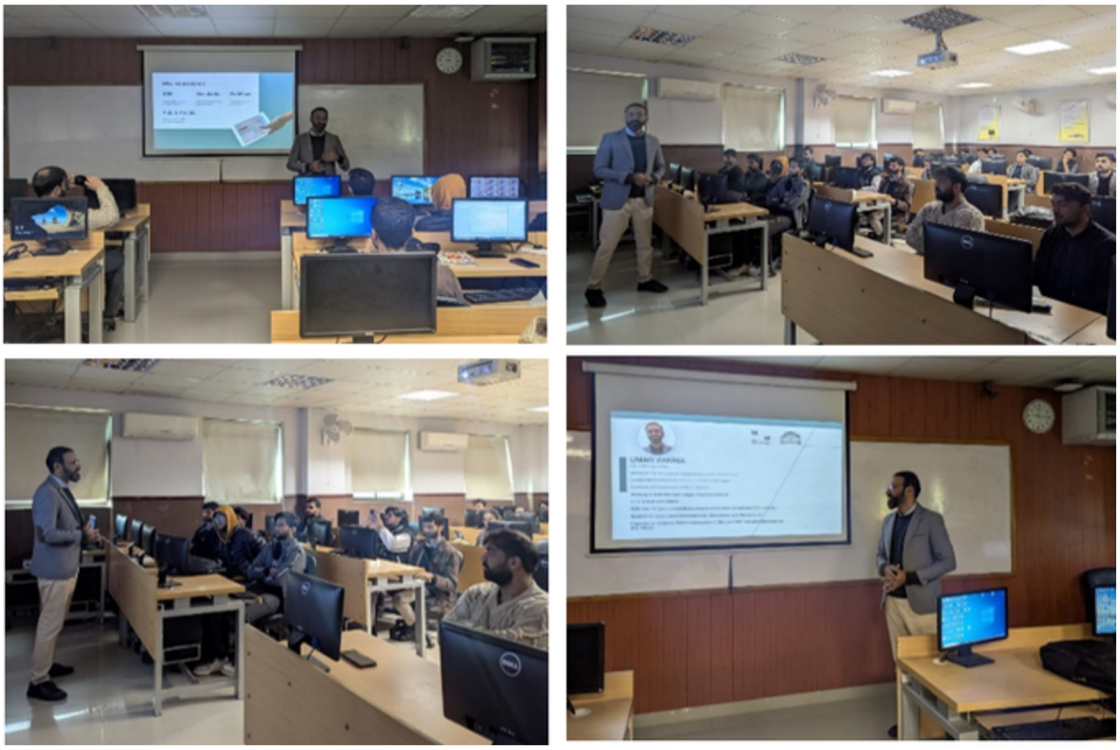
Organized By:
The Department of Civil Engineering

ACE organized a construction site visit for Batch 233 and 243, an initiative that directly aligns with Sustainable Development Goal (SDG) 11: Sustainable Cities and Communities. This site visit provided students with hands-on exposure to real-world construction practices, fostering practical solutions to address infrastructure challenges and contribute to achieving these critical SDGs. The initiative specifically connects to 11.6 of SDG 11, which aims to reduce the adverse per capita environmental impact of cities, including by paying special attention to air and water quality, municipal and other waste management, and human settlements. By encouraging students to observe and learn about modern construction techniques, safety protocols, and sustainable practices, the visit promotes the development of infrastructure that is both innovative and environmentally responsible, contributing to the creation of sustainable and resilient cities.

ACTIVITY 07:

INFRASTRUCTURE DESIGN USING BUILDING INFORMATION MODELING (BIM)

Organized By:
The Department of Civil Engineering



ASCE organized a training session on “Infrastructure Design using Building Information Modeling (BIM)”, an initiative that aligns with SDG 11: Sustainable Cities and Communities. This training equipped participants with advanced BIM skills, enabling them to design innovative, efficient, and sustainable infrastructure systems. By integrating digital tools and sustainable practices, the initiative fosters solutions to global infrastructure challenges. The training connects to Target 11.3 of SDG 11, which emphasizes inclusive and sustainable urbanization. By encouraging BIM for resource optimization, waste reduction, and enhanced collaboration, the training promotes infrastructure that is environmentally sustainable, economically viable, and supportive of resilient urban development.

ACTIVITY 08:

TRAFFIC ENGINEERING - PAST, PRESENT AND FUTURE

Organized By:
The Department of Civil Engineering




ASCE recently organized a training session titled "Traffic Engineering - Past, Present, and Future", an initiative that aligns closely with Sustainable Development Goal (SDG) 11: Sustainable Cities and Communities. The training aimed to explore the evolution of traffic engineering, its current challenges, and future innovations, emphasizing the critical role of sustainable and efficient transportation systems in building resilient, inclusive, and environmentally friendly urban environments. The training directly connects to Target 11.2 of SDG 11, which focuses on providing access to safe, affordable, accessible, and sustainable transport systems for all by 2030. By delving into the historical context of traffic engineering, participants gained insights into how transportation systems have evolved, and the lessons learned from past practices. The discussion on present-day challenges highlighted the need for innovative solutions to address issues such as traffic congestion, air pollution, and inadequate infrastructure, which are critical to achieving sustainable urban development.

ACTIVITY 09:

SUSTAINABLE TRANSPORTATION AWARENESS CAMPAIGN

Organized By:
The Department of Civil Engineering

ASCE organized a Sustainable Transportation Awareness Campaign at Capital University of Science and Technology (CUST), an initiative that directly aligns with Sustainable Development Goal (SDG) 11: Sustainable Cities and Communities. This campaign aimed to raise awareness about the importance of sustainable transportation systems and their role in building resilient, inclusive, and environmentally friendly urban environments. The initiative specifically connects to Target 11.2 of SDG 11, which focuses on providing access to safe, affordable, accessible, and sustainable transport systems for all by 2030. By promoting sustainable transportation practices such as the use of public transit, cycling, walking, and electric vehicles, the campaign encouraged the university community to adopt eco-friendly mobility solutions that reduce carbon emissions and improve urban air quality.

ACTIVITY 10:

LEVELLING AND CENTERING COMPETITION

Organized By:
The Department of Civil Engineering

ACE organized a levelling & centering competition, to enhance students' practical surveying skills and precision in geospatial measurements. Participants competed in accurately setting up of total station which is an essential tool in modern construction and urban planning. This event provides a platform for hands-on learning, promoting technical competence, teamwork and a deeper understanding of fieldwork processes crucial for infrastructure development. The competition aligns with SDG 11, particularly 11.3, which focuses on enhancing inclusive and sustainable urbanization and capacity for participatory, integrated, and sustainable human settlement planning and management. Accurate land surveying is essential for effective infrastructure planning, land use and development, ensuring that cities grow in a sustainable and organized manner.

ACTIVITY 11:

TRAINING ON IDEA STATICA SOFTWARE

Organized By:
The Department of Civil Engineering

ASCE organized a specialized training session for students by an industry professional on the use of IDEA statiCA, an advanced software tool for structural design and analysis. The training focused on equipping students with experience in modeling, load analysis, and code-checking of steel connections and concrete details, aligning academic knowledge with current industry practices. The presence of an expert from the field provided valuable insights into real world applications, design, optimization, and compliance with Eurocode standards, significantly enhancing the participants technical competencies and career readiness. This initiative is directly linked to Sustainable Development Goal 11, particularly, supporting the sub clause of SDG 11 i.e., 11.3 which emphasizes inclusive and sustainable urbanization, including participatory planning and management. The session concluded with interactive Q&A, encouraging students to explore careers in structural engineering.

ACTIVITY 12:

INDUSTRIAL VISIT TO FWO KHASALA, RAWALPINDI

Organized By:
The Department of Civil Engineering

Recognizing the crucial link between theoretical knowledge and practical application in civil engineering, ACE arranged a specialized site visit for their Batch 223 (3rd year students) to the FWO (Frontier Works Organization) Camp Khasala on May 24, 2025. The visit focused on providing students with firsthand exposure to the processes of prestressing of girders and the laying of flexible pavement, key aspects of modern infrastructure development. Following initial safety instructions and a briefing by Engr. Adeem Hashmi (NESKPAK), students were guided through demonstrations of both techniques. They observed the intricate steps involved in the prestressing of girders, gaining insight into the principles and equipment used to enhance the structural capacity of these essential components. Subsequently, the students witnessed the process of laying flexible pavement, observing the materials, machinery, and quality control measures involved in constructing durable road surfaces. This initiative is directly linked to Sustainable Development Goal 11: Sustainable Cities and Communities, particularly supporting the sub-clause of SDG 11, 11.3, which emphasizes inclusive and sustainable urbanization, including participatory planning and management.

ACTIVITY 13:

TRAINING ON SOIL REPORT GENERATION SOFTWARE

Organized By:
The Department of Civil Engineering

ASCE successfully organized a specialized training session for its 2022 batch students on Soil Report Generation using CASTeR, a critical software tool for geotechnical engineering. The session, expertly facilitated by Engr. Muhammad Faran, focused on equipping students with practical experience in the comprehensive generation of soil reports, directly aligning academic knowledge with current industry practices in geotechnical investigations. Participants received hands-on exposure through live demonstrations, learning key aspects such as data input, bearing capacity calculations, and settlement analysis. This initiative is directly linked to Sustainable Development Goal 11: Sustainable Cities and Communities, particularly supporting the sub-clause of SDG 11, 11.B, which emphasizes implementing integrated policies and plans towards resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and holistic disaster risk management.