



INDUSTRY, INNOVATION AND INFRASTRUCTURE



Sustainable Development Goal 9 (SDG 9) aims to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation. This goal is essential for driving economic growth, generating job opportunities, and ensuring environmental sustainability.

By investing in resilient infrastructure, countries can enhance their capacity to withstand economic and environmental challenges. Sustainable industrialization supports the development of industries that are environmentally friendly and inclusive, creating pathways for equitable growth. Additionally, fostering innovation is critical for developing new technologies and solutions that address societal needs and challenges.

Overall, achieving SDG 9 is vital for creating a sustainable future that benefits all sectors of society while protecting the planet.

Investment in infrastructure and innovation is vital for driving economic growth and development, especially as over half of the global population now resides in urban areas. The increasing need for mass transport and renewable energy solutions highlights the importance of adapting to these changes. Additionally, the emergence of new industries and advancements in information and communication technologies play a critical role in this transformation.

Technological progress is essential for addressing both economic and environmental challenges. It can create new job opportunities and enhance energy efficiency. Promoting sustainable industries and investing in scientific research and innovation are key strategies for facilitating sustainable development.

However, more than 4 billion people still lack Internet access, with 90 percent residing in developing countries. Bridging this digital divide is crucial for ensuring equal access to information and knowledge, fostering innovation, and supporting entrepreneurship.

Seminar On Importance of Engineering Dynamics in Industries

The Department of Mechanical Engineering arranged a Seminar on "Importance of Engineering Dynamics and its application in practical life and in industries" on January 5, 2023, under the category of department specific skills. Engr. Touqeer Iqbal from the Pakistan Ordnance Factories was the resource person of the seminar.



The seminar provided comprehensive knowledge regarding engineering dynamics and its application in industries. The resource person elaborated the targets of industries in contemporary epoch and the need for fresh engineers to develop skills to succeed in the industry.

This seminar was arranged for the students for BS (ME) third semester. DME faculty and students thanked Engr. Touqeer Iqbal for such an interactive session. Dr. Atta Ur Rehman Chairperson/Head, Department of Mechanical Engineering presented a souvenir to the resource person. The resource person also exchanged POFs Souvenir to the Head of department on behalf of Pakistan Ordnance Factories (POF).

Industrial Exposure

During the semester students from different departments visited different industrial places to integrate theoretical

knowledge into practical. The practical knowledge teaches students to put theory into practice to get their selves familiar with industry.



Industrial Visit to Gadoon Textile Mill KPK



Industrial Visit – Silver Lake Foods LIMITED



Industrial Visit at National Institute of Electronics



Industrial Visit ECE Students to High Voltage and Short Circuit Lab



A Field Trip to Sangjani Water Treatment Plant



Inauguration of New Academic Block –1

The Honourable Rector, COMSATS University Islamabad (CUI), Prof. Dr. Sajid Qamar, inaugurated the new Academic Block of the Electrical and Computer Engineering Department on November 17, 2023. The Dean, Faculty of Engineering, Dean, Faculty of Business Administration, Director, CUI Attock Campus, Principal Officers, Head of Departments and Section, Senior faculty members, and Contractors were also present on the occasion.



The worthy Rector along with Principal Officers inspected the newly renovated building designed with state-of-the-art infrastructure and the latest facilities for the Department of Electrical & Computer Engineering and Mathematics. The Director Campus, Prof. Dr. Muhammad Abid, (T.I) thanked the Rector CUI and other guests for their participation in this event.

Workplaces Exposure



Industrial Visit - Heavy Industries Taxila (HIT)



Industrial Visit – NEWTECH, Islamabad



Industrial Visit - Amfah Soft (the legal business name is Broaddigix Pvt.



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Industrial visit to weRplay, (a game-based software Development Company)



Survey Camp, Civil Engineering Department

PUBLICATIONS

Publications Title	Author	Publisher	Impact Factor	Weblink
Proactive Caching in D2D Assisted Multitier Cellular Network	Sohail Zia Muhammad Azhar Bumshik Lee	Intelligent Systems with Applications	9.29	https://www.sciencedirect.com/science/article/pii/S2667305323000194
Quasi-Optimization of Resource Allocation and Positioning for Solar-Powered UAV	Waqar Amin Fawad Hussain Sheraz Anjum	Journal of Network and Computer Applications	8.7	https://doi.org/10.1016/j.jnca.2023.103729
Recognition of printed Urdu script in Nastaleeq font by using CNN-BiGRU-GRU Based Encoder-Decoder Framework	Mian Ahmad Jan	IEEE	9.551	NULL
Reducing computational complexity in fingerprint matching	Maria Kanwal Rao Arsalan Khushnood Fazal Adnan	Elsevier	10.5	https://doi.org/10.1016/j.cemconcomp.2023.104937
Reduction of out of band radiation in non-contiguous ofdm based cognitive radio system using heuristic techniques	Maria Kanwal Rao Arsalan Khushnood Abdul Ghafar Wattoo	Elsevier	7.144	https://doi.org/10.1016/j.jobbe.2023.105930
Redundant-Signed-Digit-Based High Speed Elliptic Curve Cryptographic Processor	Muhammad Khubaib Akhtar Maria Kanwal Rao Arsalan Khushnood	Elsevier	7.144	https://doi.org/10.1016/j.jobbe.2023.106229
Shallow vessel segmentation network for automatic retinal vessel segmentation	Ali Ranjha	NULL	7.9	https://ieeexplore.ieee.org/document/10002943

Total Publications:92, only high Impact Factor publications are mentioned here.

In SDG 9 there were projects having worth of **8.11 million PKR** during 2023, among them the project titled “development of 2-deoxy - D-ribose releasing tube gels- optimization of preparation and sterilization protocols” **“Cohort: a32-bit configurable digital signal processor for industrial control applications”** are worth mentioning.

