



UNIVERSITY OF
ENGINEERING AND
TECHNOLOGY, PESHAWAR

UET PESHAWAR



SDGs MEDIA REPORT

2018-20



The University of Engineering and Technology, Peshawar, is a premier institution of higher learning in the field of engineering sciences. Started as a College in 1952, with an initial enrollment of only twenty students, today it boasts twenty four engineering departments, covering an entire spectrum of engineering and non-engineering disciplines, from the traditional, such as electrical and mechanical, to the cutting-edge technologies. With producing more than 2000 graduates every year, UET Peshawar has been treading on a continuous path to achieve its goal with a stronger such as Artificial Intelligence (AI), Data Science and Mechatronics Engineering and more efficient infrastructure and qualified Ph.D. faculty dedicated and administrative staff. Currently 10,000 students are enrolled in various disciplines of undergraduate and postgraduate levels and satellite campuses located in Peshawar (Main Campus), Abottabad, Bannu, Kohat and Jalozai.

Satellite Campuses

Abbottabad Campus

The Chancellor, UET, Peshawar inaugurated Abbottabad Campus in October, 2002, in the old premises of Ayub Medical College. The city of Abbottabad gained fame as a city of schools and colleges. Due to a pleasant climate, people from all parts of the country send their children to study in reputed educational institutions such as Army Burn Hall, Abbottabad Public School, COMSATS Institute of Information Technology etc. In addition, five medical colleges in the city also attract students. Establishment of a campus of UET, Peshawar in Abbottabad has not only addressed a longstanding public demand, but also enhanced the city's image as a seat of learning. Known for its natural beauty, better climatic conditions and a vast network of educational institutions, Abbottabad was ideally suited for such an institution of higher learning in applied sciences. A new girls hostel with a capacity to accommodate hundred students has been constructed at the campus.

Bannu Campus

Bannu Campus became operational in May 2002, in the premises of the Comprehensive High School in the city. This has brought higher education in engineering sciences to this neglected middle-southern region. Prior to this, students would go to Dera Ismail Khan, Kohat or Peshawar to pursue their higher studies.

Currently, two traditional disciplines in engineering sciences are offered, and efforts are afoot to consolidate these Programs. Large

investment in strengthening laboratories, and upgrading infrastructure are being done to quickly bring this campus at par with others.

Kohat Campus

The administrative and management control of Engineering Academic Programs of Kohat University of Science and Technology (KUST) was handed over to UET, Peshawar on April 3, 2012. At present, UET Kohat Campus is offering B.Sc. electrical engineering in leased premises, providing all necessary facilities to the students.

Jalozai Campus

The Jalozai Campus funded by HEC at the cost of Rs. 6,565.272 Million is being established on Pabbi-Cherat Road at 11 KM Southwards from GT Road in district Nowshera. Total area of the campus is 402 acres and the total covered area is approximately 1,021,233 sq. ft. with live-in strength of 3,240 students in eight departments. The Campus includes academic blocks, central facilities, amenities, sports & recreational facilities, hostels, staff residences together with infrastructural facilities and a Sewage Treatment Plant. At present, the departments of civil engineering, Electrical Engineering, Mechanical Engineering, Industrial Engineering and Computer Science and IT are offering undergraduate programs in relevant fields.

UN Sustainable Development Goals (SDGs)

At the Sustainable Development Summit on 25th September, 2015, UN Member States adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030. The Sustainable Development Goals (SDGs), also known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. (<https://www.sdg-pakistan.pk/web/sdgs>). Pakistan was the first country to adopt the UN SDGs 2030 Agenda through anonymous resolution of parliament (pc.gov.pk). In this respect Pakistan has to report annually how it is progressing to meet the Agenda 2030.

The role of universities and higher education institutions is also central to devise a comprehensive strategy for adopting the UN SDGs that are relevant to the Higher Education sector to help the country in achieving the national goal. UET Peshawar attaches much importance to play a responsible role in adopting the SDGs and subsequently reporting in its best possible form. UET Peshawar has initiated many activities and engaged allied departments to reflect on its sectoral activities that relevant to 17 SDGs. UET Peshawar is proud to share “UET Peshawar SDGs Media Report 2018-2020”, and look forward to continuing over its journey that leads us to be known as an active partner in contributing towards fulfilling the national commitment.





Goal-1

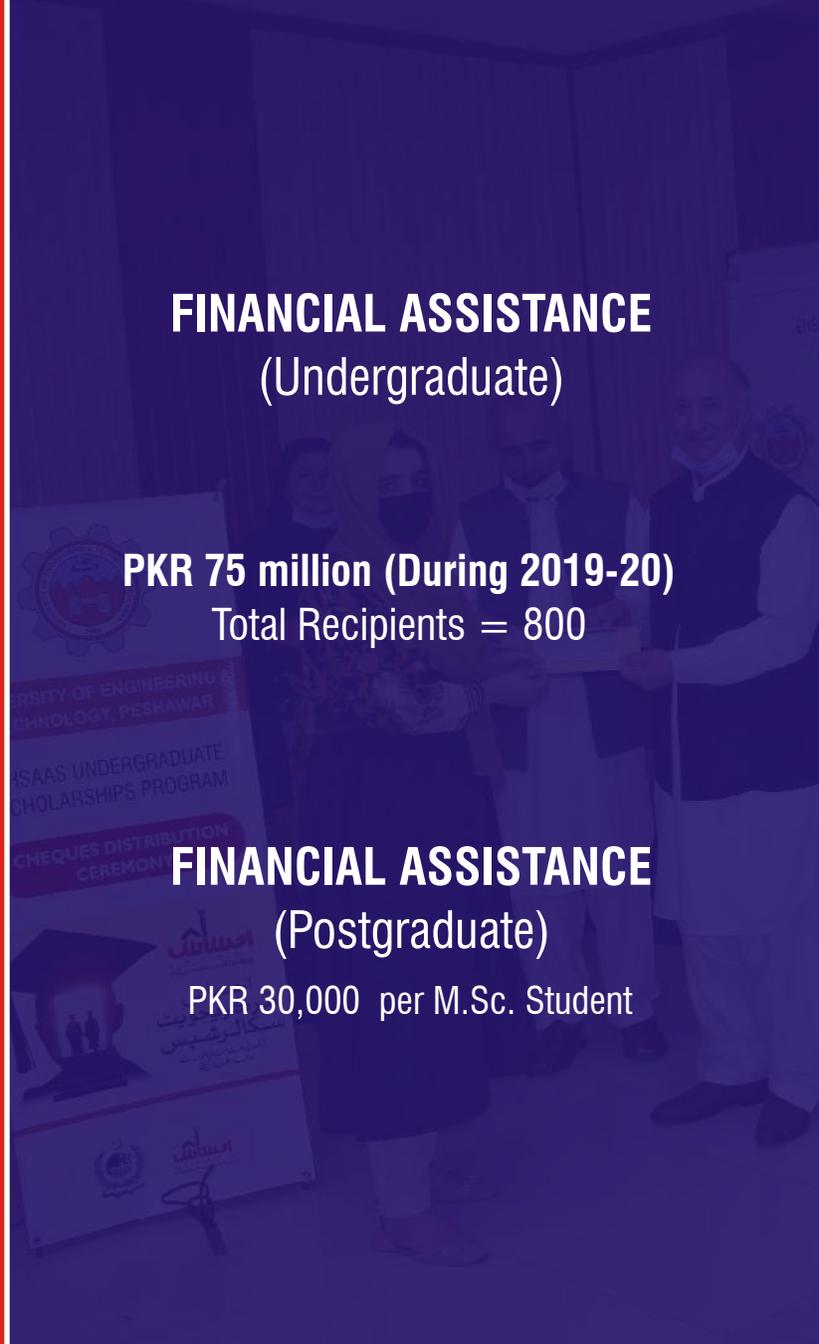
NO POVERTY

FINANCIAL ASSISTANCE (Undergraduate)

PKR 75 million (During 2019-20)
Total Recipients = 800

FINANCIAL ASSISTANCE (Postgraduate)

PKR 30,000 per M.Sc. Student



MoU with Fast Cables Company

The MoU signing ceremony was held between UET Peshawar and Fast Cables Company, a leading cable company of Pakistan. Imran Zahoor Regional Head (Fast Cables North) and Former Vice Chancellor signed the MoU. The Fast Cables would support the needy students through Zakat scholarships; award Gold Medals to the top ranked students of Electrical Engineering Department and offer internships to the engineering students.

ETEA Engineering Entrance Test 2020

The Entrance Test for Academic Session 2021 was successfully conducted on 22nd August, 2021 simultaneously at Peshawar, Mardan, Abbottabad, Swat, Malakand, Kohat, and D.I. Khan Centers.



The test was conducted by the Educational Testing and Evaluating Agency (ETEA) of Government of Khyber Pakhtunkhwa. Around 8148 candidates from Khyber Pakhtunkhwa, erstwhile FATA, AJK and Gilgit Baltistan appeared for the entrance test. The result was announced on 23rd August, 2021 (Monday) and was available on ETEA website (www.etea.edu.pk). The same was also displayed on www.enggentrancetest.pk.

At Peshawar Center, a total of 3401 candidates appeared in the test for admission in engineering disciplines, similarly at Abbottabad Center 1521 candidates, at Swat Centre 540 candidates, at Mardan Center 1125 candidates, at Kohat Center 546 candidates, at Malakand Center 435 candidates, while at D.I. Khan Center 580 candidates appeared in the test. Altogether, 7492 male and 656 female candidates appeared in all centers.

SNGPL Gives Away Gold Medals and Scholarships to the Students of Department of Electrical Engineering Department

A prize distribution ceremony was held on 26th December, 2018 in which two gold medals and six scholarships were distributed among the talented students of the Department of Electrical Engineering and Chemical Engineering Department of UET Peshawar. The ceremony was organized by Center of Intelligent Systems and Networks Research (CISNR), whereas, the gold medals and scholarships were sponsored by Sui Northern Gas Pipelines Limited (SNGPL).

Mr. Saqib Arbab, General Manager SNGPL, distributed gold medals and scholarships among students as a chief guest. He appreciated the efforts of vice chancellor and faculty members that they



have groomed their students in a way that they are capable enough to succeed in any discipline of life. He also highlighted the current issues faced by SNGPL such as gas low pressure, Gas leakage and theft and requested Dr. Gul Muhammad, Director CISNR and Prof. Dr. Iftikhar Hussain, Vice Chancellor UET, Peshawar to come up with feasible solutions.

Kohat Cement Ltd. Awards Scholarships to UET Peshawar Students

The Kohat Cement Ltd. has awarded scholarships to engineering students of UET Peshawar on 27th June, 2017. As part of its Social Corporate Social Responsibility to help local communities in education sector, the deserving students belonging to Kohat have been awarded these scholarships to cover their tuition fee. Col (R) Ajmal Khan, General Manager Admin, Kohat Cement in an award distribution ceremony in the presence of Former Vice Chancellor, Prof. Dr. Iftikhar Hussain and senior officials.

Among recipients included Sikandar Mehmood and Hamid Ullah from Mechanical Engineering Department, Usama Ali from Industrial Engineering Department and Irfan Ullah from Mechatronics engineering Department.

Coke MTO Recruitment Drive

The Coca Cola Pakistan executed their MTO Recruitment Drive on 11th March 2020. They conducted a session for the graduating students in order to recruit the three best students for the next selection round.

They also conducted recruitment competitions in which nine students were initially selected and three were given the Gold Tickets. The HR Associate Arif Khan and Jamal Mehmood Commercial Manager briefed the students about the Internships and job opportunities at Coke.





Goal-2

ZERO HUNGER

MoU with the Agriculture, Livestock, Fisheries and Coop Department, Govt. of Khyber Pakhtunkhwa

The Agriculture, Livestock, Fisheries and Coop Department, Govt. of Khyber Pakhtunkhwa, UET Peshawar and University of Agriculture have signed the MoU to strengthen research collaboration in the fields of agriculture. The Secretary Agriculture, Livestock, Fisheries and Coop Department Government of Khyber Pakhtunkhwa, Muhammad Israr, Former Vice Chancellor UET Peshawar Prof. Dr. Iftikhar Hussain, and Vice Chancellor University of Agriculture, Peshawar Prof Dr. Jehan Bakht, signed the MoU. The MoU is aimed to enhance scientific and technological developments through joint research and consultative programs between the faculty and researchers of both universities and make possible recommendations to the Government.



Prof. Dr. Zia-ul-Haq Chairman Department of Agricultural Engineering UET Peshawar informed that meetings were held earlier with the Department of Agriculture, Govt. of Khyber Pakhtunkhwa for strengthening "academia-industry and government linkages" to address the increasing challenges of agriculture and food security in Pakistan.



Goal-3

GOOD HEALTH AND WELL-BEING

Establishment of Innovative Secured Systems Lab (Principal Investigator: Dr. Sadeeq Jan, Funded by: (HEC)

The project is funded by HEC as part of National Center in Cyber Security, has been recently inaugurated. It is aimed to locally develop cyber security testing tools; secure mobile applications based on Blockchain technologies for various industries (e.g., gems, food); secure IoT devices using smart and secure communication protocols, architectures and frameworks for cutting-edge technologies in IoT; secure logistical processes with quality and integrity guarantee in IoT applications; locally developed/integrated novel products/units (key ICT infrastructure with Cyber Security protocols), lab models of future power networks with ICT based automation; research papers publications in reputable journals and conferences (16 papers); seminars and workshops in cyber security; patent filling; technical reports in security issues in cyber security applications and IoT industry; a generic framework for blockchain technologies applications; strengthening the security of Pakistani online banking services and government official web sites; providing a secure IT infrastructure for Gems and Jewels industry using blockchain; security consulting services: providing professional security consulting services (e.g., penetration testing); producing HR trained in Cyber security through M.Sc./Ph.D. programs focused on Cyber Security, Short courses/certifications in cyber security etc; awareness of Blockchain technologies and its application; started joint cyber security projects with KPIT Board; sharing resources and workshops/training; one MS student completed his thesis; 4 Publications (2 accepted, 2 under review); 2 lab members visited University De Lorain France for collaboration; access to scientific instrumentation and labs especially related to IoT devices and IoT tag; uploaded a tool on google play store for supply chain Management based on Block chain technologies and several technical reports on security related projects completed.

Road Safety Seminar

The National Highways and Motorways Police (NH&MP) arranged a one day-long awareness on Road Safety on 8th January, 2020. The aim of seminar was to aware the students about driving rules and precautions required to save pedestrians from road accidents.



NCBC, UET Peshawar Signs MoU with PTB, Peshawar

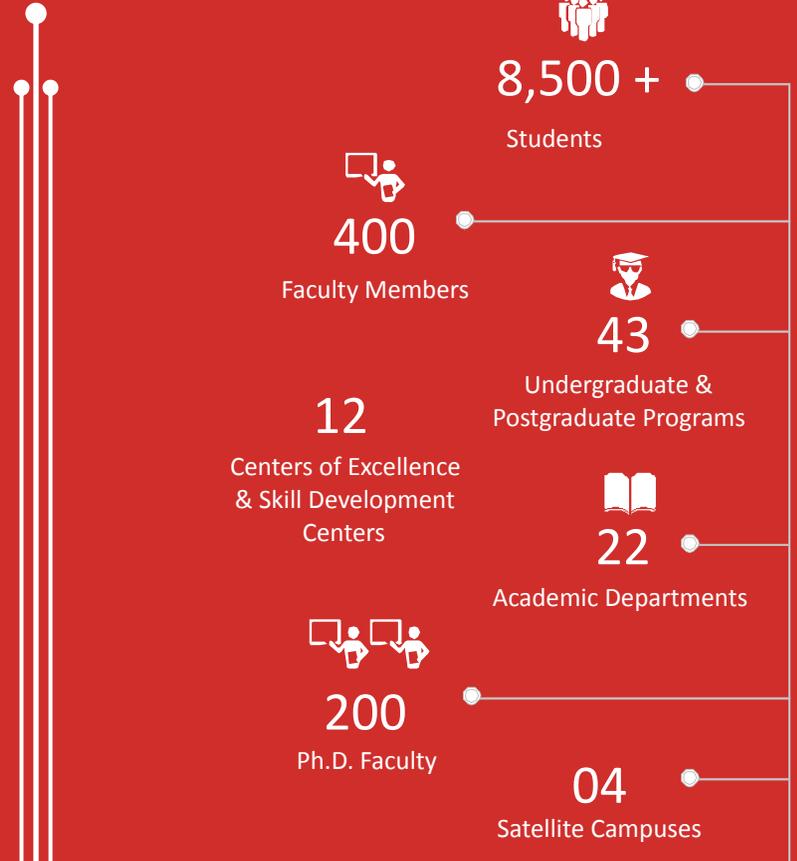
The National Center for Big Data and Cloud Computing (NCBC) UET Peshawar and Pakistan Tobacco Board (PTB), Peshawar have signed a memorandum of understanding on 14th May, 2019. The purpose of this MoU is to define terms upon which these two partners will jointly collaborate to achieve the common goals in the Accurate Detection and Estimation of Tobacco Crop through Geographic Image Analysis.





Goal-4

QUALITY EDUCATION



UET Peshawar's Academic Programs are accredited under the Washington Accord's OBE system

Mechanical Engineering Project Exhibition 2019

The Department of Mechanical Engineering, showcased 43 projects during the Final Year Project Exhibition 2019 held on 30th July, 2019. The graduating students presented projects related to climate change, plastic waste, automobile and renewable energy with offering solutions having practical usages for local market viability. The exhibition was organized by the Department of Mechanical Engineering.

The exhibited projects ranged from projects that had a conceptual nature to the state-of-the-art solutions in emerging fields of engineering and technology. Amongst the best project awards, the first prize was won by the students for "Design and fabrication of low cost "Go- Kart", second prize went to the students for "Development and analysis of fuel generation from plastic waste" and third prize went to "Integrated vehicle monitoring maintenance and management system". The project exhibition also declared special awards including "Best Mechanical Design" which was awarded to the group for "Fatigue testing machine for composite laminates"; "Best

Research Design award was conferred to the students who developed "Modification of UHM-WPE for different joint replacement" and "Best Mechanical Green project" who made the project titled, "Comparative study of carbon capturing techniques with design and fabrication of prototype and "University-Industry Linkage award for the "Effect of traffic induced vibration in gas pipelines suspended with bridges".



Seminars / Trainings

Title	Date	Participants	Focus Area & Outcomes	Audience (student /faculty /Staff)
Coca Cola Seminar on management Trainee Programe	11.03.2020	80	CV Writing and Talent Search Hiring with Campus Drive 2020	Students
AI based mineral Resource Estimation and Mine Planning	8-10.09.2020	46	AI based Resource Estimation nad Mine Planning	Students Faculty and Researchers

Title of Training	Date of Event	No. of Participants	Major Focus Area & Outcomes	Audience Type (student /faculty /staff)
Essentials of Cyber Security & Vulnerability Assessment	13-17.01.2020	60	Cyber Security Essentials	Faculty and Students
Training on Mastersizer and Zetasizer	28.01.2020	35	REE Streams	Faculty and Students
5 days training on Cyber security essentials	13-17.01.2020	27	Security essentials and vulnerabilities assessment	Students/faculty
Improvement of Quality of Postgraduate Thesis	07.01.2020	More than 80	Quality of Postgraduate Thesis	Faculty

For details please see chapter No. 4 Page No. 82-100, UET Annual Report 2018-20 (https://www.uetpeshawar.edu.pk/annual_report/Annual%20Report%202018-19%20&%202019-20.pdf)

Capacity Building

S.No.	Title of Course		Course level (undergrad/postgrad)	Credit Hours	Number of disciplines in which course is taught
1	CSE 4XX	Technical Elective-1 (Entrepreneurship	Undergrad	3	1
2	ME-201	Entrepreneurship	Undergrad	2	1
3	ME-302	Ethical & Legal Dimension of Engineering	Undergrad	2	1
4	ENE- 341	Organizational Behaviour	Undergrad	2	1
5	ENE-441	Energy Economics, Policy & Management	Undergrad	3	1
6	ENE-442	Entrepreneurship	Undergrad	2	1
7	CHE-432	Entrepreneurship in Chemical Engg	Undergrad	2	1
8	MTE-455	Entrepreneurship, Leadership & Team Management	Undergrad	3	1
9	MTE-99	Community Service Learning	Undergrad	1	1

Foreign Faculty Development Program

UET's Human Resource Development program, started in 2004, is aimed to meet the growing need for professionals in state-of-the-art engineering disciplines. The following table shows the names of scholars who have completed their Ph.D from world renowned universities and have returned during 2018-19 & 2019-20.

S.No.	Scholar's Name	Department	Ph.D Research Title	University
1.	Rabia Shahid	Computer System Engineering	Digital Design and Embedded Systems	George Mason University, USA
2.	Malik Umar Sharif	Electrical & Electronics Engineering	Cryptographic and Embedded Systems Applications	George Mason University, USA
3.	Laeq Ahmed	Computer Science	Developing Architecture for Dynamic Grid services using Dynamic weaving crosscutting concerns.	Royal Institute of Tech., (KTH), Sweden
4.	Nadeem Khan	Mechanical Engineering	Optimal design synthesis of four-bar linkages for path generation using shape descriptors and artificial network	Old Dominion University, USA
5.	Ihsan Ullah Khan	Mechanical Engineering	Rapid manufacturing (Management and implementation)	Old Dominion University, USA
6.	Abid Siddique	Electrical & Electronics Engineering	Communications and Networks	George Washington University, USA
7.	Engr. Siddique Ali	Electrical & Electronics Engineering	Techniques for Optimal Capacity and Location of Distributed Generation in Smart Grids.	University of Manchester, UK
8.	Shahidullah	Civil Engineering	Engineering Seismology	Technical University of Berlin, TU Berlin, Germany



Goal-5

GENDER EQUITY

Role of WISE towards women education in Science and Engineering

The Directorate of Media under the supervision of Dr. Shamaila Farooq, Director Media & Publications organized a session on "Role of WISE towards women education in Science and Engineering" on March 7th, 2019. The session was organized by the Women in Science and Engineering (women student society) and the Directorate of Media and Publications, UET Peshawar. The eminent women spoke on the occasion based on an interactive format. The Session Co-organiser, Engr. Sumayyeh, Lecturer Department of Computer System Engineering moderated the discussion followed by a panel discussion of invited speakers. The session was aimed to understand women's perspective in the respective professional fields and sharing of ideas on climate change.



MOL Pakistan offers Training for Female Engineers

The Career Development Center conducted an outreach session, jointly organized by MOL Pakistan on 7th October, 2019. The session was arranged for women graduating students regarding employment and internship opportunities, offered by MoL Pakistan under its Female Engineers MOL Program. This outreach session was attended by female students from different departments who asked various questions about employment opportunities and prospects of their professional growth from the management of MoL Pakistan. Abdullah Afridi HR Manager and Sara Mujahid Geologist MoL Pakistan also briefed the audience over the procedure of applying to the FEMP Program.





Goal-6

CLEAN WATER AND SANITATION

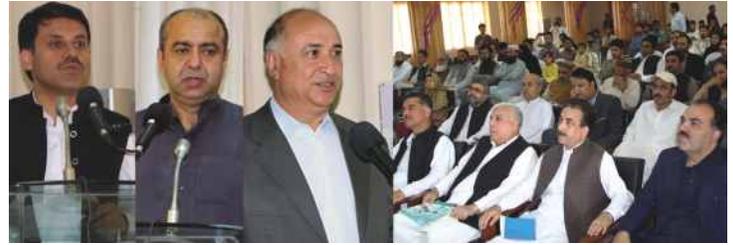
Title of Project	Outcome (Expected Benefits to Society)
<p>Enhancing WASH Sector Partner's Capacity for Emergencies</p> <p>Funded by: UNICEF</p>	<p>The UNICEF Pakistan and UET, Peshawar through NIUIP signed a Program Cooperation Agreement (PCA) for carrying out a project titled, "Enhancing WASH sector partners capacity for emergency preparedness and response" funded by UNICEF. The project has been completed successfully. NIUIP, being an implementing partner prepared 14 modules of a gender-responsive WASH in Emergency Course (WinE), to be rolled out for students and practitioner. More than 1200 drinking water samples were collected around Peshawar and tested for biological, chemical and physical containments. GIS based water quality monitoring system was developed which to be accessible over the internet. Sanitary survey was carried out in 1200+ households in urban Peshawar.</p>
<p>Competition on "Low Cost Sanitation Option" held</p>	<p>Competition on "Low Cost Sanitation Option" was organized on 28 December, 2018 at NIUIP for academic/research and business/entrepreneur category. The evaluation panel comprising of three technical experts evaluated the proposals/models/presentations submitted by all the groups in both the categories and after technical assessment and deliberation decided the winners under each category. Two (02) prizes each were awarded to the winners of 1st and 2nd positions under the Academic/Research and Business/Entrepreneur category, and, one (01) prize was awarded to the winner of the 3rd position under Academic/Research category. Finally a report was written on features of the submitted ideas along with key recommendation for the selected models.</p>
<p>Water Safety Plan for Angarghoon Chitral</p> <p>Funded by: UNICEF</p>	<p>The Department of Local Government, Elections and Rural Development, Government of Khyber Pakhtunkhwa, under the framework of UET signed MoU for carrying out a research and development project on "Water Safety Plan for Angarghoon Chitral". The project was financed by UNICEF Pakistan. This is the first of its kind project in Pakistan which adds significantly to the profile of NIUIP and UET Peshawar in the sector and affirms NIUIP as the leading organization in the country on the subject matter. In addition, collection and analysis of the data provided paid internship opportunities to our students besides making available valuable data to post-graduate students of both NIUIP and the Environmental Engineering at Department of Civil Engineering for utilizing the data in their research work. NIUIP has developed and draft of Water Safety Plan and will train Tehsil Municipal Authority (TMA), UNICEF and other stakeholders.</p>
<p>Water Quality Mapping and Development of Action Plan (Drinking Water Protection) in five disaster prone districts of Khyber Pakhtunkhwa".</p>	<p>NIUIP contracted a research and development project titled, "Water Quality Mapping and Development of Action Plan (Drinking Water Protection) in five disaster prone districts of Khyber Pakhtunkhwa". The project worth is Rs. 8.5 million, funded by Public Health Engineering Department (PHED) Government of Khyber Pakhtunkhwa.</p>

Awareness seminar held at UET Peshawar on World Water Day

UET Peshawar in collaboration with UNICEF, Watsan Cell and WSSP, organised an awareness seminar to commemorate the World Water Day with a theme on “Nature for Water” on 22nd March 2018. Every year, 22nd of March is commemorated as the World Water Day with the objective to focus on the importance of access to clean water, sanitation, hygiene (WASH) and advocacy for the sustainable management of freshwater resources. This year, 2018, is celebrated with a major theme “Nature for Water” aimed at exploring nature-based solutions (NBS) to

the water challenges that the world is facing. To handle this challenge, the UN Sustainable Development Goals have primarily focused to ensure availability and sustainable management of water and sanitation for all by 2030 as its goal 6. The speakers highlighted that Pakistan as one of the water-stressed countries in the world needs drastic steps to improve the practices for better water management resources. A number of researches, reports, and observations support the evidence that Pakistan may run dry soon therefore remedial actions are required at all levels.

They highlighted the efforts of government, NGO's and urged academia and industry to work jointly in resolving this challenge. At the end, a



video competition was held amongst university students who presented their thoughts about the WWD and brainstormed ideas on how to spread the important messages to the wider community on water conservation. The winners were given cash prizes. Representatives from the Government including Secretary Energy and Power Department KP, Naeem Khan, Chief Engineer, Public Health Department Khyber Pakhtunkhwa, Mr. Bahramand, UNICEF's WASH Specialist Sajad Akbar and Khen Zeb CEO WSSP were present on the occasion. The event was followed by an awareness walk .





Goal-7

AFFORDABLE AND CLEAN ENERGY

S.No.	Title of Project (Principal Investigator)	Outcome (Expected Benefits to Society)
1.	Intelligent Controller for Economic Load Dispatch in Micro-grids PI: Prof. Dr. Muhammad Naeem Arbab	The project develops the simulation model for the NTDC (National Transmission and Dispatch Company) system so that the proposed solution can be presented that can enhance the capability of Pakistani power system to operate securely under different operating conditions. The proposed solution will reduce the level the cost of energy, increase efficiency and ensure system stability.
2.	Road safety and disaster management / protection on CPEC Route. PI: Dr. Gul Muhammad Khan	The project is approved by HED Khyber Pakhtunkhwa and is in progress. It is aim at Implementation of technological solution to curb nature / manmade disasters; the potential outcome is disaster protection on CPEC Route.
3.	Intelligent system design for detection of gas leakage / theft PI: Dr. Gul Muhammad Khan	The project is aimed to reduce / eliminate gas theft; obtain a low cost optimal design for meter reading; saving of approx. 40 to 60 billion Rs annually.
4.	Fuel and electricity theft detection PI: Dr. Gul Muhammad Khan	The project is approved by USPCAS-E with the aim to fuel and electricity theft detection from generators of various organization and cellular towers for theft detection and reporting to concerned organization.
5.	Electrocure PI: Dr. Gul Muhammad Khan	Prototype completed and implementation is in progress to reduce / eliminate electricity theft ;Obtain a low cost optimal design for meter reading; Saving of approx. 40 billion Rs annually due to electricity theft .
6.	Metrocure PI: Dr. Gul Muhammad Khan	Prototype completed and implementation is in progress to introduce an image based autonomous remote billing system for PESCO with expected outcome for smart billing frame work to overcome underbilling / overbilling.
7.	Strategy for Energy Modeling for KP Province (Joint Project with Arizona State University, USA) PI: Prof Dr. M. A. Irfan Funded by: USAID, USPCASE Rs. 3 Million	Our Energy Modeling input was used in the 12th - 5 Year Energy Plan (2018-2023) made by Planning Commission of Pakistan.
8.	Establishment of Center for Industrial and Building Energy Audits in UETP PI: Prof Dr. M. A. Irfan Funded by: (HEC-TDF) Rs. 12 Million	Conducted Energy Audits in some University Departments and presented its results to the University in a seminar, "Energy Savings in Universities." The projected savings by applying the energy conservation measures can be up to Rs. 18 Million per annum. Conducted an extensive Energy Audit of FF Steel Mill, Lahore. The resulting energy conservation measures can lead to savings of tens of millions of rupees per annum.

For details please see chapter No. 3 Page No. 32-46, UET Annual Report 2018-20 (https://www.uetpeshawar.edu.pk/annual_report/Annual%20Report%202018-19%20&%202019-20.pdf)

9.	<p>Traversing the Path Towards Next Generation Electrical Transportation in Pakistan Models & Scenarios</p> <p>PI: Dr. Naveed Arshad</p>	<p>To assess the increase in the number of vehicles in the country i.e. cars, motorcycles, trucks, buses etc. in the coming decades; To simulate the load on electric grids with a large EVs share including assessment of the newer power generation needs beyond 2025; Develop a phase-wise plan as a recommendation for introducing EV in the country and to give policy recommendation for sustainable EV adoption in the country; To suggest allied infrastructure for EV adoption in the country.</p>
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ElectroCure: Meter less smart metering

The Center for Intelligent Systems and Network Research (CISNR) has developed a solution named "ElectroCure" a meter-less smart metering that aims to reduce electricity losses up to 90% through theft detection, load balancing and identifying other Administrative/Technical losses at an launch seminar held on April 24th 2019 titled. "ElectroCure: Meter less Smart metering using IoT and Artificial Intelligence" in Lahore. Engr. Javed Salim Qureshi, Chairman Pakistan Engineering Council was the chief guest. He appreciated the efforts of CISNR for introducing the ElectroCure and stated that it is a technological innovation but people should be the real stakeholders and beneficiaries of this innovation.

ElectroCure: Making Pakistan Bright Again

The Center for Intelligent Systems and Network Research (CISNR) has developed a solution named "ElectroCure" a meter-less smart metering that aims to reduce electricity losses up to 90% through theft detection, load balancing and identifying other Administrative/Technical losses at an launch seminar held on January 14, 2019, titled "ElectroCure: Making Pakistan Bright Again" in Islamabad.

Dr. Khalid Maqbool (Federal Minister for IT and Telecomm) as the chief guest appreciated ElectroCure and stated that it is a success story of Pakistan, not only of UET Peshawar. He assured full cooperation of Government for successful promotion and installation of system at the government entities.

Dr. Gul Muhammad Khan, Director, CISNR and inventor of ElectroCure explained significant features of the product. He said the ElectroCure is a smart meter with meter-less architecture just like the distribution boxes (DBs) of telephone companies. One single device can be used for multiple consumers ranging from 6 to 300 houses thus reducing cost of installation per consumer. "The system will give transformer level control to power utility company and also provided pre-paid and post-paid billing facility. It will ensure reliable voltage and thus, eliminating the need for power stabilizers", said, Dr. Gul. The project has been funded by the Ignite National Technology Fund under the Ministry of Information Technology and Telecommunication.

Prof. Dr. Iftikhar Hussain, said that the university would strengthen the center and its team for more innovations in the future. He said, international investors were interested in Pakistan but lack of comprehensive policies were the hurdles in establishing such linkages



Center for Advanced Studies in Energy (CAS-E)

The Center of Advanced Studies in Energy (CAS-E) at UET Peshawar is designed to support Pakistan's economic development by strengthening the relevance and responsiveness of university products, including applied and policy research and skilled graduates, to the needs of the public and private sector. The Center is proceeding efficiently towards the achievements of its goals through improving governance, innovative research and curriculum reforms. As a pivotal and comprehensive research center, CAS-E UET Peshawar realizes the responsibility for finding sustainable solutions to the energy crisis in Pakistan.



For details please see chapter No,3, Page No. 41 & 42, UET Annual Report 2018-20 (https://www.uetpeshawar.edu.pk/annual_report/Annual%20Report%202018-19%20&%202019-20.pdf)



Goal-8

DECENT WORK AND ECONOMIC GROWTH

Training	Date	Participants	Major Focus Area & Outcomes	Audience (student /faculty /staff)
National vocational and training commission	12.02.2020	75	Contemporary Technologies(IOT etc)	Students and practitioners
Skill upgradation for the field staff of SRSP	24.07.2020	18	Smart Energy Solutions	Practitioners
Design of Solar Pumping Unit for Irrigation & Water Supply Schemes	12.03.2020	60	Project Design	Student
Gemology Training Course	Sept 2019 to Feb 2020	33	hands on training on Identification of Gemstones	students from all walks of life with minimum FSc qualification
Lapidary Training Course	Sept 2019 to Feb 2021	9	hands on training on Gemstone polishing and faceting	students from all walks of life with minimum F.Sc qualification
Gemology Training Course	Feb 2020	60	hands on training on Identification of Gemstones	students from all walks of life with minimum F.Sc qualification
Lapidary Training Course	Feb 2020	19	hands on training on Gemstone polishing and faceting	students from all walks of life with minimum F.Sc qualification

Ideas Competition

Competition	Date	Participants
DLD Projects Exhibition 2019	18.1.2019	120
Build-A-Business Workshop in collaboration with TIE Islamabad	27-28.12.2019	45 teams

Innovation/Entrepreneurial Competition

DLD Projects Exhibition 2020	16.2.2020	118
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Revenue generated from Trainings / Workshops / Seminars arranged by ORIC

Title of Training / Workshop / Seminar	Type of Activity	Starting Date	Ending Date	Participants Type (Students / Faculty Members / Staff / ORIC Personnel)	No. of Participants	Revenue Generated
Cyber Security Training Course	Training	24.2.2020	-	Students	65	5248000



Goal-9

INDUSTRY, INNOVATION AND INFRASTRUCTURE

PKR **1,276.15 Million**

Faculty Research Grants

PKR **8035.32 Million**

Developmental Budget

PKR **400 Million**

Endowment Fund

PKR **55 Million**

Consultancy Services Per Annum

Earthquake Engineering Center

S.No.	Title of Project	Outcome (Expected Benefits to Society)
1.	Hydrostatic Testing of Penstock of Korara Hydropower Project 11.8MW PI: Prof. Dr. Syed Muhammad Ali	PEDO KP is constructing 11.8 Megawatts Karora Hydropower Project (KHPP) in District Shangla of KP. It was required that the Y-junction of KHPP be tested to 150% of its design pressure in order to qualify the fabrication of the penstock Y-junction before it is opened for operation. This support was provided by Prof. Dr. Syed Muhammad Ali (expert in Non-destructive testing), Director Earthquake Engineering Center. Appropriate equipment and EEC staff was mobilized to site and the test was successfully conducted in second week of January 2019 under the Umbrella of University-Industry interaction.
2.	Asian Development Bank Project for Earthquake Emergency Assistance The behavior of proposed school buildings design through experimental testing on shake table PI: Prof. Dr. Qaisar Ali Funded by: Asian Development Bank (ADB)	EEC state-of-the-art equipment that included largest shake table of Pakistan which is 6DOF, 60-ton, 6m x 6m along with 1DOF, 8-ton, 1.5m x 1.5m and numerous sensors were deployed to undertake the testing of 8 number stone masonry specimens. The project was titled "Experimental Verification of School Design in Nepal" funded by Asian Development Bank. The project was completed in one-year duration (Dec, 2017 to Dec, 2018). The project was aimed to check the behavior of proposed school buildings design through experimental testing on shake table. Eight models (four 2/3rd scale and four 1/3rd Scale) of four different typologies were tested on large and small shake table respectively. The models include: stone masonry in cement stabilized mud mortar with RC bands and containment; stone masonry in un-stabilized mud mortar with Gabion bands and containment; cement Stabilized Earth Bricks in Cement stabilized mud mortar; stone masonry in un-stabilized mud mortar with Timber and containment.

For details please see chapter No. 3, Page 32 & 33, UET Annual Report 2018-20 (https://www.uetpeshawar.edu.pk/annual_report/Annual%20Report%202018-19%20&%202019-20.pdf)

International Conference on “Sustainability in Process Industry” (SPI-2018)

A two-day International Conference on Sustainability in Process Industry (SPI 2018) was held from 24th to 25th October, 2018 at the US Pakistan Center for Advanced Studies in Energy, UET Peshawar. Vice Chancellor Prof. Dr. Iftikhar Hussain was the chief guest on the occasion.

Prof. Dr. Iftikhar Hussain, said, the universities are focused on conventional education but it is time to diversify non-conventional engineering programmes to add value and innovation in the field. He said that hosting such an event is appreciable to gather best minds under one roof that will help share knowledge and experience. He hailed the efforts of the Chemical Engineering Department for organizing this conference.



University Industry Linkages

ORIC UET Peshawar facilitated research collaborations and International Agreements with following organizations / institutions in 2018-19.

S.No	Institute Name	Between Institute Name	Date
1	University of Engineering and Technology, Peshawar	M/s Northern Botteling Company Pvt Ltd.	18.10.2019
2	University of Engineering and Technology, Peshawar	Department of Agriculture, Government of Khyber Pakhtunkhwa	25.09.2019
3	University of Engineering and Technology, Peshawar	Eminent Engineering Pvt Ltd	01.07.2019
4	University of Engineering and Technology, Peshawar	Galiyat Development Authority	11.03.2019
5	University of Engineering and Technology, Peshawar	Fast Cable Lahore Pakistan	6.03.2019
6	University of Engineering and Technology, Peshawar	Kohat Cement Company	4.03.2019
7	University of Engineering and Technology, Peshawar	Hacettepe University Ankara, Turkey	14.02.2020
8.	University of Engineering and Technology, Peshawar	Sustainability Plan for the Energy Sector Women Fellowship Program (USAID)	30.01.2020
9.	(National Center for Cyber Security-UETP) UET Peshawar	Laboratoire de Conception, Optimisation et Modélisation des Systèmes, Université de Lorraine, Metz, France	Sep-18
10.	(National Center for Cyber Security-UETP) UET Peshawar	KPCERC-Khyber Pakhtunkhwa Information Technology Board	Apr-19
11.	Department of Agriculture Engineering UET Peshawar	Nazarbayev University Research and Innovation System	28.08.2019
12.	Sarhad Rural Support Program- Pakistan	Sarhad Rural Support Program-Hayatabad Phase -7	Jan-20
13	Rehman Medical Institute-Phase-5 Hayatabad Peshawar	Rehman Medical Institute	15.11.2019
14.	University of Darham- Darham City-stock Town UK	Darham University	06.02.2020
15.	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	Rehman Medical Institute, Peshawar, Pakistan	15.11.2019
16.	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	Hayatabad Medical Complex, Peshawar, Pakistan	18.11.2019
17	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	Isaac Newton Building, College of Science, University of Lincoln, United Kingdom	25.02.2020
18.	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	Faculty of Electrical and Electronics, Istanbul Technical University, Istanbul, Turkey	19.02.2020
19.	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	Faculty of Electrical & Electronics, Department of Computer Engineering, Yildiz Technical University, Istanbul, Turkey	20.02.2020
20.	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	School of Computer Science at the University of Lincoln, United Kingdom	29.011.2019
21.	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	Khyber Medical University, Peshawar, Pakistan	2019-2020
22.	AI in Healthcare, IIPL, NCAI, UET Peshawar, Pakistan	Lady Reading Hospital, Peshawar, Pakistan	2019-2020
23.	UET Peshawar	Mining Engineering Department, Istanbul Technical University, Turkey	1.2.2020

Post-Earthquake Assessment Study Tour

A post-earthquake assessment study tour to Mirpur University Azad Kashmir was arranged for the MS students of National Institute of Urban Infrastructure and Planning (NIUIP), UET Peshawar as part of their course, "Disaster Preparedness and Management". The tour was supervised by Dr. Khan Shahzada, Associate Professor and Dr. Qazi Samiullah, Assistant Professor, Department of Civil Engineering. During the tour, the students were briefed about structural possible damages and how to report damages with the help of well-established post-earthquake assessment pro-forma.



Establishment of Jalozai Campus

Location:	At kilometer 11 on Pabbi-Cherat Road, Jalozai, District Nowshera,
Date of Approval :	May 19, 2020
Sponsoring Agency:	HEC, Islamabad
Consultants:	M/s National Engineering Services Pakistan (Pvt.) Limited (NESPAK)
Revised PC-1 Cost:	Rs. 6535.325 Million
Total area of the Campus	350 acre
Total Covered area	1,021,233 sq
Live-in strength:	3,240 students
HRD Component:	200 Nos. Overseas MS/PhD scholarships

Objectives

- ▶ Construct one million square feet of building area to house University infrastructure.
- ▶ Establishment of eight Engineering Departments at Undergraduate and Postgraduate level.
- ▶ Train 200 faculty members to obtain PhD Degrees (Overseas) as HRD program.
- ▶ Increase the student enrollment by 3240
- ▶ Improve quality of education and increase relevance to the national needs by developing and funding research facilities for faculty.

Out of eight faculties at Jalozai Campus, 05 Nos. Disciplines including Civil Engineering, Electrical Engineering, Mechanical Engineering, Industrial Engineering and Computer Science & Information Technology have already been introduced. Under its Human Resources Development program, 83 Faculty members were sent abroad for MS /PhD higher education to teach and impart state of the art scientific and technical knowledge to the students whereas further 22 scholars have been selected for award of scholarships to be sent abroad shortly.



Strengthening of Abbottabad Campus

The project was approved by DDWP in its meeting held on 20th March 2020 for a total cost of Rs.1,500.00 million. An amount of Rs.50.00 million has been allocated as PSDP allocation for the FY 2020-21, against which no release has been made as yet. Component wise allocation of the project is as under:





Goal-11

SUSTAINABLE CITIES AND COMMUNITIES

S.No.	Title of Project	Outcome (Expected Benefits to Society)
1	Center for Industrial and Building Energy Audit PI: Prof. Dr. M.A Irfan Mufti Co-PI Dr. Mohammad Adil	Center will help producing energy consumption and wastage in Industries, Residential and Commercial Buildings. 1 PhD, 2 MSc and 1 Site Engineer along with undergraduate student teams has collected data from Industries and Buildings, Conducted Seminars and Workshops for awareness of public and other researchers.
2	Sustainable Housing Research Center PI: Dr. Mohammad Adil Co-PI Dr. Muhammad Ashraf	This center will provide low cost sustainable construction material and technology to general public. 1 PhD, 2 MSc and One Site Engineer has designed innovative low cost construction material with Sandwich panel technology. One MSc already completed in the field.
3	Comparative Study of Welded Splices and Lapped Splices in Structural Reinforcement Steel PI: Engr. Mudassir Iqbal	This research study is helpful in using welded splices as an alternative to traditional lap splicing which causes much complexity (reinforcement congestion) in construction of high rise buildings especially in columns of lower stories. This study can be continued further by testing welded splices in concrete under monotonic and cyclic loading. Trained three number of B.Sc. students in this research project
4	Role of infilled Walls on Lateral Stability of Reinforced Concrete Frame Structures PI: Dr. Khan Shahzada Funded by: (HEC-NRPU)	This research will help build resilient building structures showing enhanced strength in earthquake disasters. This research has a vital role in the socio economic growth of the country. Trained two number of B.Sc., two MSc students and one PhD student in this research project
5	Performance of confined dry block masonry against blast loading PI: Dr. Khan Shahzada Funded by: (HEC-TDF)	The successful implementation of this research work will be of great significance in mitigating the disastrous effects of blast loading on the buildings, thus will save many lives in case of any terrorists activities in the coming future. The existing techniques used for blast loading is uneconomical and may impedes the utility of the building (sand and concrete walls). This research could give a better replacement of the said options; It will produce one MSc and one PhD in a new field; With the help of this project, University of Engineering & Technology (UET) Peshawar and Military College of Engineering (MCE) Risalpur will be sufficiently equipped to conduct more experimental work in the field of blast loading.
6	Design, Modeling and Assessment of Phase Change Materials (PCM) Based Energy Efficient Prototype Building (USPCAS-E) PI: Dr. Khan Shahzada	Analysis of Energy Saving using PCM in order to have safe and sustainable buildings (Earthquake Resistant). Analysis of results, publications and recommendations for building code revision in Pakistan. Capacity building and training of students. Three number of B.Sc, Two MSc students will be trained in this research project
7	TA-8910 NEP: Earthquake Emergency assistance project-Experimental Verification of Remote School Type Designs PI: Prof. Dr. Qaisar Ali & Dr. Naveed Ahmad	Development of innovative Earthquake Resilient construction schemes. Affordable housing in remote mountainous regions such as Himalayas regions. Mobilize the large-scale Shake table of Pakistan for commercial purpose for the first time. Employed and Trained Fresh
8	Evaluation of the construction industry from sustainability perspective. PI: Prof. Dr. Iftikhar Hussain	Sustainability evaluation in the construction industry of Pakistan. Research into new processes for evaluating sustainability at the industrial level.

9	Comparative Study of Welded Splices and Lapped Splices in Structural Reinforcement Steel. PI: Prof. Dr. Qaisar Ali	This research study is helpful in using welded splices as an alternative to traditional lap splicing which causes much complexity (reinforcement congestion) in construction of high-rise buildings especially in columns of lower stories. Trained one M.Sc. Student
10	Establishment of Cloud Integration and analytics for mass data platform R&D Lab PI: Dr. Nasru Minallah Funded by: HEC	This project is funded by HEC as part of National Center for Big Data and Cloud Computing. Gathering of digital data and computing analytics to ensure governmental regularization of revenue and citizens welfare from digital apps and IoT ecosystem. Map-based digital portal will be developed that provides citizens and governing bodies with visual analytics to understand complex municipal data e.g. a citizen can see the analytics of pollution, crimes, road conditions, load shedding timing, street light conditions of any postal code. Governing bodies can use data for policy making, and monitoring. The digital portal will have support of search engine, analytics and heat maps support.
11	Effects of Infill Wall Modeling on Design of Reinforced Concrete Buildings PI: Prof. Dr. Qaisar Ali	Helpful in modelling of RC Structure. Trained one M.Sc. Student

Sustainable Housing Research Center Inaugurated

To address the challenges of construction which causes hazards to the environment and national economy, the Sustainable Housing Research Center (SHRC), a project funded by HEC under the Technology Development Fund was launched on 25th September, 2019. Prof. Dr. M.A Irfan, Dean Faculty of Mechanical Engineering UET Peshawar inaugurated the Center in presence of senior officials from CDWP, P&D Department KP and industry. The researchers have introduced innovative low-cost construction material with mud (SMIP) and concrete panels (SCIP) possessing multiple benefits and sustainability aspects. Because of its light weight and rapid construction time, the mud insulated panel technology (SMIP) is capable of resisting high magnitude earthquakes, and is energy efficient and culturally acceptable. These are the features with which project team, led by Dr. Muhammad Adil, Principal investigator of SHRC, is confident for giving desirable results after performing successful experimental testing of SMIP in collaboration with Norwest Group Ltd.

Experimental Testing held for the School Designs Nepal

UET Peshawar successfully performed the lab test through its Earthquake Engineering Centre (EEC) for the design and verification of school designs under the Nepal Earthquake Rehabilitation and Reconstruction Program. The test was performed on multi-axis shake table on December 5, 2018.

In response of the Asian Development Bank's (ADB) financial support for the reconstruction of school buildings in affected areas of Nepal (Gorkha and Kathmandu) after a devastating earthquake of 7.9 magnitude took place on 25th April 2018, EEC UET Peshawar had been awarded to provide services for the design and verification of school designs through its state-of-the-art shake table testing services.



Road Safety Seminar

The National Highways and Motorways Police (NH&MP) arranged a one day-long awareness on Road Safety on 8th January, 2020. The aim of seminar was to aware the students about driving rules and precautions required to save pedestrians from road accidents. Mr. Baseer Ahmed, Senior Petrol Officer, NH &MP gave a detailed presentation and shared informative videos on common mistakes that drivers commit and end up in road. Earlier, the Chief Petrol Officer, National Highways and Motorway Police, Mr. Aneesudin appreciated the efforts of Dr. Nehar Ullah, Advisor Pakistan Institute of Chemical Engineers (PICE, Peshawar Chapter), the student organising society, and Prof. Dr. Mudassar Habib, Head of Department of Chemical Engineering for arranging the seminar to inculcate road sense among the students and educate them on the important road safety rules.



National Institute of Urban Infrastructure Planning (NIUIP)

National Institute of Urban Infrastructure Planning (NIUIP) was established in December 2010 with Higher Education Commission (HEC) funding. It is committed to promote sustainable urban development in Pakistan, and apply research in combating challenges being faced by rapidly growing urban centers in the country. NIUIP is equipped with state-of-the-art technologies and equipment such as satellite imagery, simulation modeling for water and sewer systems, GPS and remote sensing tools, GIS digitizer, GIS scanner, Digital plotter, and licensed software such as GIS, STATA, PIPE, Oracle and GeneXproTools

- ▶ To develop it into a center of excellence for teaching, research, and training in urban infrastructure planning in Pakistan.
- ▶ To conduct research in emerging trends in urban planning and management, and urban infrastructure engineering.
- ▶ To identify and disseminate global best practices in urban planning and management.
- ▶ To develop national and international strategic partnerships for collaborative research.
- ▶ To train in-service professionals in government and non-government organizations in urban infrastructure planning.

Soon after its establishment in the year 2010, NIUIP started its postgraduate academic programs namely Urban Infrastructure Engineering and Urban Infrastructure Planning & Management. The aim of these degree programs is to perform leading edge research to groom quality researchers for the country in the field of education, research and industry.





Goal-12

RESPONSIBLE CONSUMPTION AND PRODUCTIVITY

Campus Management Solutions (CMS) / IT Center

UET Peshawar with its core mandate to provide “quality education” is on a continuous path to bring new technologies in the academic processes. In 2006, UET Peshawar under the auspices of HEC took an initiative and established an advanced network infrastructure through the Campus Management Solutions (CMS) software services. The CMS, a web-based portal was officially launched in 2008 at UET Peshawar with an aim to provide faculty/staff and the students with immediate access to real-time information that helps to streamline the processes, reduce manual handling and building a database that effectively manages student accounts. In 2012, CMS was transformed into Information Technology Center by adding a wide spectrum of services to its domain. These services are offered across the campus which include CMS software services; providing 24/7 internet services on campus and hostels; official email services; VPN to access HEC Digital Library for the students and faculty/staff; video conferencing; issuance of Microsoft licensed softwares to the departments; managing the official website: www.uetpeshawar.edu.pk with the latest information on academic and research programs, and IT Help Desk Support. The University also started the Smart Campus (Eduroam), a world-wide education roaming service in 2019 which has further enhanced the internet connectivity for the students and faculty/staff across campus. Over the years, the integration of information technology into academic and administrative processes has completely transformed the learning environment and student lifestyle on campus.

Digital Library and Video Conferencing

The University Library contains one of the greatest collections of latest books and manuscripts related to various engineering and computing disciplines. The Library also offers facilities to students to access electronic journals under “Digital Library Program”, an HEC funded project for public and private sector universities. (<http://www.digitallibrary.edu.pk/nwfpuet.html>). The video conferencing room is equipped with latest video conferencing equipment and sound system. It is being used for holding multi-party conferences without travelling, delivering and attending courses,

Online Admissions

UET Peshawar has completely transformed its manual admissions to online system for engineering and non-engineering undergraduate programs. It has gone entirely online by giving complete information ranging from online registration for ETEA test, eligibility criteria, application process, seats allocation, disciplines and online payments information. (<http://www.enggentrancetest.pk>).

Data-Centre

As per HEC desired standards, UET Peshawar has developed a state of the art Data-Centre that is equipped with IBM Servers, CISCO Firewall and Layer-3 Switches, Network Monitoring System, uninterrupted power supply, fire suppression system, cooling system and CCTV monitoring system to make available the CMS services 24/7 for the associated stockholders.

ERP Software System

ERP is the concept of computerization of all the business process, departments and sections of an institution to integrate, automate and produce intelligent report for current assessment and future planning. This concept paved the way to implement the vision of the government of Pakistan towards a smart and paperless environment.



Goal-13

CLIMATE ACTION

Clean and Green Pakistan Campaign held at all campuses

The Vice chancellor Prof. Dr. Iftikhar Hussain inaugurated the Clean and Green Pakistan by planting a sapling at Peshawar Campus on March 12, 2019. More than 5000 saplings were planted during the campaign at all campuses in which students and faculty too active participation. In line with Government's vision, UET Peshawar is the first public sector university to plant saplings at its campuses while realizing that climate change and global warming are grave issues that need to be tackled accordingly with community participation.



ECO Summit 2019

The first ever two-day ECO Summit 2019 was held from 6th to 7th March, 2019 with a purpose to bring academia industry and government at one platform for introducing innovative green technologies and finding indigenous solutions for sustainable environment. The summit was organized by the Office of Research Innovation and Commercialization (ORIC) UET Peshawar in collaboration with National Bank of Pakistan (North Region), USPCASE-UET Peshawar, British Council and various leading organizations of Pakistan.



Title of Project	Outcome (Expected Benefits to Society)
<p>Establishment of Traffic characterization and analytics R&D Lab</p> <p>PI: Dr. Nasru Minallah</p> <p>Funded by: HEC</p>	<p>This project is funded by HEC as part of National Center for Big Data and Cloud Computing. Vehicular traffic flow being a dynamic system, experiences perturbation because of new entrant vehicles at ingress. Causing shock waves which travels back in the traffic flow system causing congestions. Congestion, excessive acceleration and deceleration increases fuel consumption, emissions (CO₂, CO, dust particles etc.) and accident's vulnerability. Traffic flow models will be devised using Wave propagation, Fluid Flow dynamics, Constraint/linear programming, Queuing theory and regression techniques for forecasting, congestion mitigation and ameliorating traffic flow. A working simulator for traffic flow characterization and analytics will be developed that will support of real time route choice to the drivers by integrating real time data (congestion, pollution, and traffic flow) and make decisions for real time traffic.</p>



Goal-17

PARTNERSHIPS FOR THE GOALS

Foreign Academic Linkages

UET Peshawar is mandated to identify and explore areas of cooperation and linkages with foreign and local institutions. Promoting academic collaboration with local and foreign universities in the form of student, faculty and student exchange, joint research, exchange of publications, sponsorship of conference and other academic activities is the main portfolio where we are actively involved in the initiation, planning, implementation and monitoring of linkage activities.



Foreign Academic Linkages

University of Illinois, USA
University of Maryland, USA
George Washington University, USA
Mississippi State University, USA
Old Dominion University, USA
George Mason University Virginia, USA
McGill University, Canada

University of British Columbia, Canada
Cambridge University, UK
Loughborough University, UK
Southampton University, UK
University of Glasgow, UK
University of Strathclyde, UK
University of Surrey, UK

University of Bradford, UK
Politecnico Di Torino, Italy
Rose School University of Pavia, Italy
AIT Bangkok, Thailand
Shandong Academy of Sciences, China
Tsinghua University, China

Arizona State University, USA delegation visits UET Peshawar

The delegation of Arizona State University (ASU), USA led by Dr. Sayfe, Advisor, ASU US-Pakistan Center for Advanced Studies in Energy (USPCAS-E) met with the Former Vice Chancellor, and senior faculty and administrative staff of UET Peshawar during his maiden visit on 15th November, 2018.

Dr. Sayfe while addressing the meeting exchanged views on the possibilities of establishing joint academic and research linkages, through faculty and student exchange joint research collaboration. He said, ASU is the number one university in the US for international students having 20,000 engineering students who are currently enrolled at five schools of engineering at ASU. Dr. Sayfe said, “Khyber Pakhtunkhwa is enriched with natural resources such as hydel, gems and minerals. It is heartening to note that a joint partnership between UET and ASU has reached to its final year through USAID funded project USPCAS-E, a five year project that started in 2014”, adding, “we see this as a beginning of a new chapter to keep working together in energy as well as other areas of engineering”. He further said, ASU would like to see USPCAS-E a sustainable programme in future with the objective to produce graduates and skillful human resources who would solve the issues in energy in Pakistan.



Pak-China Robotics and Automation Research Laboratory Inaugurated

of China inaugurated the “Pak-China Robotics and Automation Research Laboratory” at the Department of Mechatronics Engineering, UET Peshawar on 12th November, 2019. The Vice Chancellor Prof Dr. Iftikhar Hussain and Mr. Zhang Heqing, Cultural Counselor of Embassy of the People's Republic of China unveiled the plaque in the presence of Chinese diplomats and senior officials.

UET Peshawar and Shandong Academy of Sciences, China had signed a Memorandum of Understanding (MoU) in 2017 to encourage closer academic/research links in the areas of interest for both institutions. Through this MoU, both institutions agreed to exchange and educate academic personnel through sabbaticals, seminars to develop research programs and projects.



UET Peshawar, GIZ Pakistan hold Consultative Session on Managing SDG's on Public Private Partnerships

A one-day consultative session on Managing SDG's on Public Private Partnership was held with the main objective of engaging academia with government for managing and implementing successful PPP projects. The session was held in collaboration of GIZ and Office of Research Innovations and Commercialization, UET Peshawar on 7th October, 2019.

The UET Peshawar attaches much importance to public private partnerships as the teaching faculty is engaged with Government and private sectors through funded research projects. However, the social perspective of sustainability gets neglected in engineering projects. Technical Advisor GIZ also highlighted the role of GIZ in consistently creating awareness on SDG's in public sector institutions.



Roundtable held on “Paving the way for sustainable development”

UET Peshawar and GIZ, the German development agency held a Roundtable on "Paving the way for sustainable development" on 28th February, 2019. The purpose of the roundtable was to converge industry experts and academia on a single platform to discuss and pave a way for future investments under the Agenda 2030 on sustainable development. The adoption of the 2030 Agenda for Sustainable Development is undoubtedly a huge milestone achieved, however, to turn it into a huge success, concerted efforts from all sectors of society including universities and academia are mandatory for effective implementation of Agenda 2030 effectively.





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