

## **GANANCE VISION** Be a leader in enabling Pakistan's social and economic transformation.

# Acquire education and re

Acquire education and research excellence in engineering and allied disciplines to produce leadership and enabling application of knowledge and skills for the benefit of the society with integrity and wisdom

NED University of Engineering and Technology believes in establishing environment conducive to continual improvement in its efforts for providing the highest-level quality education.

#### **QUALITY POLICY**

The University is making all out efforts to raise its standards through teaching excellence and quality research. These efforts are carried out with involvement of the entire university work force – to obtain utmost possible satisfaction of its customer. Our endeavors are to make our students useful to the society in particular and to humanity in general. In dealings with industry and utilities, attempts are made to maintain standards of integrity as well as quality.

# MESSAGE FROM THE VICE CHANCELLOR

## Dr. Sarosh Hashmat Lodi

It is indeed a great honor and privilege for me to present the salient highlights of this University's working during 2017-18.

The core functions of this University are teaching, research, outreach activities and extending an enabling environment for the same to our students, faculty, researchers, collaborating partners, staff members and other stakeholders. As shared from time to time, the University initiated many teaching programmes at the undergraduate, postgraduate and doctoral levels in the recent past. It is now in the phase of consolidation of these programmes and has undertaken many steps to build the capacities of our student body, who are the direct beneficiaries of these academic ventures. Present undergraduate enrolment stands at 9661 while the total number of masters' students is 2514 and doctoral scholars are 158. During the year 2018, 1982 students graduated with undergraduate degrees, 802 with masters' degrees whereas 02 scholars were awarded PhD degrees. The total number of PhD qualified faculty has risen to 176.

#### MESSAGE FROM THE VICE CHANCELLOR

We stand committed to support doctoral studies for our young faculty members through the available schemes. 18 Faculty members joined back after completing their doctoral studies while 42 are still studying in various universities abroad and shall return after the completion of their respective degree requirements.

Our journey in promoting quality research has progressed further. There are currently 95 research projects in progress worth Rs. 689 Million. Faculty members of NED University remain actively engaged in outreach and networking to create new opportunities. This year, 38 faculty members proceeded abroad on staff mobility and conference travels. 214 research papers were published in foreign research journals, out of which 145 were JCR indexed. NED University continues to publish three high quality research journals, including NED University Research Journal which is HEC recognized in 'X' category. The University organized 12 international conferences where, in addition to our national delegates, several prominent international speakers also participated. NED University now hosts 20 research centers including the National Center for Artificial Intelligence, National Center for Robotics and Automations, National Center for Data Analytics and Cloud Computing, and National Center for Cyber Security.

Providing fair access and opportunities to student body remains one of our top priorities. This year, 1450 students were awarded scholarships for studying in various programmes with a total scholarship amount of 66.82 Million. 1,422 students availed industrial placements in various organizations 145 industrial visits were arranged. The quality management, control and assurance continued to play its vital role. During the reporting period, the QEC has been assigned a score of 95.67% with a place in 'W' Category by the Quality Assurance Agency (QAA) of the HEC.

ORIC continues to grow at NED University as it is playing a key role in supporting commercialization potential. It is working hard in developing an entrepreneurially conducive environment on campus. Ten spin offs have now registered with ORIC in the reporting period.

NED University enjoys a very healthy alumni engagement. Associations around the world continued to launch several supporting initiatives for the betterment of this University including scholarships and awards. One of the notable alumni contributions was a frequently organized webinar series which featured prominent speakers working in cutting edge domains around the world. Building Information Modeling (BIM) Lab is a first Centre of its kind in Pakistan established in collaboration with NED Alumni Association of Tri-State (NEDATS) with the total cost of Rs 3.5 million. Industrial collaborations continue to grow, as is showcased by establishment of state of the art K-Electric laboratory at Department of Electrical Engineering.

There were several high points achieved by the university. The ground breaking ceremony of Panjwani Hisaar Water Institute was held on 04 May 2018 where Mr Muhammad Zubair, Chancellor and Governor of Sindh was the Chief Guest. The inauguration of National Incubation Centre took place on 11 May 2018 by former Prime Minister Shahid Khaqan Abbasi. A high powered delegation of Russian Higher Education Department visited the university and discussed matters of possible collaboration and other issues of mutual interest. Other esteemed visitor and delegates visited the university

We now move into 2018-19 with focus on further strengthening our infrastructure, increasing our outreach and enhancing academic and research quality. There are several on-going initiatives, for which we are thankful to ALLAH TAALA and we pray for our pledges to be fulfilled. Ameen.

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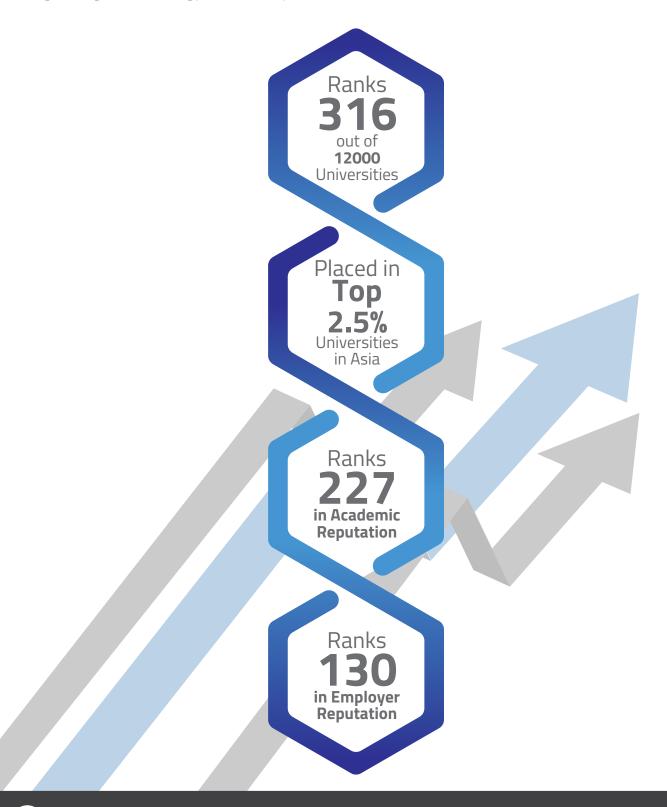
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## UNIVERSITY RANKING

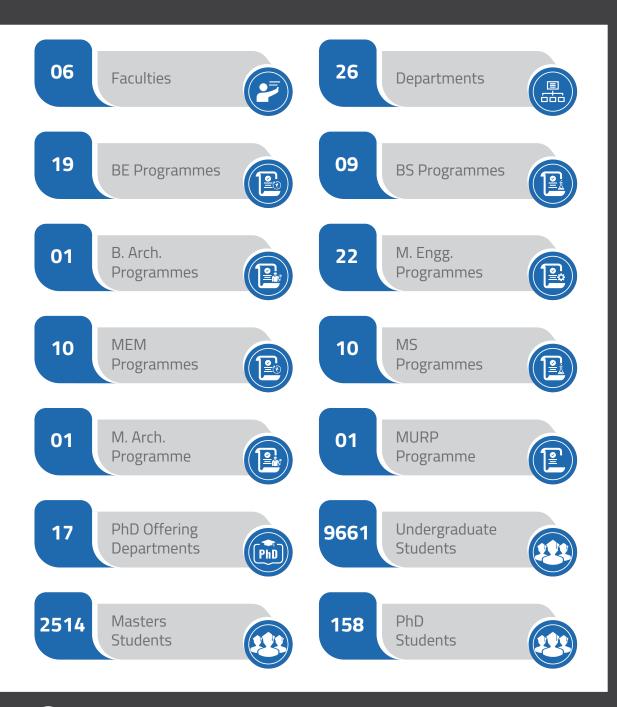
# NED University in QS Asian Ranking 2018

In the 2018 edition, the institution performed among the top 71% in the QS Asia University Rankings. Considering there are approximately 11,900 universities regionally, this makes NED University of Engineering and Technology one of the top 2.5% universities in Asia.



# ACADEMICS





NED University has 26 teaching departments from six faculties, offering 29 undergraduate and 44 masters programmes. Seventeen teaching departments also offer PhD degrees. NED University has decided to transform all undergraduate programmes on outcome-based education (OBE). Two Undergraduate programmes have already obtained OBE-based accreditation from PEC and the accreditation for all other engineering programmes is in process.

		UNDERGRADUATE	MASTERS	PH.D.
PETROLEUM RING (CPL)	Civil Engineering	B.E Civil Engineering	M. Engg. Structural Engineering M. Engg. Geo-Tech Engineering M. Engg. Transportation Engineering M. Engg. Coastal & Water Resources Engineering MEM Construction Management	Yes
AND PE	Urban and Infrastructure Engineering	B.E Urban Engineering	MEM Transportation Infrastructure Management	Yes
	Petroleum Engineering	B.E Petroleum Engineering	M. Engg. Petroleum Engineering	
5	Earthquake Engineering		M. Engg. Structural Earthquake Engineering	Yes
L AND URING G (MME)	Mechanical Engineering	B.E Mechanical Engineering	M. Engg. Design M. Engg. Energy Systems M. Engg. Mechatronics M. Engg. Renewable Energy MEM Energy and Plant Manage- ment	Yes
ANICA FACTU ERING	Textile Engineering	B.E Textile Engineering BS- Textile Sciences	MEM Textile Management MS Textile Management	Yes
MECHA MANU ENGINE	Industrial and Manufacturing Engineering	B.E Industrial and Manufac- turing Engineering	M. Engg. Manufacturing Engineering MEM Industrial Management MEM Quality Management MEM Supply Chain Management	Yes
	Automotive and Marine Engineering	B.E Automotive Engineering		

## ACADEMIC PROGRAMMES

		UNDERGRADUATE	MASTERS	PH.D.
ER	Electrical Engineering	B.E Electrical Engineering	M. Engg. Electrical Power Systems MEM Energy Management	Yes
ND COMPUT RING (ECE)	Computer and Information Systems Engineering	B.E Computer Systems	M. Engg. Computer Architecture & Systems Design M. Engg. Computer Network & System Security MS Data Engineering and Information Management	Yes
ELECTRICAL AND COMPUTER ENGINEERING (ECE)	Electronic Engineering	B.E Electronics B.E Telecommunication	M. Engg. Micro System Design M. Engg. Industrial Electronics M. Engg. Telecommunications Engineering MS Telecommunications Systems	Yes
ш	Biomedical Engineering	B.E Biomedical Engineering	M. Engg. Biomedical Engineering	Yes

INFORMATION SCIENCES AND HUMANITIES (ISH)

Software Engineering	B.E Software Engineering		
Computer Science & Information Technology	B.S Computer Science & Information Technology	MS Computer Science & Information Technology MS Information Security	Yes
Mathematics	B.S Computational Finance	MS Applied Mathematics	Yes
Physics	B.S Applied Physics	MS Physics	
Chemistry	B.S Industrial Chemistry	MS Industrial Chemistry	Yes
Humanities	B.S English Linguistics	MS Applied Linguistics	Yes

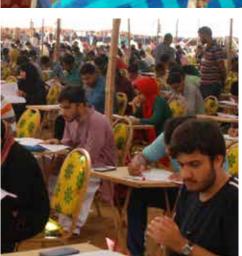
## ACADEMIC PROGRAMMES

		UNDERGRADUATE	MASTERS	PH.D.
CHEMICAL & PROCESS ENGINEERING (CPE)	Chemical Engineering	B.E Chemical Engineering	M. Engg. Chemical Engineering MEM Chemical & Process Management	Yes
	Materials Engineering	B.E Materials Engineering	M. Engg. Materials Engineering	Yes
	Metallurgical Engineering	B.E Metallurgical Engineering		
	Polymer and Petrochemical Engineering	B.E Polymer & Petrochemi- cal Engineering	M. Engg. Polymer Engineering	
	Food Engineering	B.E Food Engineering		
	Environmental Engineering		M. Engg. Environmental Engineering MEM Environmental Management	
ARCHITECTURE & MANAGEMENT SCIENCES (AMS)	Architecture and Planning	Bachelor of Architecture B.S Development Studies	Master of Urban & Regional Planning M. Arch.	Yes
	Economics and Management Sciences	B.S Economics & Finance B.SManagement Sciences	MS Economics and Finance	











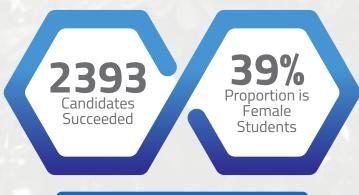




## ADMISSIONS

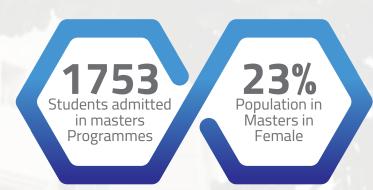
#### UNDERGRADUATE ADMISSIONS

A total of **2393 candidates succeeded** in securing admissions in undergraduate programmes at NED University after qualifying the entry test conducted by NED University or Higher Education Commission (HEC). A healthy **39% proportion is female** students qualified for admission this year.



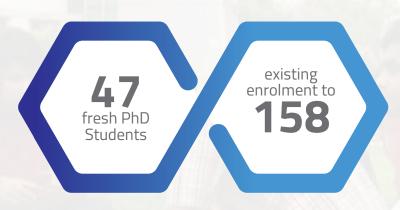
#### **MASTERS ADMISSIONS**

Due to shift in the academic calendar of the university, two postgraduate batches were admitted this year. A total of **1753 students** were admitted in various programmes out of which **1033 were admitted in Fall 2017 batch and 660 were admitted in Fall 2017-18 batch.** This year intake consisted of about **23% female** cohort.

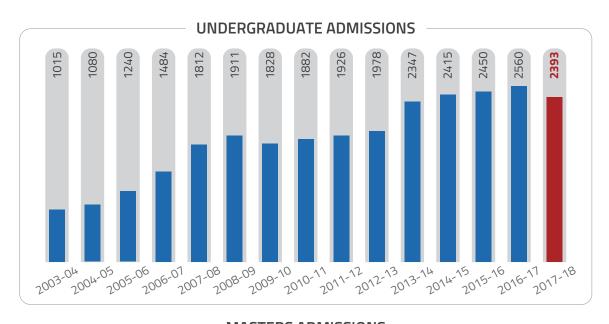


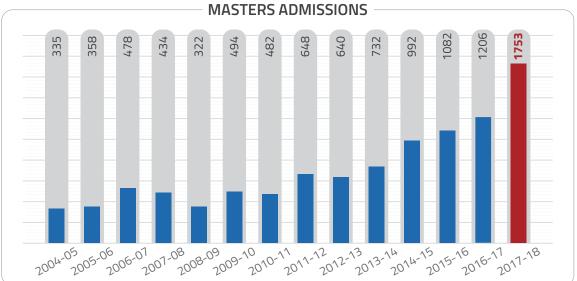
#### **PHD ADMISSIONS**

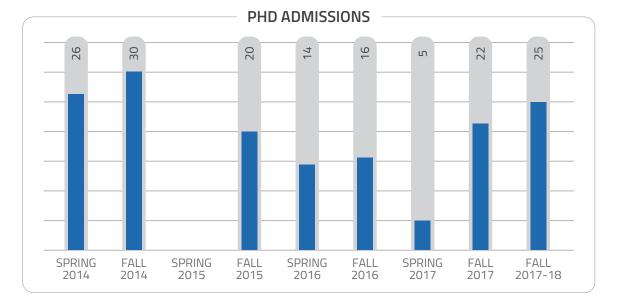
A total of **47 fresh PhD students** were admitted in two postgraduate intakes this year, taking total existing enrolment to **158**.



## ADMISSIONS







14 NED ANNUAL REPORT 2017/2018

### **ENROLMENTS**

- Total student enrolment at NED University currently stands at *12,333*.
- This year *9,661* undergraduate students were enrolled, of which about 37% were female students.
- Total 2,514 masters students were enrolled during 2017-18, of which about 24% were female students.
- Ph.D. enrolment at NED University currently stands at *158* scholars.

	Enrolment					
Programme	2013-14	2014-15	2015-16	2016-17	<b>2017</b> -18	
Undergraduate Programmes	7801	8515	8951	9496	9661	
Masters Level Programmes	1145	1913	2336	2643	2514	
Ph.D. Programmes	69	89	99	122	158	
Total	9015	10517	11386	12261	12333	

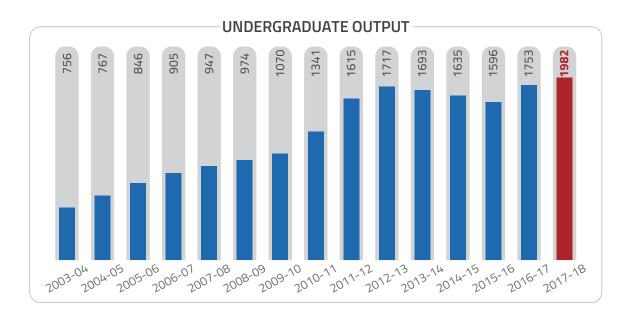


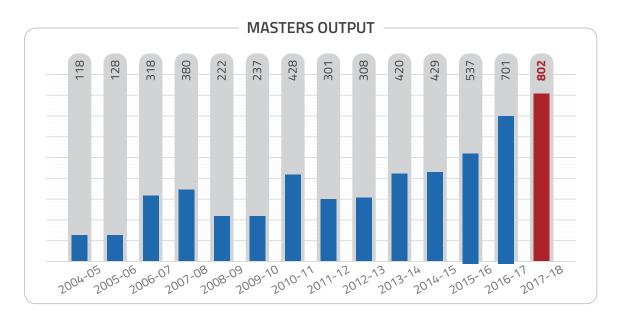
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Convocation 2018 of the NED University of Engineering and Technology was held on Saturday, 06 January 2018. Chief Minister Sindh, Syed Murad Ali Shah was the Chief Guest and former Federal Minister and Senator Mr. Javed Jabbar attended as Guest of Honour.

In all, 2786 degrees were conferred this year. Among the degree holders, 1982 were undergraduate, while 802 received masters degrees. Two scholars – Muhammad Ali Baig and Sana Arshad – received Ph.D. degrees during convocation 2018.

This year's graduation saw 13% increase from previous year graduation of 2456 students.













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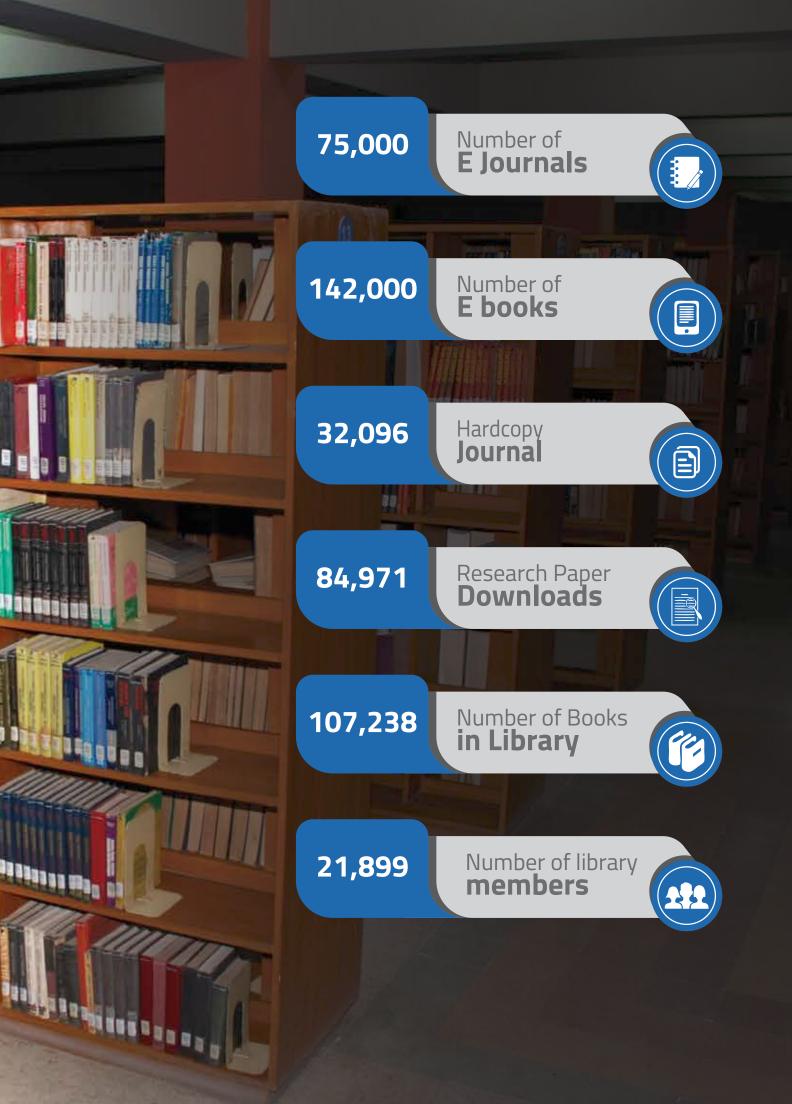
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# TECHNOLOGICAL



The NED University started its Information Technology services in 1999 which later on evolved into the establishment of Information Technology Department (ITD) in March 2010. The ITD has played a pivotal role in developing the varsity's I.T. infrastructure providing robust Information Systems, Communication and High Performance computing facilities to its users within the university and outside it. Equipped with state of the art equipment backed by fibre optic core network, the Information Technology Department acts as the I.T. hub. Following are the key aspects of the technological infrastructure at NED University.



#### NEDUET Data Centre

State-of-the-Art data centre with 5 server racks along with 3 network racks with capacity to host 90 servers at 4.8Gbps backed by a complete fibre optic distribution plane. The data centre is capable of terminating a 10G FO link.



#### Digital Library

Provides access to high quality research journals and E-books. Through PERN high quality research journals and e-books, which are accessible from anywhere on the campus, and outside campus to research scholars through VPN connectivity.



#### NEDUET – ISP

24 x 7 high-speed Internet access through independent ISP equipped with state of the art firewalls and bandwidth managers.



#### NEDUET-WiFi Network

WiFi connectivity with campus-wide coverage powered by captive portal, the iAccess. Thus providing accessibility to LAN and WAN services through WiFi enabled mobile devices.



#### NEDUET - Email Service

NEDUET offers Email service to its employees. The Email server is deployed in the NEDUET NOC and has up to 2000 accounts. State of the art Email Gateway security has also been deployed for protection against threats.



#### Video Conferencing

A centrally-located Civil Engineering Video Conferencing Hall Facility Centre connects NEDUET, locally and internationally for the arrangement of virtual classes, conferences, seminars, Internet meetings (video conferences) between multiple locations.



#### **Campus Management Information System**

NEDUET Campus Management System aggregates information from various MIS and present it to the end user through single consolidated interface completely personalized and role based in a robust and secure manner.

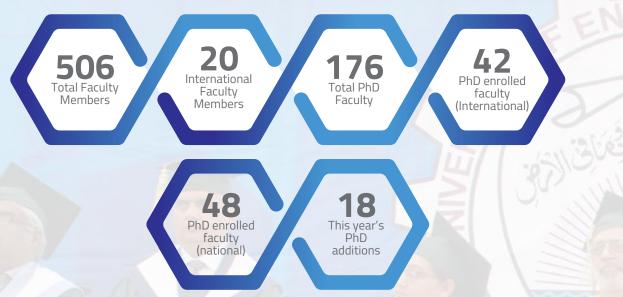


#### Web Portals

NEDUET Campus Management System covers portals for several facilities including alumni website, alumni administration interface, researchers' web, finance, examination, medical, scholarships and library.

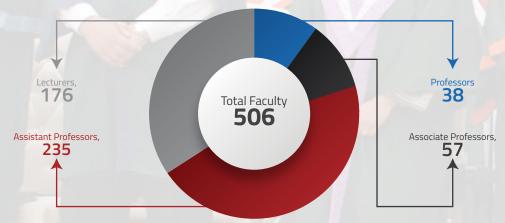


# FACULTY



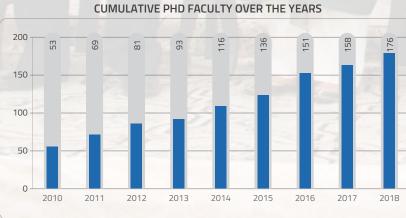
#### **Designation wise Faculty Members**

There are a total of 506 faculty members at NED University, out of which 176 (36%) are Ph.D. holders. In addition to the local faculty members NED University hosts 20 International faculty members out of which 16 native Chinese teachers are undertaking teaching assignments for the Chinese Language Programme. The designation wise break up of Faculty is as follows:

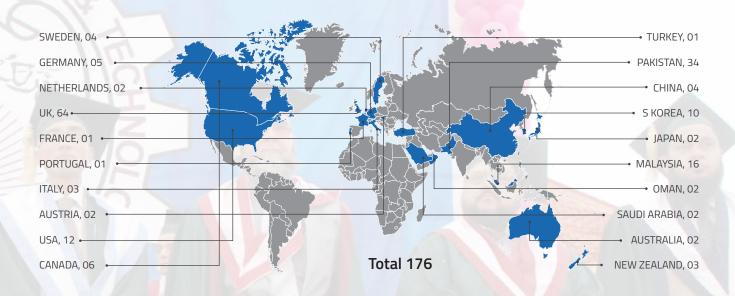


#### Ph.D. Faculty

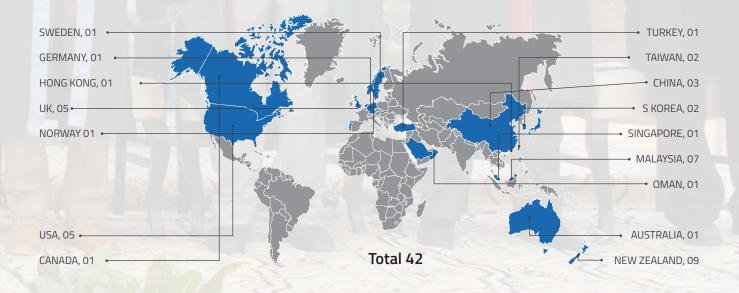
The number of Ph.D. gualified faculty over the years is shown in the chart below.



NED University strives to maximize international diversity including when it comes to acquirement of qualifications. The map below illustrates the geographical statistics pertaining to Ph.D. faculty at NED University.



There are currently 90 faculty members pursuing Ph.D. Forty two (42) of those are doing so abroad in sixteen different countries.



## FACULTY AWARDS

During last year, NED University faculty members won several awards in recognition of their extraordinary performance in teaching and research. A summary of awards is given below:

IAP Faculty Excellence Award by Institute of Architects, Pakistan (IAP)

01) Prof. Dr. Anila Naeem

02) Dr. Suneela Ahmed

PhD scholarship by University of Science and Technology, China

01 Mr. Muhammad Ali

Best paper award by Institution of Engineers, Pakistan

01) Mr. Ehtesham ul Haque

Pro Chancellor's Award UTM

01 Dr. Rizwan Aslam Butt

**Best Publication Award by NEDAASC** 

- 01) Dr. Nisar Ahmed Shar
- 02 Dr. Tehmina Ayub
- 🛚 Dr. Sadaqat Ullah Khan
- 04 Dr. Muhammad Wasif
- 05 Dr. Nuzhat Arshad
- 06 Dr. Muhammad Dawood Husain
- 07 Dr. Shenela Naqvi
- **08** Dr. Muhammad Owais Raza Siddiqui
- 09 Dr. Muhammad Fahad
- 10 Dr. Adnan Qadir
- 11 Dr. Bilal Zahid
- 12 Dr. Muhammad Masood Rafi
- 13 Muhammad Muzammil
- 14 Dr. Murtaza Mehdi
- 15 Dr. Maaz Akhtar

## FACULTY AWARDS

#### Best Teacher Award by NEDAASC

- 01 Muhammad Samiuddin
- 02 Dr. Muhammad Wasif
- 03 Dr. Najeed Ahmed Khan
- 04 Dr. Rashid Ahmed Khan

#### **Best Student Award UTM**

01 Dr. Rizwan Aslam Butt



# RESEARCH



**95** ONGOING PROJECTS

**Rs. 689 million** ONGOING PROJECTS GRANT



**20 STATE OF THE ART RESEARCH CENTRES** 



214 papers PUBLISHED IN INTERNATIONAL JOURNALS



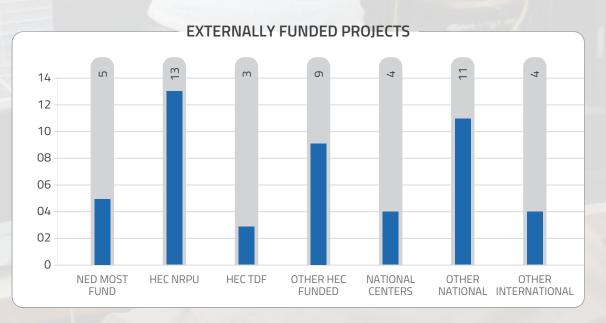
Organized 12 INTERNATIONAL CONFERENCES

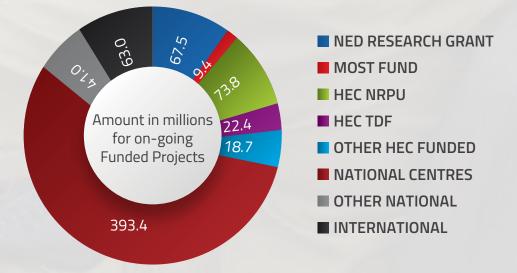
## **RESEARCH PROJECTS**

Research remains at the forefront of the NED University focus. Faculty competes extensively in national and international RFPs, and as a result a healthy number of research projects are currently underway in state of the art domains of engineering and technology.

In total, 95 research projects are currently on-going worth Rs. 689 Million. These projects include three HEC-TDF grants, Thirteen HEC NRPU grants and nine other HEC grants. The diverse research portfolio of NED University has resulted in securing funding to establish five centers of excellence of national level.

Currently, there are 46 projects internally funded by NED University in addition to 49 projects funded by external agencies as illustrated below:





#### NORWEGIAN CENTRE OF PETROLEUM STUDIES

The Norwegian Centre of Excellence in Petroleum Studies (NCEPS) is established with the cost of PKR 44.924 M in collaboration with Government of Kingdom of Norway. The Centre is the foremost facility in the country aimed to develop expertise for teaching and research in Petroleum Engineering discipline. Through the establishment of this centre a significant capacity building in teaching and research have been achieved. Four faculty members have received MS degree from NTNU as part of faculty development and training. It is strongly believed that the outcome of NCEPS will benefit the industry, the country and the region and will contribute in the improvement of the socio-economic conditions of the common people of Pakistan

#### NED UNIVERSITY VIRTUAL REALITY CENTRE

The NED University has recently established a state-of-the art facility for integrating virtual reality in the education, research and practice. The facility that is housed at the Department of Civil Engineering is named as "NED University Virtual Reality Centre" is the first of its kind in the sub-continent. The facility houses three major system including, virtual teaming system, walking VR systems, and Projection VR system. The virtual teaming system is equipped with latest interactive panel, video conferencing and webcasting equipment and software. There are multiple walking VR systems available at the centre to provide virtual immersive environment to the user specifically for VR designing, and VR based individual training, as per customized needs of the trainee. The project VR system is based on a Corner Cave-in concept that has the capability (both from software and hardware perspective) to provide a virtual-cum-immersive experience to a group of people. The centre is equipped with VR designing and development software, Building Information Modeling platforms, 3D to VR transformation platforms, and VR experience software platforms etc. The centre was indigenously designed for customized needs and has the capacity to be integrated and expanded towards Augmented Reality in near future.





### **RESEARCH**

#### RESEARCH CENTRE FOR ARTIFICIAL INTELLIGENCE

Research Centre for Artificial Intelligence (RCAI), is an initiative towards, creating research-based environment, producing professional and high-quality engineers in the field of Information & Communication Technologies (ICT), and creating ways to step in the field of innovative and cost-effective product design. The team has worked on variety of IoT related projects i.e., Smart irrigation & Agricultural systems for water resource management and preserving food quality, Smart home solution for efficient energy management and security purposes, Automatic secure entrance system by exploiting RCAI technology, smart health care system for monitoring oxygen concentration and heart rate of patients, and many others project related to different technologies like satellite communication, Speech processing, and Image processing.



#### HIGH PERFORMANCE COMPUTING CENTRE

High Performance Computing Centre at NED University of Engineering & Technology manages high performance computational resources to address the miscellaneous computational needs. With 10 TFLOPS of computational power and various scientific software along with related expertise, the centre provides an excellent state-of-the-art R&D and business opportunities for its users.

#### ADVANCED MATERIAL TESTING LABORATORY

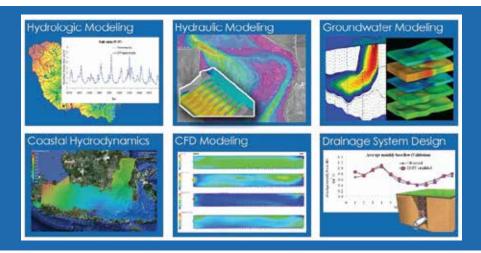
The Advanced Material Testing laboratory is another state of the art facility. The facility is used to conduct full scale static and pseudo dynamic testing of various structural components of buildings and bridges. This facility is collection of various state of the art advanced lab facilities for research and advanced materials including Rapid Alloy Analysis Lab, Composite Materials Lab, Magnetic Materials Lab, Thermal Analysis Lab, Nano Materials Lab, Advanced Coatings Lab, Surface Engineering, XRD Lab, Advanced Ceramic Materials Lab, Powder Materials Characterization Lab, Advanced Materials Processing Lab, Scanning Electron Microscopy Lab and Transmission Electron Microscopy Lab.

#### **BUILDING INFORMATION MODELING CENTRE**

BIM provides free service to industrialists for resolving pre-construction issues of high rise and complex structured buildings related to wind zones, emergency exits and temperature through developing visual models of the projects. The Centre is providing a platform to bring all engineers including civil, mechanical, electrical, structural and material to work together under the same umbrella while preparing building modeling using software that adds everything. This is first Centre of its kind in Pakistan established in collaboration with NED Alumni Association of Tri-State (NEDATS) with the total cost of Rs 3.5 million.

#### WATER MODELING CENTRE

The Water Modeling Centre (WMC) was inaugurated on May 21, 2013. This Centre serves as a research institute with urge of providing better understanding of private and public water resources and management strategies. Research and outsourced projects are conducted by the team of WMC. WMC is equipped with various computer-based models for performing water supply analysis flood plain mapping, drainage system design, groundwater assessment, watershed simulation, climate change, computational fluid dynamics (CFD), irrigation system design, and many more related tasks



### RESEARCH

#### NED-DICE ENERGY INNOVATION CENTRE

NED-DICE Energy Centre is a joint collaborative initiative of NED University and DICE Foundation. It provides a platform for energy related innovations and for collaboration among academia, industry, government, entrepreneurs and expatriates to integrate science, technology and policy solutions to solve pressing energy challenges faced by Pakistan. The Centre aims to mobilize energy professionals of Pakistani origin around the world, to take advantage of their expertise and experiences for growth of energy sector in Pakistan.

#### K-ELECTRIC LABORATORY

K-Electric has partnered with NED University to establish its Electrical Engineering laboratory along with the provision of integrated equipment to further strengthening the platform for engineering students. The Lab equipment includes modified relays, test benches, transformers and various other valuable devices used in grid stations. Moreover, separate areas for lectures and experiments have been established as well. This lab is enabling electrical engineering students to gain first-hand access to complex electrical equipment, while enhancing R&D activities in line with the utility's research driven approach.



#### ELECTRONICS DESIGN CENTRE

Electronics Design Centre performs cutting-edge fundamental and commercially driven research in electronic devices and circuits, radio frequency and microwave integrated circuits. Since its inception (January 2011), EDC's primary objectives have been to investigate scientific fundamentals necessary to obtain incessant improvements in ultimate miniaturization, increased functionality, enhanced bandwidth and improved efficiency. EDC has several international linkages in US, Europe and Asia pertaining to its expertise. The Centre has produced three PhDs so far; and continues to enhance NED University's reputation for quality research output. At present, EDC consists of a RF (Radio Frequency) Lab, DC (Device Characterization) Lab, Design Tools and expertise including Sonnet, Cadence, Mentor Graphics, MicroTech (TCAD) and AWR Microwave.



#### PRODUCT DEVELOPMENT CENTRE

This Centre is fully equipped with complete range of sophisticated equipment and software to be used for re-engineering. Faro Arm scanning system along with Fused Deposition Moulding machine is available in the centre where reverse engineering of any product can be obtained, and its prototype developed. The centre facilitates the industry for developing the prototypes.

#### COWASJEE EARTHQUAKE STUDY CENTRE

CESNED was established in 2001 after the devastating Bhuj earthquake. The Centre is currently administered by the Department of Earthquake Engineering. The objectives of this Centre include (a) housing national and global data pertaining to earthquake; (b) to act as a Centre for disseminating accumulated knowledge; (c) to respond to the emergency needs; and (d) be able to provide guiding principles for pre and post disaster earthquake mitigation. It has become a hub of the earthquake related activities with time. The vital role played by CESNED after 8th October 2005 Kashmir earthquake led to its recognition as one of the two earthquake study centres in the Country.

#### SHAKE TABLE TESTING FACILITY

The Shake Table laboratory is a state of the art facility which is available in the Department of Earthquake Engineering. The facility is used to simulate real time earthquake ground motion to record the dynamic response of a given structure placed on the table.



#### NATIONAL CENTRE FOR DATA ANALYTICS AND CLOUD COMPUTING

The Centre is a unique concept which will provide framework through which NEDUET can collaborate with leading ICT companies and national and international academia to accelerate the development and deployment of the cutting-edge ICT solutions related to big data and its analytics on cloud using Open source platforms. The overall mission of the lab is to bring cutting-edge exascale open source data analytics research to the Pakistan. Mentor and provide platform to all national students, scientists industry from all domain of sciences and engineering, finance, economic and finance, environment, medical to solve their related data analytics problems. The lab will be focusing particularly on four application domains which are Astrophysics, Tsunami Modeling, Genomics, and Transport Modeling.

#### NATIONAL CENTRE FOR CYBER SECURITY

The centre aims to develop a unified security framework which will be useful for stakeholders from all the related areas of computing (software, operating systems, network, Internet, databases, mobile, cloud, etc.). The unified security framework will be based on joint research in the four application domains which are End-Point Protection, Internet Security, Digital Forensics, and Quantum Technology. The focus of the centre is to develop defensive framework from malware and other Cyber threats by understanding their development, evolution, proliferation, prediction, damage, forensics and ensuring data security by efficient quantum based cryptographic methods. The Higher Education Commission has approved 118.04 Million PKR for the establishment of this centre.

#### NATIONAL CENTRE FOR ARTIFICIAL INTELLIGENCE

Through a long competitive process HEC has selected O6 national universities to establish affiliated labs of National Centre for Artificial Intelligence (NCAI). NED University won funding for two affiliated labs of NCAI that are being established with a total funding of Rs. 167 Million. The two labs under NCAI are Neurocomputation Lab and Smart City Lab.



#### NATIONAL CENTRE FOR ROBOTICS AND AUTOMATIONS

Higher Education Commission (HEC) and Planning Commission (PC), Pakistan invited to establish top-tier research-oriented National Centre of Robotics & Automation (NCRA). NCRA is designed to create national capacity in key emerging areas of Robotics and Automation that have received a lot of attention and focus in the recent years. NED University is selected for the Haptics, Human-Robotics and Condition Monitoring Lab (combined Lab of NED and MUET) worth Rs. 90 Million which is one of the 11 selected labs across the country. However, the Haptics and Human-Robotics Lab is going to be separately established at NEDUET worth Rs. 45 Million. The lab will specifically focus on the design and development of Haptics and Teleoperation Setups for disaster management and tele-surgery etc. In addition, the lab will also research in the design of the STEM-based education and assistive robots.

#### HERITAGE CELL

The Heritage cell at Department of Architecture and Planning, NEDUET, is a research unit established in 2006 to support and sustain DAPNED's ongoing efforts towards creating general awareness of issues related to heritage conservation in Pakistan. Since its establishment in 1998 the department has endeavored to develop technical support and professional capacity building in the field of heritage conservation through its activities of focused research, training and advocacy. Heritage Cell functions as a full-fledged research unit housed within NED University's historic 'City Campus'.

NCRA

### PANJWANI HISAAR WATER INSTITUTE

The ground-breaking ceremony of the Panjwani Hisaar Water Institute at NED University was held on 4th May 2018 by the Chief Guest Mr. Muhammad Zubair, Governor Sindh. The institute is a collaborated effort of NED University, Panjwani Charitable Foundation and Hisaar Foundation. The institute will provide multidisciplinary research facility that will not be restricted to just water engineering but aims to integrate the currently isolated nodes of engineering, natural sciences, economics and social sciences to bring forth a new generation of water professionals. The institute will be home to advanced social and scientific water labs and be the hub of all cutting-edge water related research which would be driven by the real world issues and hence bridge the gap between the world of academia and market demand.



### National Incubation Centre, Karachi

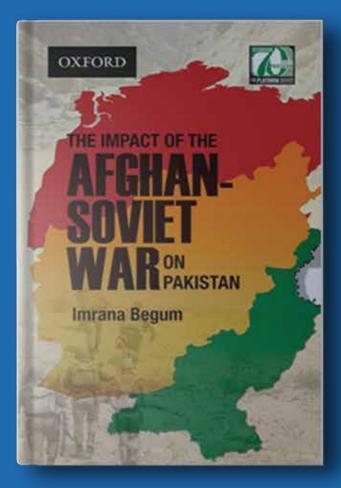
NED University in collaboration with LMKT is hosting the National Incubation Centre, Karachi which was inaugurated by the Prime Minister of Pakistan, Mr. Shahid Khaqan Abbasi on 11th May 2018. The centre will offer talented entrepreneurs and promising start-ups of Sindh quality incubation programmes, access to mentor and investor networks as well as technical resources.



## **RESEARCH PUBLICATIONS**

NED University continues to disseminate discoveries and contribution to knowledge through publications and proceedings. During the reported period, the statistics remained indicative to an upward trend in producing research.





Book published: The Impact of the Afghan-Soviet War on Pakistan by Oxford University Press

About the Book: Since December 1979, when Soviet troops first entered Afghanistan, the country has remained a focal point in regional and global politics. With a focus on the 1980s, The Impact of the Afghan-Soviet War on Pakistan delves into both Afghanistan's history and the involvement of superpowers in shaping its present situation. Through the investigation of a complex and highly politicized war, the author demonstrates the direct correlation between Pakistan's society, politics, and economy with the state of affairs in Afghanistan. In a world currently fighting the War on Terror, this book serves as a useful examination of the region and emphasizes that a peaceful Afghanistan is crucial for a peaceful Pakistan.

Author: Dr. Imrana Begum is an Assistant Professor, with a focus on Pakistan Studies, at NED University of Engineering and Technology, Karachi.

# FACULTY SCHOLARLY

In addition to the research activities at the University, faculty members actively participate in the scholarly activities nationally and internationally as summarized below :



### NED University publishes the following research journals:

NED University Journal of Research – Since 2013, the journal is published biannually in two sections, namely Structural Mechanics and Applied Sciences. The primary aim of this journal is to provide an international forum for the dissemination of research and new developments and their applications in engineering and technology. NED University of Journal of Research is an 'X' category HEC recognized journal, and indexed by several international indexing services.

Journal of Research in Architecture and Planning (JRAP) – Focusing on research works relevant to the fields of architecture and planning, this journal explores issues of relevance to both scholars and practitioners. JRAP was initiated in 2000 and is a peer reviewed journal published biannually since 2011.

Journal of Social Sciences and Interdisciplinary Research (JSSIR) is a refereed, bi- annual journal. The journal acts as a forum for social scientists and researchers to investigate and discuss issues confronting societies both local and global. All the submitted manuscripts are multiple peer-reviewed.



## INTERNATIONAL CONFERENCES ORGANIZED

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Twelve international conferences were organized during 2017-18, which were attended by several national and international keynote speakers, authors and delegates. Some of these conferences are into their eighth or ninth rounds, attracting diversified contributions in subject areas

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### **INTERNATIONAL CONFERENCES ORGANIZED**

*Cyber Secure Pakistan Vision 2025* - Premium Information Security Conference in Pakistan, May 05, 2018

2nd International Conference on Urban and Regional Planning (CURP) – April 27-28, 2018

*International Conference on Emerging trends* in Telecommunication and Electronics Engineering, February 27 - 28, 2018

3rd International Electrical Engineering Conference, February 09 - 10, 2018

8th International Mechanical Engineering Congress (IMEC-2018), January 26 - 27, 2018

3rd NED International Textile Conference, January 10 - 11, 2018

Conference on Emerging Trends in Automotive Engineering (CETAE-2017), December 28-29, 2017

*9th International Civil Engineering Conference* "Striving Towards Resilient Built Environment" (ICEC-2017), December 22 - 23, 2017

2nd International Conference on Advanced Materials and Process Engineering, December 12 - 13, 2017

3rd International Conference of the Linguistic Association of Pakistan 2017, October 12-14, 2017

International conference on Computing, Electrical and Electronics Engineering (ICCEEE 2017), August 02 - 03, 2017

*5th International Conference on Infrastructure Engineering in Developing Countries IEDC 2017,* July 14 - 15, 2017

### DICE SHARK – Investment Pitch Session

DICE AUTOMOTIVE was held on 28th and 29th December 2017, one of the biggest events fostering innovation, commercialization and entrepreneurship in the field of Automotive. DICE SHARK, was managed by NED Entrepreneurship Society. It provided opportunity for young future entrepreneurs to pitch their projects and business plan and get funding from venture capitalists.



### **DICE Virtual Innovation Competition**

NED Entrepreneurship Society organized the 4th installment of DICE Virtual Innovation Competition in 2017. Team NES arranged the most interesting 3 rounds competition, inviting renowned professionals of the innovation and entrepreneurship community to judge the top 30 Teams.



### TEDx NED University 2018

3rd edition of TEDx NEDUniveristy was organized by the students of NED Entrepreneurship Society under the umbrella of ORIC on 8th May 2018. There were several impressive speakers at the event which included Muqeem Khan (works in Hollywood visual effect industry), Hina Khalid ( a wheel chair bound photographer), Hammad Safi among others.



### Additionally ORIC has the following features to share:

- 04 patents were filed last year.
- 38 project proposal submitted for grant under National Research Programme for Universities.
- 03 project proposal under the Technology Development Fund were awarded.
- 06 project proposals under the Social Integration Outreach Program were submitted, out of which one has been awarded.
- 10 research projects were awarded startup research grant by ORIC.

# QUALITY ASSURANCE

ISO 9000 certified since 2002
Successfully transformed to ISO9001:2015 standard
QEC in 'W' category (95.67% Score in HEC ranking)
36 Trainings arranged with 1284 participants
QECs established in all affiliated institutions

### Quality Assurance

*Quality enhancement Cell* QEC (previously known as Quality Management Cell) was established in 1999 with the aim to develop and implement Quality Management System at NED University. The cell successfully acquired ISO 9000 certification in year 2002. Since then, the QEC has been instrumental in assuring quality to its customers and stakeholders. With the advent of QAA in recent years, QEC NED has coordinated with HEC with the spirit of continual improvement. The following are major highlights from 2017-18.

*- QEC in 'W'' category -* Quality Assurance Agency (QAA) of the HEC assesses the progress of the Quality Enhancement Cells (QECs) of all Universities through a quantitative 'Scorecard System' based upon their performance and participation in quality-related processes. During the reporting period, the University QEC has been assigned a score of 95.67% with a placement in 'W' Category.

- Establishment of the QECs at affiliated colleges/institutions – In pursuance of QAA-HEC instructions, NED University has successfully established the QECs in all affiliated colleges/ institutes of the University. In this regard, the NED-QEC has conducted necessary meetings and arranged training Programme for all nominated officials of affiliated colleges/ institutes to develop Self-Assessment Reports (SARs) in their respective colleges/ institutes.

*- Transition from ISO 9001:2008 to ISO 9001: 2015 –* NED University has successfully transformed the QMS standards to ISO 9001:2015. Recertification and Transition of the University to ISO 9001:2015 of the University conducted by LRQA from 21st to 25th August 2017 and after successful audit and Transition to ISO 9001:2015, the University was certified by LRQA.

*- Capacity Building -* Another important activity of Quality Enhancement Cell is planning and arrangement of various training Programmes/workshops according to the requirement of departments. Initially 20 training programmes were planned to be conducted during the period but later some more trainings were also conducted and as such thirty six (36) training programmes were arranged. In January, 2018 faculty development programme of 36 hours was also organized for new and young faculty members in order to improve their teaching performance and learning outcomes.

*Self-Assessment Reports (SARs)* - Self-assessment is an important tool for academic quality assurance and provides feedback for faculty and administration to initiate action plans for improvement. As per the HEC directives, second assessment cycle of ten programmes have been completed Further, SARs of two more programmes are also completed in 2017-18.

- Yearly Objective 2018 – The yearly objective 2018 for all teaching departments is: "Accreditation of Undergraduate Programmes – BE Programmes under Outcome Based Education (OBE) System with Pakistan Engineering Council (PEC) and BS/ BArch Programmes with respective Accreditation Councils recognized or established by the HEC". Under the objective all departments have completed the major tasks including defining Vision and Mission of the departments/programmes, Programme Educations Objectives (PEOs) and Course Learning Outcomes (CLOs).

*- External and Internal Audits/ Assessments -* QEC arranged two Surveillance Audits and two Internal Quality Audits during the reporting period.

- Institutional Performance Evaluation (IPE) – Institutional Performance Evaluation of the University was successfully conducted on 21-23 February, 2018 by the Review Panelists from the Quality Assurance Agency of the Higher Education Commission (QAA-HEC). During their three days of evaluation, the review team thoroughly assessed the University Portfolio Report (UPR-2018) and verified all the related evidences. They also visited different departments/facilities and interacted with the students, faculty and Heads of various teaching and non-teaching departments. The review panelist showed satisfaction and appreciated the efforts towards enhancement of quality standards at NED University.

## Institutional Performance Evaluation (IPE) Visit of NED University of Engineering & Technology, Karachi by QAA-HEC Review Panel



Quality Management System Held on 3rd February 2017



Faculty Development Training held on 15th January to 2nd February 2018



Assessment Team Training 6th March 2017

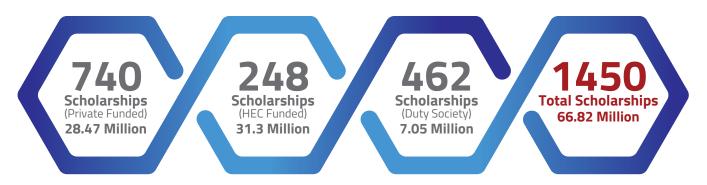


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# ACCESS AND Opportunities

### Scholarships

NED University recognizes the need to support students demonstrating merit or face challenges courageously in a variety of contexts. Department of Student Affairs is responsible to solicit scholarships applications and processes them round the year. The salient statistics pertaining to scholarships are:



### **Students Mobility**

International travel provides students with opportunities to experience different countries and its cultural and historical environments NED along with improving their language skills and broadening their social horizons. NED University being the part of Erasmus+ programme encourages its students to win exchange placements. In the reporting period around 20 students participated in national and international events and exhibitions. Moreover, around 90 students from various institutes joined NED University as part of their internships. Three international students joined NED University under student exchange programmes.

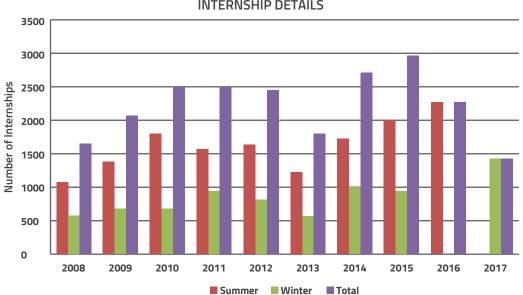


### DIRECTORATE OF INDUSTRIAL LIAISON

The Directorate of Industrial Liaison performs several functions mostly related to the interaction with industries and finding opportunities for our students becoming involved in practical training before graduation.

The Directorate of Industrial Liaison performed following core jobs during the reporting period.

- 1422 Summer Internships. a.
- **144** study visits were arranged in **108** different industries related to various engineering disciplines. b.
- **614** projects for final year students were formally coordinated through industries. C.
- **360** activities for facilitating employment were conducted jointly with various employers, including d. direct "On Campus Hiring" process by **20** employers.
- More than 174 Students were able to obtain employment in various organizations through DIL. ρ.
- **08** Workshops, competitions, and seminars were arranged. f.





NOTE: Due to adjustment of academic Calendar and shift in the semester offering, internships could not be offered during summer 2016 and winter 2017 at University level. However, students were allowed to avail internships on self-basis.

### **NED Academy**

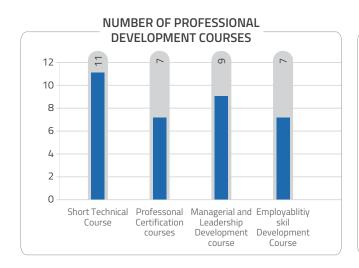
Today, we live in a world of embedded adaptability. With the advent of IT, not only knowledge base is increasing at a tremendous pace but also new business avenues are being explored challenging employees to attain specialized knowledge on a continuous basis. To cater these ever-changing and diversified capacity building needs for continuous and adaptive uplifting of industry and its professional human capital, NED University established initially the Centre for Continuing Engineering Education (CCEE) and then NED Academy, which has been serving as a pivotal academic node for the last two decades. NED Academy is registered with Pakistan Engineering Council as Professional Engineering Body (PEB) and hence courses conducted by NED Academy are valid for earning CPD points for engineers.

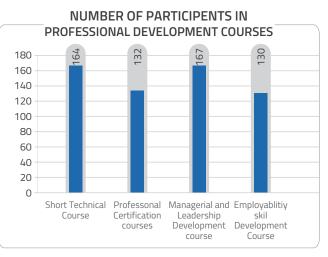
The vision of NED Academy is "Empowering for Professional Excellence" via continuous offerings of market based globally savvy training programmes ranging in diversity for the energetic youth to professional engineers to middle-tier managers to seasoned top leadership of organizations.

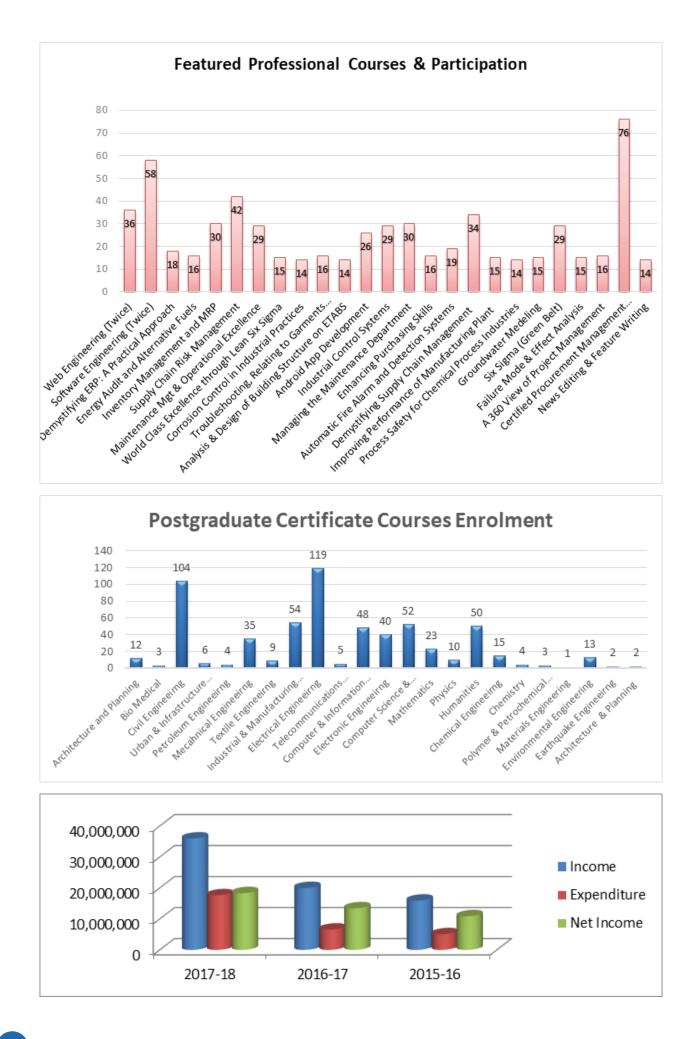
During 2017-18, NED Academy executed/ facilitated in the execution of following streams of courses:

- 1. Professional Development Courses
- 2. Postgraduate Certificate (PGC) Courses
- 3. Vocational and Technical Training Courses (in collaboration with NAVTTC)
- 4. Undergraduate Degree Backlog Courses

Approx. 5790 participants were facilitated via the courses offered during 2017-18, including 520 industry/ professional participants, 4661 undergraduate students, 459 postgraduate students and 150 students from unemployed/ unskilled youth.







### Student Activities – Co-curricular and Extra-curricular

NED University pays significant attention to providing its students ample opportunities for activities beyond academic endeavors through various activities. NED University encourages its students to actively participate in the technical sessions and other co-curricular activities. NED University is proud to have a vibrant and dynamic student body, who actively engages in sports and extracurricular activities as well. These activities form the basis for providing the necessary team building and leadership skills among several others to our graduates and help them become successful professionals. The list below is a snapshot of some activities conducted over the reporting period.

### Events Organized by Academic Departments

- **01.** Performance Based Design of Tall Buildings, in collaboration with Asian Institute of Technology, AIT Solutions, Thailand, November 2017
- **02.** Two-Month International Certification Program on "Certified Corporate Governance Professional (CCGP)", in collaboration with Better Corporate Governance Inc., Singapore, August 2017.
- 03. Procurement Management (Workshop), in collaboration with GSK and Dawlance, February 2018
- **04.** Seminar on "Organic Electronic and Photonic Devices: Materials, Designs, Fabrication, Characterization, Optimization and Research Needs", in collaboration with GIKI Pakistan, 2017

- **05.** Workshop on "Engineering Applications of Digital Microscopy", in collaboration with Leica Microsystems, 2018
- **06.** Distinguished Lecture on "Emerging Challenges in Drilling Engineering", in collaboration with Norwegian Center of Excellence in Petroleum Studies, October 2017.
- 07. Distinguished Lecture on "Petroleum Cybernetics", in collaboration with Norwegian Center of Excellence in Petroleum Studies, November 2017
- **08.** Lecture on "Enhanced Oil Recovery", in collaboration with the collaboration with Petroleum Institute of Pakistan (PIP) and Institute of Petroleum Engineer (IEP)
- **09.** One day Symposium on Institutional Cooperation Program (ICP)
- **10.** Lecture on "Classification between Resources and Reserves", in collaboration with Pakistan Petroleum Limited (PPL)
- 11. Visit to the State Bank of Pakistan by the students of Department of Economics and Management Sciences, February 2017
- **12.** Lecture on "Smart Investment in Stock Market", in collaboration with Meezan Bank and AKD Securities in August 2017.

# STUDENT

13.	One day seminar on "Understanding Cryptocurrency", December 2017
14.	Seminar on "Ensuring impactful research analysis", January 2018.
15.	Seminar on "Young Generation and Global Economy", February 2018.
16.	National Workshop on Retrofitting and Strengthening of Existing Structures/Infrastructures, in collaboration with Institute of Engineers Pakistan, February 2018.
17.	Workshop titled "Green Climate Fund (GCF) & Mass Transit Projects under CPEC", January 2018
18.	Introduction to OBE for MME Faculty, February 2018
19.	DICE-Automotive 2017 Student Project Exhibition, DICE Shark, Industry Exhibition, in collaboration with DICE Foundation USA, December 2017
20.	DICE Seminar on Product Lifecycle Management (PLM), in collaboration with DICE Foundation USA, December 2017
21.	DICE Seminar, in collaboration with DICE Foundation USA, September 2017
22.	A Short Seminar on Automotive Engineering, in collaboration with NED Alumni, September 2017
23.	A DICE Seminar on Design and Development, in collaboration with DICE Foundation USA, July 2017.
24.	Smart Irrigation Workshop, in collaboration with DFKI Germany, July 2017
25.	Lecture on "Contemporary Muslim Women: Roles & Issues", August 2017
26.	Lecture on "Research Methods: Exploring Perspectives & Practices", January 2018.
27.	Seminar on "Application of Radiation and Radiation Protection", in collaboration with Pakistan Nuclear Regulatory Authority, September 2017
28.	Lecture on "Medical Physics and its Application", in collaboration with Aga Khan University Hospital, January 2018
29.	31st Session of Windows into Tomorrow Seminar Series, in collaboration with the University of Karachi, January 2018
30.	Seminar on 'Social and Spatial Organization of Religious and Cultural Heritage in Sindh', in collaboration with Center of South Asian and Indian Studies (CEAIS) Paris Institute of Architects Pakistan (IAP), November 2017



31.	Workshop on Cognitive Security, August 2017
32.	Seminar on ATM Threats and Security, August 2017
33.	Seminar on Fiber Reinforced Concrete Design, Flexcon (16th August 2017) organized by ACI NEDUET Students, EA Consulting, Fay Tissue paper & Pak Cement
34.	Petro Bowl Competition in NED University (petroleum related quiz competition) organized by SPE NED Student Chapter. NOTE: NED University team won the competition
35.	Brainiac, (Technical, Quizzes, Seminar and Workshops) organized by by ASME NEDUET Chapter
36.	Technical workshop, KhHOAJ-VII organized by ASHRAE NEDUET Chapter
37.	Technical Sessions on Aerial Escapade, organized by IMechE (NEDUET)
38.	Technical Sessions on Propellair, organized by IMechE (NEDUET)
39.	Speak out for Engineers, organized by IMechE (NEDUET)
40.	Abul Kalam Design Challenge, organized by IMechE (NEDUET)
41.	Career Seminar 2017 organized by ATCC NED student chapter
42.	Seminar on Composite Machining organized by SME Student chapter
43.	Seminar on Marketing organized by IMD students
44.	Workshop on Career Counseling organized by SME Student chapter
45.	SME Workshop (Energy Outlook) organized by SME Student chapter
46.	SPARK 4.0 organized by IEEE PES; Different competitions including Marathon, Eureka, Quiz Competition, STEM Presentations, Logic Building and Case Studies
47.	Workshop on Web Art and Application Development organized by IEEE-NED Computer Society
48.	Techathon 2.0 (a combination of the competitions like LFR. Robo Maze. Speed Programing, CS Project Exhibition and others) organized by IEEE-NED Computer Society
49.	Workshop on block chain demystified organized by IEEE-NED Computer Society
50.	Session on Google I/O extended where Google developer shared their latest technology and inventions.
	<ul> <li>32.</li> <li>33.</li> <li>34.</li> <li>35.</li> <li>36.</li> <li>37.</li> <li>38.</li> <li>39.</li> <li>40.</li> <li>41.</li> <li>42.</li> <li>43.</li> <li>44.</li> <li>45.</li> <li>46.</li> <li>45.</li> <li>46.</li> <li>47.</li> <li>48.</li> <li>49.</li> </ul>



### STUDENT ACTIVITES

51.	Tawanai Workshop on DIY Solar Power at home organized by ELD students
52.	Research based Session for final year project counseling organized by ELD students
53.	Women's day celebration for women empowerment organized by ELD students
54.	Spec 2017 Project Exhibitions and Competitions organized by ELD students
55.	CareerExpo 2017, A career counseling event organized by ELD students
56.	Information Technology Exhibition and Competition (ITEC 2017) organized by ACM Student Chapter
57.	Project Showcase organized by CSIT students
58.	Let's get Quanted, A Seminar on the Fintech, An Orientation of Quants Society organized by Quants society
59.	Career Building Workshop, organized by SCHEME (Society of Chemical Engineers)
60.	FYP Session, Technical discussion for helping students in their FYP, organized by SCHEME
61.	IN(3D)USTRY, A workshop on 3D Printing application in chemical engineering organized by SCHEME
62.	Final Year Project Exhibition EFL 2017 by MES MYD NEDUET
63.	Two day workshop on Smart Investment in Stock market organized by Economics & Finance Club
64	Session on Understanding Cryptocurrency organized by Economics & Finance Club
65.	Session on ensuring impactful research analysis organized by Economics & Finance Club
66.	Session on Young Generation & Global Economy organized by Economics & Finance Club

### Activities organized by Student Affairs Department

- **01. Azadi Celebration** Speech Competition on 4th August 2017 Organized by Quaid-e-Azam Rangers School
- **02. Matrix of Leadership** on 8th August 2017 Organized by NED Photography Society in collaboration with Department of Students' Affairs
- **O3.** All Pakistan Robotics Quiz Competition & Educational Fair SENTEC'17 on 9th & 10th August 2017 Organized by SENTEC in collaboration with Department of Students' Affairs
- **04. Green Build Competition & Result** on 10th August 2017 Organized by Green Society in collaboration with Department of Students' Affairs
- **05. Seminar on Higher Education** in USA on 10th August 2017 Organized by Alumni Association of Tri-State in collaboration with Department of Students' Affairs
- **06.** Independence Day Celebration on 11th August 2017 Organized by Green Society in collaboration with Department of Students' Affairs
- **07. Blood Donation Camp** on 15th to 17th August 2017 Organized by Indus Hospital in collaboration with Department of Students' Affairs
- **08. Zouq e Qawwal** on 30th August 2017 Organized by MOSAIC Society in collaboration with Department of Students' Affairs
- **09. Prize Distribution Ceremony** of SENTEC 17 on 11th September 2017 Organized by SENTEC in collaboration with Department of Students' Affairs
- **10. Presentation Regarding Higher Studies Abroad** on 14th September 2017 Organized by United State Education Foundation Pakistan in collaboration with Department of Students' Affairs
- **11. Study Visit of City School** on 5th October 2017 Organized by City School PAF Chapter Senior I Section in collaboration with Department of Students Affairs
- **12.** Orientation Programme of Batch 2017-18 on 13th November 2017 Organized by Department of Students Affairs.
- **13. Speaking Session One Nation One Vision** on 22nd November 2017 Organized by Department of Students Affairs.
- **14. Orientation & Seminar** of NED Photography Society on 6th December 2017 Organized by NED Photography Society in collaboration with Department of Students Affairs
- **15. Seminar of MOSAC Society** on 6th December 2017 Organized by MOSAIC in collaboration with Department of Students Affairs



# STUDENT AFFAIRS

- **16. Fatimid Blood Donation Camp** on 6th and 7th December 2017 Organized by Fatimid Foundation in collaboration with Department of Students Affairs
- **17.** Masala TV Cooking Show on 7th December 2017 Organized by Hum TV Network
- **18.** Anti-Corruption Week on 8th to 14th December 2017 Organized by Character Building Society in collaboration with Department of Students Affairs
- **19. Study Trip of Hira Foundation Academy** on 12th December 2017 Organized by Character Building Society in collaboration with Department of Students Affairs
- **20. Orientation of SENTEC** on 14th December 2017 Organized by SENTEC in collaboration with Department of Students Affairs
- **21.** Seminar on Higher Education in Italy on 21st December 2017 Organized by Department of Students Affairs
- 22. Green Society Induction Ceremony 2018 on 3rd January 2018 Organized by Green Society in collaboration with Department of Students Affairs
- **23. TV Programme Show 'Karachi Ke Baat' with Rizwan Jaffar** on 4th January 2018 Organized by Youth Parliament in collaboration with Department of Students Affairs`
- 24. Peace Walk to show Sympathy for (Zanib) Rape & Murder Case on 16th January 2018 Organized by Various Societies in collaboration with Department of Students Affairs
- **25. GAS Induction Ceremony 2018** on 25th January 2018 Organized by GAS in collaboration with Department of Students Affairs
- **26.** How to Successful in Your Life Lecture by Mr. Saeed Anwar on 26th January 2018 Organized by Various Societies in collaboration with Department of Students Affairs
- 27. Presentation Regarding Higher Studies Abroad (USEFP) on 6th February 2018 Organized by USEFP in collaboration with Department of Students Affairs
- **28.** Women's Day 2018 on 12th February 2018 Organized by GAS & NSA in collaboration with Department of Students Affairs
- **29. Routine Immunization Awareness** on 13th February 2018 Organized by Health Department (GOS), NED Medical Department in collaboration with Department of Students Affairs
- **30.** Blood Donation Camp (Indus Hospital) on 21st and 22nd February 2018 Organized by Indus Hospital in collaboration with Department of Students Affairs

- 31. Seminar Green Society 2018 on 09th April 2018 Organized by Green Society
- **32. Essay Competition (Bilingual)** on 12th April 2018 Organized by Pakistan Society
- **33.** All Pakistan Declamation Contest on 17th April 2018 Organized by Debating Society
- 34. Matrix of Leadership 3.0 on 26th April 2018 Organized by NED Photography Society (NPS)
- **35. Pakistan Quiz** on 30th April 2018 Organized by Pakistan Society
- **36.** Theater Day 1 on 15th May 2018 Organized by MOSAIC
- **37. Bazam e Abad** on 17th May 2018 Organized by Debating Society
- **38.** Bilingual Literary Recital Contest on 15th June 2018 Organized by Literary & Publications Society (LPS) & MOSAIC
- **39.** Education Fair on 21st June 2018 Organized by SENTEC

















#### Sports Events Won by NED University

- Winner: ZABIST OLYMPIAD 2018; Throw ball. (Girls); 22nd to 24th January 2018 at ZABIST University, Karachi
- Winner: 3rd Inter University sports gala 2018 on 22nd February/2018, Cricket (Boys) at Pakistan Marine Academy, Karachi
- 2nd Position: 3rd Inter University sports gala 2018 on 22nd February, 2018, Football (Boys) at Pakistan Marine Academy, Karachi
- 2nd Position: 3rd Inter University sports gala 2018 on 22nd February, 2018, Lawn Tennis (Boys) at Pakistan Marine Academy, Karachi
- 2nd Position: 3rd Inter University sports gala 2018 on 22nd February, 2018, Basketball (Boys) at Pakistan Marine Academy, Karachi
- 2nd Position: 3rd Inter University sports gala 2018 on 22nd February, 2018, Cricket (Girls) at Pakistan Marine Academy, Karachi
- 2nd Position: Jashan-e-Azadi Volley Ball Championship; 16th and 17th August, 2017; at NEDUET

### **NED University Participation**

- Inter University competitions organized by HEC
  - O Intervarsity Football (Boys) Zone-G Championship, 17th to 20th January, 2018 at Hamdard University
  - Intervarsity Cricket (Boys) Zone-G 22nd to 29th January 2018, at IBA, Karachi.
  - Intervarsity Basketball (Boys) Zone-G Championship 25th to 27th January, 2018, at Greenwich University,
     Karachi.
  - Intervarsity Badminton (Boys) Zone-G Championships, 25th to 27th January, 2018, at Institute of Business Management (IoBM), Karachi.
  - Intervarsity Volleyball (Boys) Zone-G Championship, 7th to 9th February, 2018, at NEDUET
  - Intervarsity Table Tennis (Boys) Zone-G Championship, 14th to 16th February, 2018, at NEDUET
- NUST OLYMPIAD 2018; Throw ball. (Girls), 22nd to 24th January, 2018, at NUST University Karachi

#### Srd Inter University sports gala 2018, on 22nd February, 2018, at Pakistan Marine Academy, Karachi

- O Boys Events: Cricket, Table Tennis, Badminton, Football, Lawn Tennis, Athletics, Volley ball, Basketball,
- O Girls Events: Cricket, Badminton, Table Tennis, Volleyball



### Sport Events organized by NED University

#### ■ Inter University Competition 2017-18 under the auspices of Higher Education Commission (HEC)

- Intervarsity Volleyball (Boys) Zone-G Championship, 7th to 9th February, 2018, at NEDUET
- Intervarsity Table Tennis (Boys) Zone-G Championship, 14th to 16th February, 2018, at NEDUET
- NED Inter Departmental Games 2018, 4th December 2017 to 23rd February, 2018
  - Boys events: Cricket, Badminton, Table Tennis, Chess, Volleyball, Basketball, Tennis, Futsal, Squash, Bodybuilding, Athletics
  - Girls Events: Athletics, Basket-ball, Volleyball, Badminton, Table Tennis, Chess, Squash, Throw-ball
- FRC Bowling Ball Competition 2.0 (16th February 2018) organized by ACI NEDUET Students & Pak Cement.

### Sports Events organized by NED University with Higher Education Commission Islamabad

- Trials and Selection of HEC Table Tennis (Girl), 4th and 5th January, 2018
- Inter Board Badminton (Boys) Championship 2017-18, 4th and 5th January, 2018
- Intervarsity Squash Girls Championship 2017-18, 24th to 26th February, 2018



#### Friendly Matches organized

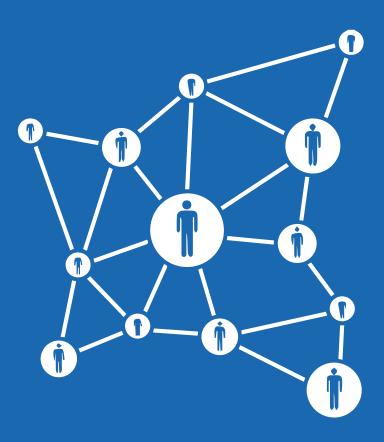
- Cricket (Boys) with CBM/IoBM on 08th January, 2018 at NED Cricket Ground. (Winner: NED)
- Basketball (Boys) with Habib University on 12th January, 2018 at Habib University. (Winner: NED)
- Cricket (Boys)with Sherwani Cricket Club on 15th January, 2018 at NED Cricket Ground. (Winner: Sherwani Cricket Club)
- Cricket (Boys) with Habib University on 17th January, 2018 at NED Cricket Ground. (Winner: NED)
- Cricket (Boys) with Bahria University on 18th January, 2018 at NED Cricket Ground. (Winner: NED)
- Cricket (Boys) with CBM/IoBM on 19th January, 2018 at NED Cricket Ground. (Winner: NED)
- Table Tennis (Boys) with Virtual University on 19th January, 2018 at Virtual University. (Winner: NED)
- Cricket (Boys) with ZABIST University on 20th January, 2018 at NED Cricket Ground. (Winner: NED)
- Volleyball (Boys) with Habib University on 19th January, 2018 at NED Boys Gym. (Winner: Habib)

### Friendly Match with NED Alumni led by Honorable Chief Minister Sindh, Syed Murad Ali Shah

The NED University of Engineering and Technology organized a friendly cricket match between NED Alumni and University faculty on 20th August, 2017 to mark the 70th Independence Day celebration of Pakistan. NED Alumni Team led by Honorable Chief Minister Sindh, Syed Murad Ali Shah scored 107 runs in the allotted ten overs defeating NED-eleven led by Vice-Chancellor Dr. Sarosh Lodi by seventeen runs.



# OUTREACH AND NETWORKING



### Staff Mobility and Conference Travels

NED University promotes and facilitates its faculty and staff in collaborating with national and international counterparts. University faculty and staff actively participate in international conferences and events. In the reporting period University faculty participated in 21 international conferences with a total of 38 international staff travels.



# OUTREACH AND

### **Prominent National and International Delegates**

NED University was privileged to have hosted several prominent national and international luminaries on its campuses during the year. The list is very long; hence just some are being shared here.



Prime Minister of Pakistan, Mr. Shahid Khaqan Abbasi inaugurating the National Incubation Center at NED University on 11th May, 2018



Chief Minister Sindh, **Murad Ali Shah** as Chief Guest at University convocation on 06th January, 2018 and former Federal Minister and Senator **Mr. Javed Jabbar** also attended as a Special Guest



**Dr. Atta Ur Rehman** at Cyber Secure Pakistan Vision 2025 on 05 May, 2018



Federal Minister of state, **Mr. Rana Afzal** as Chief Guest in a conference at NED University on 27th February, 2018



Governor Sindh, **Mr. Muhammad Zubair** visit for ground breaking of Panjwani Hissar Water Institute on 04th May, 2018.

# OUTREACH AND



Australian Delegation visit to NED University on 17th October, 2017



**Mr Shoaib Sidddiqui,** Secretary Planning Commission,visit to petroleum and earthquake departments on 01st January, 2018



Visit of **Dr. Khaldon H. Khashman**, Secretary General for the Arab Countries Water Utilities Association (ACWUA) to NED University on 20th December, 2017



Visit of member of Russian HEC Mr. Vladimir Bilik on 24th April, 2018



Delagation from sixteen Chinese institutes visited **NED University** on 24th April, 2018

67

# INSTITUTIONAL

Collaborations with industries, universities and other organizations are undoubtedly important in carrying out meaningful research and other academic activities. NED University linkages continued to grow during the past year. Following is the list of major agreements / MoUs.

### AGREEMENTS / MOUs



Zhongxing Telecom Pakistan (Pvt.) Ltd. (ZTE) for Supplying Installation Testing and Commissioning of Two Thousand Lines PHS Wireless local loop Network



Pakistan Petroleum Ltd. (PPL)



Ricardo Software Master License Agreement FSAE



Ford Motor Company ("Ford")



Earthquake Model of the Middle East Region (EMME)



National Testing Service (NTS)



Habib Metropolitan Bank Ltd.



M/s. Pakistan Beverage Limited (Pepsi Cola).



Engro Polymer & Chemicals Ltd.





Alternative Energy Development Board regarding research and Development of Fuel Cell Technologies

Dow University of Health Sciences Karachi



Siemens (Pakistan) Engineering Co. Ltd.



Supernet Limited regarding Data Communication Services



United Company of Pakistan Ltd.

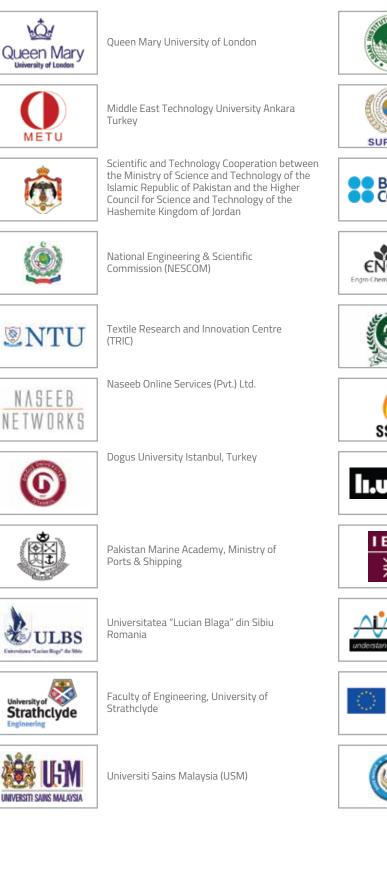


Jersey Precast (JPC)

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The ARAS Cooperation, University Program.

### INSTITUTIONAL NKAGES



Asian Institute of Technology Bangkok, Thailand

Pakistan Space and Upper Atmosphere

Research Commission (SUPARCO)

SUPARCO

BRITISH COUNCIL

British Council

RO

Engro Chemical Pakistan Ltd.

Development in Road Traffic Management and Safety

City District Govt. Karachi for Cooperation

in the field of Engineering Research and



Sui Southern Gas Company Ltd.



Linkoping University (LiU) Linkoping, Sweden



Institution of Business Administration, Karachi (IBA)



National Institute of Oceanography



Erasmus Mundus Action 2 Programme, EMMA-WEST 2013



Karachi Water and Sewerage Board Karachi, Pakistan











### INSTITUTIONAL NKAGES



National Institute of Lasers and Optronics, Islamabad



K-Electric, Karachi, Pakistan.



Pakistan Petroleum Ltd. (PPL)



The Promotion of Education in Pakistan (PEP) Foundation, Inc., USA



Italian Development Committee (IDC).



UNDP Sponsored Project Component "CIU-Trucking, Pakistan Sustainable Transport" (CIU-TRUCKING-PAKISTAN, UNDP



The AGH University of Science and Technology, Krakow, Poland



Universiti Malaysia Perlis



The University of BOLTON



Pakistan Association of Automotive Parts & Accessories Manufactures



Provincial Coordination Unit Benazir Bhutto Shaheed Youth Development program BBSHRRDB board, Boards & Universities Department Govt. of Sindh



Technology (Norway)

Norwegian University of Science and

A Joint Project of OPEN Karachi



The Pak Oasis Industries (Pvt.) Ltd.

🗇 ihsən trust

Ihsan Trust



Dawood University of Engineering & Technology, Karachi



Clothing and Design Faculty, Minjiang University, China



Tianjin Polytechnic University, China



Hasselt University Transportation Research Institute (IMOB)



Pakistan Standards and Quality Control Authority



Confucius Institute University of Karachi



**Brothers Engineering Industries** 



## INSTITUTIONAL



Asian Institute for Environmental Research and Energy



Indus Motor Company Ltd.



Incheon – National University Republic of Korea



Sindh Public Procurement Regulatory Authority, Govt. of Sindh



Hunan Polytechnic of Environment and Biology, China



Hunan College of Modern Logistics, China



Gansu Forestry Technological College, China



Baotou Railway Vocational and Technical College, China



Hunan Petrochemical Vocational Technology College, China



Guangxi Polytechnic of Construction, China



Think Transportatior



NED Alumni Association of Southern California (NEDAASC)



Management and Business Excellence Consultancy



Shaanxi Institute of Technology, China



Shandong Vocational College of Industry, China



Hunan Chemical Vocational Technology College, China



Shandong Vocational College of Light Industry, China



Hunan Automotive Engineering Vocational College, China



Hunan Industry Polytechnic, China

#### NED Social Integration and Outreach Program

As the leading Engineering and Technology based university, we are playing our part in shaping the future of youth in our region. In this Social Integration and Outreach program, we intend to educate and enlighten Secondary School level children between ages thirteen and sixteen to deal with the challenges of the emerging technologies and trends. These young minds could make a difference when in the main stream of economy in a few years. This program will serve a purpose of enlightening young minds through an awareness raising workshop and training session at NED University of Engineering & Technology



#### NED SOCIAL INTEGRATION AND OUTREACH PROGRAM

#### Alumni Engagement and Institutional Support

- Extension of NED University Mosque Rs. 35 Million
- Construction of BIC Building Rs. 30 Million
- Construction of Captain Naseemuddin Building Rs. 29 Million
- ICT equipment for Department of Industrial and Manufacturing Engineering worth Rs. 0.6 Million
- ICT equipment for Department of Mechanical Engineering worth Rs. 0.6 Million
- NEDAASC funding for projects and research worth USD 8,500
- DICE Energy funding
- ICT equipment for CIS department worth of USD 10,000/-
- ICT equipment for CIS department worth of USD 50,000/-
- NED Alumni in Washington DC USD 10,000/- support to Urban department for development of project lab
- Rs. 100,000/- Scholarships from Architecture Alumni
- Rs. 250,000/- for Architecture Alumni dinner
- Various trainings and seminars by Alumni



## **NED UNIVERSITY** NEWINITIATIVES

- Chinese Language Programme
- Community Service Initiative
- Carbon Neutral Campus Initiative
- National Incubation Centre



## Chinese Language Programme

CPEC (China-Pakistan Economic Corridor) is a framework of regional connectivity. CPEC is intended to rapidly modernize Pakistani infrastructure and strengthen its economy by the construction of modern transportation networks, numerous energy projects, and special economic zones. It is predicted that CPEC will result in the creation of upwards of 2.3 million jobs between 2015–2030.

In order to meet the requirements of a technical and engineering manpower for the CPEC activities/projects, NED University as the first leading Engineering University of Pakistan took the lead and introduced the Chinese language learning program as non-credit course (NC course) across the University. In the light of this decision, two courses i.e., HSK-1 and HSK-2 have been designed and made mandatory for all newly admitted students from batch 2017-18. Currently 2702 (two thousand seven hundred & two) students are studying these courses. NED University has signed MOU with the Confucius Institute, Karachi for offering the Chinese language course from native Chinese Teachers. Currently, sixteen Chinese teachers are sharing the responsibility of conducting this course to undergraduate students. NED University is also offering certificate course of higher levels to interested candidates in order the avail the full expertise in Chinese language.

Several MOUs were also signed with Chinese universities for the exchange/ scholarships of these students and faculty in the near future.



## NED COMMUNITY SERVICE INITIATIVE

The University has made it mandatory for all the students admitted since 2018 to spend at least 20 hours in a designated task of community service. The aim of this important initiative is to provide first hand exposure to our student body about the prevailing socio-economic situation in the country and afford an option to make a practical contribution by engagement in an identified activity. So far, over 800 students have successfully participated in different modules of activities with organizations such as the Indus Hospital, Youth Together for Human Rights Education, Dar-ul Sakoon, Fatimid Foundation and Shed Foundation. Efforts are underway to send remaining students of 2018 batch to various community service assignments with other worthy organizations.

Apart from above organizations, it was decided to involve students in other activities contributed to betterment of community. The students of Software Engineering performed community service in terms of green campus awareness, cleaning NED campaign and plantation in NEDUET in coordination with NED Green Society of Student Affairs Department.

Discussion with Motorway Police is also in process where student will perform awareness campaigns on different locations (Toll) on Motorways along with Motorway Police.



NED University is the oldest institution and one of the leading engineering universities of Pakistan. On February 12, 2018, the worthy Vice Chancellor of NED University Dr. Sarosh H. Lodi has signed the Talloires Declaration to become Carbon Neutral Campus and brought Pakistan as a member of Talloires Signatory List. As an institution of higher education, concerned about the state of the world environment and the advancement of sustainable development, NED University shall strive to promote actions that will achieve a sustainable future. By signing the Talloires Declaration, NED University agreed to increase Awareness of Environmentally Sustainable Development, Create an Institutional Culture of Sustainability, Educate for Environmentally Responsible Citizenship, Foster Environmental Literacy for All, Practice Institutional Ecology, Involve all Stakeholders, Collaborate for Interdisciplinary Approaches, Enhance Capacity of Primary and Secondary Schools, Broaden Service and Outreach Nationally and Internationally, and Maintain the Movement

The term carbon neutrality is generally refers to achieving a net zero carbon emission. The task of achieving carbon neutrality requires taking two parallel lines of actions.

- **01.** Reducing Carbon Emission: In order to reduce carbon emission on campus following measures need to be taken such as Creating general awareness, carbon emission studies, improving energy efficiency to reduce carbon emission related to energy generation/ making the campus green and use of renewable energy sources.
- **02.** Balancing Carbon Emission: In order to balance carbon emission on campus following measures need to be taken such as tree plantation, optimize water use, optimize land use and turning the campus into forested campus.

NED University has started working on these initiatives and Four Steering Committee meetings have been organized. Active working on creating general awareness, tree plantation, waste water treatment, solar power harvesting, and efficient use of energy has been initiated. NED University aims to achieve carbon neutrality by its centennial year 2021.



### NATIONAL INCUBATION CENTRE, KARACHI

Prime Minister of Pakistan, Shahid Khaqan Abbasi inaugurated the National Incubation Centre (NIC) Karachi at the launch ceremony held at NED University of Engineering & Technology on 11th May, 2018.

The Karachi-based incubation center is a Rs. 575 Million project which will be operated by LMKT with prime partnership of NED University. Other partners include, PTCL, Habib Bank Limited and Pakistan Poverty Alleviation Fund, PPAF. The funding for the centre will come through the Ministry of IT&T and Ignite Fund (formerly known as National ICT R&D Fund) under their National Incubation Center Programme.

NIC Karachi is perfectly placed to attract the Country's talented youth and make a true impact in the Country's economic future. As the Prime Minister pointed out during his speech "Karachi is the heart of Pakistan. Karachi succeeds, Pakistan succeeds." The NIC in Karachi, aims to provide incubation services for over 200 next-generation businesses in the first five years, will empower aspiring Sindh-based entrepreneurs to create high-growth and sustainable businesses. In addition, it will also provide talented entrepreneurs and promising startups from the Sindh region quality incubation programs; access to mentor and investor networks; and technical resources. The incubator will connect budding entrepreneurs and promising startups with mentors, investors and new business opportunities. A 12-week experiential learning programme aims to produce impact entrepreneurs, who will also benefit from intensive 1-on-1 coaching programmes as well.

NIC Karachi will focus its resources on identifying and nurturing promising startups by running various programmes that will range from two-day boot camps to year-long acceleration programmes. This include the centre's SPARK Accelerator programme, which will look to digital transformation in thirteen areas of focus including Fintech, real estate, commerce, cybersecurity, and robotics.

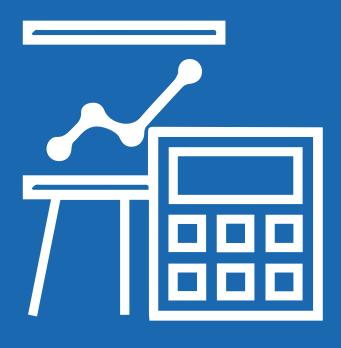
Along with other facilities, incubating startups businesses at NIC Karachi will have access to a Design Studio, NED University's Makers' Lab and a Fintech Centre, a result of HBL's collaboration on the project



#### List of Meetings of Statutory Bodies in 2017-18

Statutory Body	Number of Meetings	Meeting dates
Senate	01	27th July, 2017
Syndicate	03	13th October, 2017; 19th February, 2018; 30th May, 2018
Academic Council	04	28th September, 2017; 13th December, 2017 27th March, 2018; 14th May, 2018
Advanced Studies & Research Board (ASRB)	03	19th Jul, 2017; 26th December, 2017; 09th April, 2018
Finance and Planning Committee (FPC)	04	31st August, 2017; 22nd December, 2017; 05th March, 2018; 03rd May, 2018
Affiliation Committee	04	11th July, 2017; 27th September, 2017; 08th February, 2018; 10th May, 2018
Selection Board	02	19-20 December, 2017; 15-17 & 22-24 January, 2018
Board of Review (University Level)	02	30th June, 2017; 21st December, 2017
Board of Faculty (CEA/CPL)	03	04th August, 2017; 27th October, 2017; 06th February, 2018
Board of Faculty (MME)	03	02nd August, 2017; 16th November, 2017; 01st February, 2018
Board of Faculty (ECE)	04	22nd August, 2017; 14th November, 2017; 09th February 2018; 30th April, 2018
Board of Faculty (ISH)	05	03rd August, 2017; 02nd November, 2017; 14th February, 2018; 15th March 2018; 11th May, 2018
Board of Faculty (CPE)	03	09th August, 2017; 15th November, 2017; 13th February, 2018
Board of Faculty (BME)	01	09th August 2017
Board of Faculty (AMS)	02	02nd February, 2018; 14th March 2018

# UNIVERSITY FINANCES



#### Summary of on-going Development Projects

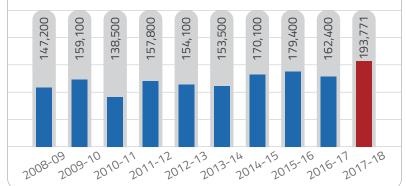
NO	Name of Projects	PC-1 Provision (Million Rupees)	Releases Upto 17-05-2018	Amount Utilized Upto 17-05-2018	Expected date of Completion
01	Strengthening of NED University of Engineering and Technology (M-III)	2,193.000	2,193.000	2,124.047	09/01/2017 (except HRD component)
02	Commencement of New Engineering Programs and Infrastructure Development at NED University	750.697	750.697	415.967	March 2019
03	Development of Department of Food Engineering and Infrastructure (ADP Project)	327.343	10.000	1.000	June 2020
04	Development of sports facility at NED University	230.000	230.000	NIL	June 2019

\* Rs. in Million

#### NED UNIVERSITY FUNDS

		as on 17-05-18
S. No	Name of Fund	Total in millions PKR
1	NED University Endowment Fund	1,157.684
2	MoST Endowment Fund	279.025
3	Oman IT Chair Fund	183.486
4	Rafeeqi Endowment Fund	5.612
5	Pension Fund	1,097.778
6	G.P.Fund	410.819
7	Benevolent Fund	66.456
8	Research Fund	240.070
9	UDWP	272.828
	Total	3,713.758

#### COST PER STUDENT IN PAK RS.



<b>IATES</b>	-18
<b>ESTIN</b>	AR 2017
EMAND	THE YEA
<b>FINAL DI</b>	FOR

	CCEE	-	-		1	-	-	-	-	1	-	-	I		7.036	10.000	0.750
	Research	'	'		•	'	'	'		'	41.000	13.800	10.000	2.000	-		161.881
	UDWP	'	'		1	'	'	'	'	96.394	-	-	1	'	-	'	174.336
Payments	Self Finance	-	-		•	46.098	46.098	82.140	174.336	1	-	-	I	1	-	ı	1
	Recurring	1,422.736	361.681	150 000	400.000	-	1	1	'	1	-	-	1	'	-	I	1
	Descriptions	Pay & Allowances	Pension Contribution		Utiler Unarges	Research Fund	UDWP	Recurring	Endowment Fund	Development Works 2017-2018	Ph.D Projects	Ph.D Fellowship for Faculty/Students	Remuneration paid to Ph.D Course, Supervision of ISP and Dissertation	Infrastructure for Research	Contigencies	Expected Transfer to Recurring Account	Closing Balance
	S. No	6	10	7	_	12	13	14	15	16	17	18	19	20	21	22	23
	CCEE	1.715		'	1		-	ì	-				T			16.071	
	Research	176.283			1			•					46.098			I	6.300
	UDWP	215.132			,			I		46.098			ı			I	9.500
<u>Receipts</u>	Self Finance	1			1		220 560	328.00U					I			I	20.112
Re	Recurring	1.671	1,147.158	139.761	951.830			1					I			I	1
	Descriptions	Opening Balance	Annual Grant from HEC	Sindh Government Grant	Fees & Other Sources			Admissions of self Finance Scheme		Share received from Self Finance Scheme (UDWP)			Share Received from Self Finance Scheme (Research)			Income from Course Fees	Expected profit on Investment
	S. No	٢	¢	V	с		~	4		5			9			7	Ø
-		_	_	_	_	_	_	_	_		_				_		

s.	PARTICULARS	Recurring	Self	UDWP	Research	CCEE
Q			Finance			
-	Total Receipts	2,240.420	348.672	270.730	228.681	17.786
2	Total Payments	2,243.047	348.672	96.394	66.800	17.036
ო	<b>Closing Balance</b>	(2.627)	•	174.336	161.881	0.750

17.786

228.681

270.730

348.672

2,243.047

TOTAL PAYMENTS

17.786

228.681

270.730

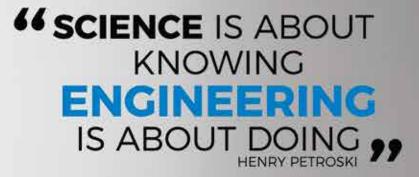
348.672

2,240.420

TOTAL RECEIPTS

S. No	Key Ratios	2016-2017	2017-2018	2018-19 (Planned)
а	Faculty : Staff Ratio	1 : 3.9	1 : 3.4	1 : 3.2
b	Faculty : Student Ratio	1 : 27	1 : 20	1:20
с	Self-Generated Income as % of total Resources	36%	43%	43%
d	Self-Generated Income as % of total Expenditures	36%	41%	39%
е	Recurring Grant as %age of total Expenditures	44%	46%	47%
f	Students Fees as % of Cost per student	27%	31%	30%
g	Salary as % of Total Expenditure	54%	59%	60%
h	Non-Salary as % of Total Expenditure	46%	41%	40%

#### **KEY INDICATORS**



### **NED University** of Engineering & Technology

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Design and Photography