NUST 2014
NATIONAL UNIVERSITY OF SCIENCES & TECHNOLOGY

Ranked among top 500 world universities and top 120 Asian Universities

Mission
To develop NUST as a comprehensive, research-led university with a focus on Technology, Innovation and Entrepreneurship.

Number 1 University in Pakistan
In the category of large general universities.

Community Service
Global Linkages
Quality Assurance
Spirit of Enterprise
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Rector’s Message

NUST symbolizes excellence in learning and research. The faculty and support facilities are comparable to the best in the world. The academic programs are tailored in the light of national needs, international best practices and latest trends in modern education so as to prepare our graduates for challenging jobs at home and overseas.

Apart from professional expertise, we seek to inculcate in our students a spirit of enterprise, dynamism and global perspective, besides a passion for community service. It is seen through our curricular and extra-curricular activities aimed at promoting service learning, entrepreneurial culture and civic engagement programs. Entrepreneurship and Community Service have been formally embedded in the curriculum. The scope of these activities has been expanded through membership of the Talloires Network. Presently NUST hosts the Pakistan Chapter of the Network with 35 universities on board, as its founding members. All this is in line with the objectives set by the Higher Education Commission: Universities building communities; Universities building leaders; Universities building economies.

The new technology smart campus in Islamabad mirrors our vision and commitment to quality and innovation in letter and spirit. Besides a vibrant Research, Innovation and Commercialization office, the University is poised to enter into the next phase of development with a planned Science and Technology Park and a Medical Complex with a 500-bed Teaching Hospital, School of Health Sciences, School of Pharmacy, and School of Nursing and Paramedics.

Another facet of the University is its spirited student body which joins after a rigorous process of merit-based selection. As many as 72% students come from middle and lower-middle classes, and there is a healthy gender mix with a tilt of male students in the engineering disciplines while female students lead the rest. Being a national university of international standing, there are students from all over the country with a sprinkling of international students here and there.

NUST remains a choice institution for talented students who realize their dreams in its enabling environment. We are constantly striving to upgrade our programs and facilities to improve our international standing and strengthen our linkages with leading universities and research organizations. May Allah reward our efforts!

Engr Muhammad Asghar
Pakistan

The land of antiquity and diversity

Pakistan is a land of antiquity and diversity. It has been a melting pot for races and cultural traditions from times immemorial. Therefore, it has a rich tapestry of cultural patterns and colorful customs and traditions. It is a treasure trove for archaeologist and historians, as it has been home to some of the oldest and most vibrant civilizations—Soan Valley (ca 50000 to 125000 BCE), Mehrgarh (7000-5500 BCE), Kot Diji (3000 BCE), Indus Valley (3300 to 1700 BCE) and Gandhara (1st to 5th Century CE) which flourished over vast areas. Apart from the ancient heritage sites, it is a mountaineers’ paradise as there are 108 peaks above 7000 meters, and out of 14 highest (eight-thousander) peaks in the world, five are located in the northern areas of Pakistan, not far from Islamabad. Apart from historical sites, there are fascinating variations in landscape, ranging from pristine shores and desolate deserts to fabulous valleys and mighty mountains.
Location

The National University of Sciences and Technology (NUST) is ideally located in the heart of the capital city, Islamabad, which is a planned metropolis in the historical Potohar plateau. The Central Campus lies in the hub of research organizations and institutions of higher learning. It is at 45 minutes drive from the International Airport and 10 minutes from the Motorway (M1). Apart from fascinating tourist attractions in and around the city, some famous historical sites (like Taxila and Katas Raj) and hill stations (like Murree and Patriata) are within easy access. There are museums, theaters, parks, shopping centers and a diplomatic enclave which houses foreign missions. The city is also known for its universities, colleges and research organizations.

Islamabad is located in the backdrops of lush green Margalla hills, in the foothills of the mighty Himalayas, at the northern rim of the Potohar Plateau. It is surrounded by heritage sites and ancient centers of learning: The Soan Valley (with imprints of most ancient human habitation); Taxila, the cultural center of Gandhara Civilization and the site of the first university called Takshashila; famous religious retreats in the Salt Range (Katas Raj and Nalanda) where Al Beruni learnt Sanskrit and measured the circumference of the earth. It is co-located with the historical Gakhar city of Rawalpindi; thus displaying a beautiful blend of history and modernity. The region has strong traditions of learning and creative arts.

The city enjoys a continental climate with hot summers (May-June), rainy Monsoons (July-August), fabulous Fall (October-November), cold Winters (December-January) and a blooming Spring (March-April). The climate is regulated by alpine mountains in the vicinity and man-made lakes (Khanpur, Rawal and Simli) which are also the sources of potable water for the twin-cities. The temperature ranges from -4°C in January to 46°C in June.

The twin-cities (Islamabad-Rawalpindi) have a population of 4.5 million inhabitants. There is a happy blend of different communities including members of foreign missions. Urdu is the lingua franca. However, English is generally understood and spoken by the educated sections of the society, as Pakistan is the 9th largest English speaking country. English is also the medium of instruction in the universities.
About University

The National University of Sciences and Technology (NUST) was established in March 1991 for promotion of higher scientific education in the country, especially in the fields of science and technology, by providing enabling environment together with need-based research, pertinent to national requirements. The University was granted its Charter in 1993. Over the years, it has expanded in scope, services and stature and emerged as a leading comprehensive University in the public sector.

Within two decades, NUST has achieved many important milestones and gained premier position as an institution of higher education in Pakistan. It produces professionals and researchers of highest calibre, capable of developing indigenous technologies to meet the growing demands of the 21st century. It is envisioned to grow as a centre of excellence for the country’s scientific and technological progress. An outstanding feature of the University is that while maintaining traditional values and excellence in teaching and research, it challenges conventional mind-set and methods to expand the frontier of knowledge.
The academic year commences in September each year. There are two semesters of 18-20 weeks duration: September-January and February-June. The University observes summer vacation from June to August. Admissions are offered in the Fall Semester. However, some schools do entertain students in the Spring Semester also. The University functions from 9 am to 5 pm, 5 days a week. However, laboratories and libraries remain accessible to researchers till late at night and even on weekends.

The University functions under the aegis of the Ministry of Science and Technology. There is a Board of Governors and an Academic Council which oversee academic matters. The Rector is the Chief Executive Officer. He is assisted by the Pro-Rectors. The University comprises constituent colleges (located away from the main campus) and schools (faculties), institutes and centres at the Main Campus.
Defining Futures

Vision 2015: National University of Sciences and Technology aims to emerge as a comprehensive residential institution responsive to technological change, dedicated to excellence and committed to international educational and research needs of the country. NUST will continue to champion a tradition of distinguished teaching, research and service through evolving undergraduate, postgraduate and doctoral level programs of study in various disciplines in collaboration with renowned universities inside the country and abroad. Besides traditional fields in Engineering, IT, Medicine, Management, Natural and Basic Sciences, NUST envisages exploring and initiating higher education in the emerging science and technology disciplines. In recognition of its place in the human society, the University will celebrate a faculty, staff and student body which will reflect the diversity of our nation. The University is entrusted with the responsibility of producing culturally enlightened, technologically knowledgeable, academically competent and research-oriented graduates who are prepared to lead, inspire and preserve our great traditions. The University commits itself and all its resources to this trust and responsibility.

Strategic Thrusts

Excellence in Teaching & Learning
Provide high-quality education in sciences and technology while remaining accessible to all sections of the society.

Focus on Research, Innovation and Commercialization
Undertake high-quality yet relevant research through innovation and commercialization to support the emerging knowledge-based economy and society.

Spirit of Enterprise
Develop instruments and mechanism for promotion of enterprising spirit and entrepreneurial culture among NUST graduates and create strong linkages with industry.

Internationalization and Global Vision
Develop strong international linkages to ensure inflow of new knowledge and state-of-the-art technologies, while building a positive international image of our University and the country.

Positive Social Impact
Structure curricula and programs to influence a wider cross-section of the population in terms of education and absorption of new technologies.
Mission
To develop NUST as a comprehensive, research-led university with a focus on Technology, Innovation and Entrepreneurship.
Why Study at NUST

NUST symbolizes quality and excellence. Its spirited faculty, industrious students and excellent support infrastructure provide an academic environment, found only in the very best of the world universities.
Multi-disciplinary University
National University of Sciences and Technology is a multi-sectoral university which offers a wide range of study options.

Academic Excellence
By virtue of its merit-based selection, it attracts the most talented students who perpetuate a culture of academic excellence.

Recognized Qualifications
The academic programs are duly accredited by the respective professional bodies, and the qualifications are recognized internationally for their quality and relevance.

State-of-the-art Labs and Studios
There are well-equipped labs, workshops and studios for art and design work.

On-campus Hostels
There are separate hostels for boys and girls, with dining and administrative support facilities. Rooms are furnished for single and double occupancy.

Quality Culture
NUST invests in the best. Quality standards and international best practices are followed in letter and spirit.

Counselling and Career Advisory Services
The University has a specialized Centre to guide and help the students to cope with adjustment and stress-related issues. Besides, Career Development Center provides programs and services to help students to make effective career choices.

Scholarships
The University provides various types of financial support and incentives to both talented and needy students in the form of scholarships, fee waivers and deferred payments.

Entrepreneurial Culture
NUST infuses a spirit of enterprise among its students through taught courses and programs designed to nurture budding entrepreneurs.
Research Facilities

NUST aims to grow as a leading research-intensive university, comparable to the best in the world, within the next 10 years. Its main thrust is on high-quality teaching and goal-oriented Research and Development (R&D). The University’s postgraduate programs help create the requisite research culture, supported by well-qualified faculty and need-based research projects. Being a premier institution of higher learning, the University gives prime importance to the promotion of a conducive research environment and related eco-system. As science laboratories and workshops are essential for research and innovation, the University dedicates maximum resources on purchase of state-of-the-art equipment. These sophisticated laboratories help researchers undertake research in cutting-edge areas.

NUST has a special focus on innovation through applied research. The number of postgraduate programs and scholars is growing every year. There is an increasing number of industry-related and collaborative projects which reflects the confidence of local industry and international partners in the expertise and potential of the students and faculty.
Institutions and Programs

**Constituent Institutions** 23

**Programs**
- Undergraduate 29
- MS / MPhil 60
- PhD 41
- **Total** 130

**Fields**
- Engineering
- Management Sciences
- IT
- Basic Sciences
- Medicine & Applied Biosciences
- Social Sciences & Humanities
- Art, Design & Architecture
Campus Life
NUST is a residential teaching and research university where a significant number of undergraduate and graduate students as well as faculty live on campus, showing a blend of academic and residential life. The campus lifestyle is distinctive, based on vibrant and interactive community living. The residents improve their social and intellectual skills through participation in a range of activities through membership of various clubs and societies.

Centre for Counselling and Career Advisory (C³A)
The Centre offers professional, psychological and educational assessment, guidance and counselling and related services to members of the NUST community to advance and enhance the academic and personal growth of students and members of the University in general. It has a dedicated team of trained psychologists and counsellors conducting aptitude and psychological testing coupled with counselling and undertaking research projects at the same time. The Centre also functions as a support organization that strives to develop students into wholesome and productive human beings. Psychological testing facilities at the Centre assist students in having a clearer understanding of their personality, their strengths and weaknesses and problematic areas of their lives, thus guiding them towards best possible choices and better adjustment in everyday life.
Hostels

Being a research-led university at the national level, NUST provide hostel facilities to all those who wish to stay on the campus. Besides subsidized good-quality food, the students have access to digital library resources of the HEC through high-speed internet connectivity and 24-hour power supply in the technology smart campus. There are separate hostels for boys and girls equipped with administrative support facilities.
Spirit of Enterprise

The University breeds entrepreneurial culture to inspire and guide students to become job-providers instead of job seekers. Entrepreneurship is taught as a subject, and aspiring students are guided, groomed and mentored to compete in business plan competitions and given space in Technology Incubation Centre at the University to establish their businesses. The University organizes a national business plan competition under the banner of DISCOVER. The Prime Minister has extended his patronage to the event organized as a national competition each year.
Research, Innovation & Commercialization

One of the influential factors contributing to the national development is the university-industry linkages. Universities have proven to be an indispensable source of research and innovation, contributing to national growth. NUST has successfully implemented the concept by encouraging the local industry, both in the public and private sectors, to collaborate with university researchers, and benefit from state-of-the-art laboratories. These linkages will yield long-term benefits that are mutually beneficial.

Centre for Innovation & Entrepreneurship is designed to promote discovery of knowledge and technological innovation, with a view to improving quality of life, and contributing to Pakistan’s socio-economic development. In order to institutionalize commercialization of University output and to facilitate researchers in linking up with industry, NUST took the lead and established a comprehensive, Research, Innovation & Commercialization (RIC) ecosystem comprising the following:

» Directorate of Research
» Directorate of Innovation & Commercialization
  • Intellectual Property Office
  • Technology Transfer Office
  • Industry Liaison Office
» Technology Incubation Centre
» Professional Development Centre

The Centre houses innovative commercial initiatives under one roof to reinforce the University’s resolve to promote innovation & entrepreneurship by creating a dynamic environment that fosters creativity.

Professional Development Centre (PDC)
The PDC aims at enabling working professionals to remain updated with the latest developments in their respective disciplines, enhancing their knowledge, employability and managerial skills. It conducts high-value workshops, short courses and seminars.

Corporate Advisory Council (CAC)
The CAC serves as a platform for industry and NUST to establish collaboration of mutual benefit. It encompasses 11 different industrial sectors including Automotive, Health, Pharmaceuticals, Infrastructure, Information Technology and Telecom, Engineering, Banking and Financial Services, Power and Energy, Chemicals, Defence Technology, Intellectual Property and Social Sector. Each sector is co-chaired by two Senior Executives (one from NUST and one from the Industry). Its objectives are:

» Help develop required university-industry collaborations for “knowledge economy” and “technology-driven development”
Global Think Tank Network (GTTN)

NUST has established a Think Tank to influence policy making and create awareness among the masses in general and civil society in particular on national and international issues. Its mission is to actively influence nation-building through regional and international knowledge-based collaboration with the vision to ultimately evolve into a global network of think tanks for promoting development, justice, peace, prosperity, and harmony at national, regional and global levels.

» Build mutual trust and faith
» Build, produce and provide knowledge and knowledge workers
» Visible, effective and measurable contribution
» Help productive employment for NUST graduates in Pakistan
» Joint studies, projects and R & D (domestic & global industries)
» Encourage domestic and global Industry to invest in NUST R&D facilities
» Help initiate appropriate projects in NUST Technology Park
» Undertake required studies jointly with Industry to assist the Government in rapid development & economic growth
Centre for International Peace & Stability

The Centre has been established to prepare leaders and managers for International Peacekeeping and Peacebuilding operations and conduct academic programs in the disciplines of International Relations and Peace & Conflict Studies. It is envisioned to grow as a centre of excellence in international peace and stability. It was inaugurated by UN Secretary-General, HE BAN Ki-moon, on August 13, 2013.
Student Support Facilities

NUST has elaborate student support infrastructure and facilities to make the students comfortable during their stay at the Main Campus as well as satellite campuses. It includes a Student Centre which facilitates their interaction with the University offices and guides their co-curricular activities. There are cafeterias, provision stores, stationery shops, banks, dry-cleaners and laundries, bakeries, messes, photo-shops, tailors, parlours, hair-cutting saloons, etc. These facilities help student devote their effort to learning and research and spend their leisure in a relaxing environment.
Sports and Recreation

There are ample sports facilities for both outdoor, including adventure sports, and indoor games at all the campuses. Thanks to local climatic conditions, one can pursue the passion for sports throughout the year. There are many intra-University and inter-university competitions which provide the students opportunities to excel in their respective areas. An all-weather indoor gymnasium is ready for commissioning at the Central Campus. There are other recreational diversions that allow students to pursue their hobbies in relaxing environments.

Sports facilities and infrastructure include athletics tracks, cricket grounds, squash courts, swimming pools, football grounds, hockey grounds, gymnasia, volleyball courts, basketball courts, indoor sports halls, tennis courts, etc.

NUST students regularly participate in intra-University and inter-university sports competitions both at the zonal and national levels.
The campus remains abuzz with activities organized by the students. The Clubs and Societies not only provide a platform to students from different schools and faculties to work together, they also help them engage in activities involving local communities and students from other academic institutions. The University has more than one dozen central clubs and societies which help realize the objective of “Universities Building Leaders”. Besides these, constituent institutions have societies and clubs akin to their respective domains. Besides academic excellence, students display dynamic literary, creative and artistic abilities and aptitude for extra-mural activities. In order to provide organized opportunities to work in the company of like-minded individuals, students are encouraged to join various clubs and societies such as International Association for the Exchange of Students for Technical Experience (IAESTE) - Islamabad Chapter, Entrepreneurs Club, Community Service Club, Science Society, Literary Circle, Bazm-e-Pakistan, Adventure Club, Aeromodelling Club, Drama and Debating Society, Media Club, Environment Club, Fine Arts Club and many more.
Civic Engagement

Institutions of higher learning have fast assumed discernible role in building economies, producing future leaders and encouraging civic engagements. There is now greater awareness than ever before, in the light of Higher Education Commission guidelines and directives, about what the universities should do to make the students not only proficient professionals, but also compassionate global citizens.

Community Service is not only practiced as a voluntary activity by the student bodies, organized in clubs and societies, such as Community Service Club, Environmental Club, it forms an integral part of the curriculum as a two credit-hour course based on lectures (by renowned social workers) awareness campaigns and field work. The University is an active member of the Talloires Network which works towards civic engagement in the Universities. NUST spearheaded an initiative under the network to twine 5 Pakistani universities with five similar universities from the US. The concluding ceremony was held at NUST. On this occasion, the Pakistan Chapter of Talloires Network was launched with 33 Pakistani universities on board. Its secretariat has been established at NUST.
International Linkages

In line with one of its strategic thrusts, namely Internationalization and Global Perspective, NUST has developed strong international linkages with foreign universities and institutions of repute.

The purpose of these linkages is to encourage a two-way flow of knowledge at minimum expense. This aspect also adds a global perspective to our activities and assists in remaining current with latest technological advancements. In most cases, the linkages have gone beyond student and faculty exchanges to active research collaborations.
International Collaborations

The University has active academic and research linkages with many prestigious universities and research institutions around the globe.
NUST’s success lies in the galvanizing force of progressive vision and commitment par excellence. Although barely two decades old, the University has created a niche of its own in terms of quality of education and futuristic outlook. Some up-coming projects mirror its future course and long-term objectives.

Medical Complex
Being a comprehensive University, NUST has a well-established Medical College and a School of Applied Biosciences. The planned project at the Central Campus includes a 500-bed teaching hospital, School of Health Sciences, School of Pharmacy and a School of Nursing and Paramedics. The project which has already taken off will broaden the scope of teaching and research in the field of medical education and health biotechnologies.

Centre for Energy Systems
The Centre, which has been established recently, is being expanded in terms of its scope and research capabilities and relocated to a purpose-built premises to boost its research potential.

School of Social Sciences and Humanities
Henceforth Social Sciences formed a part of the NUST Business School which plans to introduce new disciplines in Management Sciences. Therefore, School of Social Sciences and Humanities has been established to widen the scope of studies in this domain. A dedicated school building is under construction to be completed before the commencement of academic year 2014-15.
Creativity
NUST at a Glance

Innovation
Quality Assurance

NUST was among the first ten national universities to establish a quality enhancement set-up. Being a multi-campus university, the management went an extra mile by establishing Local Quality Enhancement Cells at all the campuses across the country.

NUST is a member of various international quality assurance organizations with a strong focus on developing personal skills, knowledge and abilities that enable faculty, staff and students to perform their duties efficiently and remain abreast with the advancements in their relevant disciplines. This objective is achieved through training, seminars, workshops, conferences and other developmental activities.

Asia Pacific Quality Network (APQN), comprising quality assurance agencies of the entire Asia-Pacific Region, awarded its Best/Model Internal Quality Assurance Award for 2014 to National University of Sciences and Technology (NUST) during an impressive ceremony held at Hanoi, Vietnam, on March 7, 2014.

The award was given in recognition of strict enforcement of quality assurance regime by the University, choice selection of quality people, and development and implementation of best practices, along with application of technology in all its activities, as specified by the Higher Education Commission.
NUST Identity

The NUST emblem is an artistic interpretation of the vision of the University.

The Book of Knowledge lights up the darkness, through the Vine of Wisdom which bears the two moons and stars facing towards the East and the West, symbolizing the diversity of disciplines and the fruit of knowledge.

The Rising Sun brings change, hope and enlightenment. It emanates inspiration and from the light of knowledge, four birds take wing from the nests of light, and spread out to the four corners of the world, symbolizing the quest for spiritual gratification through knowledge and wisdom.

The NUST Blue is a colour that represents the future. It carries all the characteristics of the colour blue, like dignity, grace, freshness, professionalism, prudence and resolve.