



PROSPECTUS 2025-26

NFC INSTITUTE OF ENGINEERING & FERTILIZER RESEARCH



NFC INSTITUTE OF
ENGINEERING & FERTILIZER
RESEARCH FAISALABAD





اللہ کے (پاکے) نام سے (شروع) جو بڑا مہربان نہایت رحم والا ہے



NFC INSTITUTE OF ENGINEERING & FERTILIZER RESEARCH FAISALABAD



Where Bright Future Begins

NFC Institute of Engineering & Fertilizer Research is envisaged to grow as a modern center of excellence for research and development in the fields of sciences, engineering and technology. NFC IEFR is committed to the provision of intellectual leadership and to emerge as a beacon of light for the country's scientific and technological progress and needs.



Download Prospectus Now from:
<https://iefr.edu.pk/prospectus.php>



Degree Programs

- B.Sc. Chemical Engineering (OBE Level-II)
- B.Sc. Electrical Engineering (OBE Level-II)
- B.Sc. Mechanical Engineering (OBE Level-II)
- B.Sc. Civil Engineering (OBE Level-II)
- B.Sc. Computer Science
- Bachelor of Business Administration (BBA)
- Bachelor of Business & Information Technology (BBIT)

Affiliated with University of Engineering and Technology, Lahore

- B.Sc. Information Technology
- B.S. Artificial Intelligence
- B.S Cyber Security
- B.S. Data Science
- B.S. Tourism & Hospitality Management
- B.S. Biochemistry
- B.S. International Relations
- B.S. Environmental Science

Affiliated with Khawaja Fareed University of Engineering and Information Technology, Rahim Yar Khan



**All Engineering Programs Accredited by:
Pakistan Engineering Council (PEC)
at OBE Level-II**

**B.Sc. Computer Science is Accredited by:
National Computing Education
Accreditation Council (NCEAC)**



**NFC INSTITUTE OF ENGINEERING &
FERTILIZER RESEARCH, FAISALABAD**
Ministry of Federal Education & Professional Training
Government of Pakistan



Message to the Youth

Dr. Khalid Maqbool Siddiqui
Federal Minister
Ministry of Federal Education and
Professional Training
Government of Pakistan

Higher education is key to national development, equipping youth with the knowledge and skills needed to lead and innovate. The Government of Pakistan places great importance on human resource development, with technical and professional education at its core.

I am pleased to address students aspiring to join the NFC Institute of Engineering and Fertilizer Research (IE&FR), Faisalabad - a respected institution dedicated to academic excellence and accessible education.

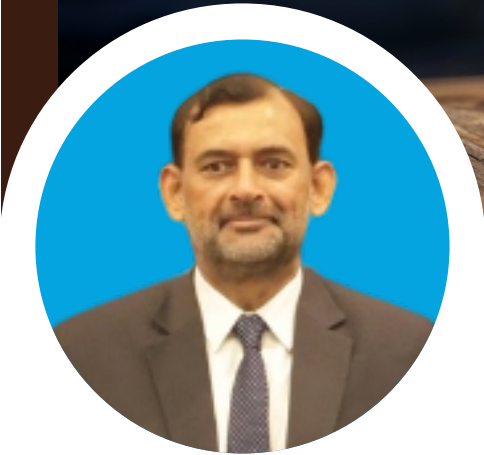
In developing nations, technical education empowers youth and drives economic growth. IE&FR's commitment to quality education across all socio-economic backgrounds plays a vital role in building a skilled and forward-looking workforce.

The Ministry of Federal Education and Professional Training is focused on improving access to vocational and professional education. Under the Prime Minister's vision, our efforts are aligned with Sustainable Development Goal 4 (SDG-4) to ensure inclusive and quality education for all.

The establishment of the National Curriculum Council (NCC) is another step towards national educational standards.

Our youth is our greatest strength. With education and training, you hold the key to a brighter, more stable future for Pakistan. I wish you success in all your endeavors.

Chairman Message



Hassan Saqlain

Chairman | Board of Directors

The 21st century presents an evolving landscape defined by rapid change, innovation, and global connectivity. In this environment, success demands professionals who are not only technically proficient but also capable of critical thinking, adaptability, and leadership across diverse cultural and societal contexts.

The Government of Pakistan is fully committed to transforming higher education institutions into hubs of excellence—cultivating professionalism, innovation, and ethical responsibility. At the core of this vision lies professional education and applied research, which are vital to developing informed, forward-thinking citizens and fostering a more inclusive and progressive society rooted in national values.

In alignment with this national agenda, the NFC Institute of Engineering & Fertilizer Research

(IE&FR), Faisalabad is advancing efforts to standardize and elevate academic programs in science, engineering, and technology. These initiatives are guided by the Higher Education Commission (HEC) and executed through national accreditation bodies such as PEC, NCEAC, and others.

With a strong academic legacy, cutting-edge research, and a student-focused learning environment, IE&FR stands as a premier institution dedicated to developing future-ready professionals. I invite you to be part of this transformative journey at NFC IE&FR, Faisalabad.

Ministry of Federal Education and
Professional Training
Government of Pakistan



Director Message



Prof. Dr. Najaf Ali Awan
Director/CEO
NFC Institute of Engineering &
Fertilizer Research, Faisalabad

It is my pleasure to welcome you to the NFC Institute of Engineering & Fertilizer Research (IE&FR), Faisalabad—an institution committed to excellence in professional education and human capital development.

At IE&FR, we firmly believe that professional and technical education is the driving force behind national growth and transformation. Our mission is to provide education that meets international standards while addressing the evolving needs of Pakistan's industrial and economic landscape. We are dedicated to advancing knowledge in engineering, science, technology, and business administration—disciplines central to national progress.

While academic excellence remains our core focus, we recognize that true success lies in preparing students for real-world challenges. To this end, we continuously strengthen our partnerships with industry, business, and the wider community to ensure that our graduates are not only well-educated but also job-ready.

Our curriculum emphasizes practical, hands-on training through integrated course modules and industry placements. This applied learning approach equips our students with a competitive edge in the job market and ensures they contribute meaningfully from day one.

We wish you success in your application process and look forward to welcoming you to a transformative academic journey at IE&FR.

Best wishes for your future endeavors.

Laying the Foundation for Your Professional Growth



KHWAJA FAREED
UEIT
RAHIM YAR KHAN

PROFILE

Sardar Saleem Haider Khan
Chancellor

Prof. Ir. Dr. Amir Azam Khan
Vice Chancellor

Dr. Shahzad Murtaza
Pro-Vice Chancellor

Dr. Javed Iqbal
Registrar

Prof. Dr. Muhammad Saghir
Dean of All Faculties
Director Academics

Dr. Saleem Ullah
Treasurer

Engr. Dr. Badar ul Islam
Associate Dean
Faculty of Information Technology
Chairperson Affiliation Committee

Dr. Kashif Munir
Controller of Examination





UET LAHORE PROFILE

Sardar Saleem Haider Khan

Chancellor

Prof. Dr. Shahid Munir

Vice Chancellor

Prof. Dr. Nasir Hayat

Pro Vice-Chancellor

Mr. Muhammad Asif

Registrar

Prof. Dr. Muhammad Shoaib

Dean, Faculty of Electrical Engineering

Prof. Dr. M. Shahid Rafique

Dean, Faculty of Natural Sciences,
Humanities & Islamic Studies

Prof. Dr. Tauseef Aized

Dean, Faculty of Mechanical Engineering

Prof. Dr. Khalid Farooq

Dean, Department of Civil Engineering

Prof. Dr.-Ing. Naveed Ramzan

Dean, Faculty of Chemical, Metallurgical
& Polymer Engineering
Chairman Affiliation Committee



Prof. Dr. Muhammad Nasir Malik

Chairman, Institute of Business &
Management

Mr. Muhammad Zargham Nusrat

Controller of Examination

Dr. Muhammad Awais Hassan

Convener Admission Committee

Prof. Dr. M. Usman Ghani Khan

Chairman Department of Computer Science





NFC INSTITUTE OF ENGINEERING & FERTILIZER RESEARCH, FAISALABAD

VISION

To acquire prominence at national and international level as a unique source of quality education and distinguished research, which stimulates all to excel in their respective endeavors to emerge as winners.

OBJECTIVES

1. To develop, implement and monitor the quality standards and moves in the institute.
2. To meet the challenges of global compatibility to excel the education standards.
3. To develop a viable and sustainable mechanism of quality assurance in the education sector of the country.
4. To produce the manpower that could serve the society in an efficient, effective and honest manner.

MISSION

NFC Institute of Engineering & Fertilizer Research is committed to uplift the quality of engineering/technical education in all the departments to fulfill the requirements and satisfaction of its students, their potential employers and other stakeholders. This goal will be achieved by continuous monitoring and assessments with a provision of training, guidance and resource management. In this way, we will ensure to maintain a sustainable quality of education in the institute that will significantly contribute in the excellence of technical education and prosperity in Pakistan.

CONTINUOUS IMPROVEMENT

The PDCA Cycle



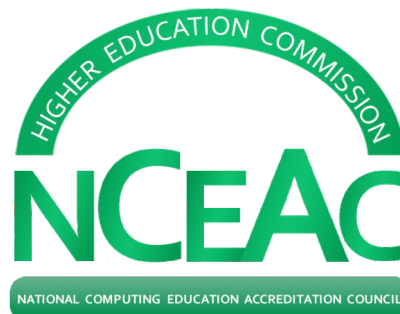
OUTCOMES BASED EDUCATION



Program Learning Outcomes (PLOs)

1. **Engineering Knowledge:** An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** An ability to identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
3. **Design/Development of Solutions:** An ability to design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
4. **Investigation:** An ability to investigate complex engineering problems in a methodical way including literature survey, design and conduct of experiments, analysis and interpretation of experimental data, and synthesis of information to derive valid conclusions.
5. **Modern Tool Usage:** An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities, with an understanding of the limitations.
6. **The Engineer and Society:** An ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solution to complex engineering problems.
7. **Environment and Sustainability:** An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
9. **Individual and Team Work:** An ability to work effectively, as an individual or in a team, on multifaceted and/or multi-disciplinary settings.
10. **Communication:** An ability to communicate effectively, orally as well as in writing, on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project Management:** An ability to demonstrate management skills and apply engineering principles to one's own work, as a member and/or leader in a team, to manage projects in a multi-disciplinary environment.
12. **Lifelong Learning:** An ability to recognize importance of, and pursue lifelong learning in the broader context of innovation and technological developments.

National Computing Education Accreditation Council (NCEAC)



National Computing Education Accreditation Council (NCEAC) is a recognized accreditor of bachelor level computing degree programs in Pakistan. It ensures the quality of education which students receive in Higher Education Institutions in Pakistan. It provides world leadership in assuring quality and in stimulating innovation in applied sciences, computing, engineering, and technology education.



OBJECTIVE

To ensure the quality of computing degree programs in Higher Education institutions in Pakistan and fostering the intellectual development of students interested in pursuing the computing profession.

NEED

In today's knowledge-driven era, ensuring the quality and relevance of educational programs is essential. Although relatively young, computing professions are playing a transformative role in national development.

In Pakistan, computing education is still evolving and requires structured direction, oversight, and quality assurance mechanisms. Accreditation is a key tool in achieving these goals. It safeguards the interests of all stakeholders - students, parents, educators, employers, and the public - by ensuring that academic programs meet defined quality standards. Accreditation communicates that:

- Programs meet minimum academic benchmarks for students and parents.
- Faculty and administrators receive insights for continuous improvement.
- Employers can trust graduates' readiness for professional roles.
- Public resources are being used effectively and responsibly.
- Graduates are conscious of public health, safety, and ethical standards.

Recognizing its importance, the National Curriculum Revision Committee for Computer Science (2003–2004), under the Higher Education Commission, recommended the establishment of the National Computing Education Accreditation Council (NCEAC) to oversee accreditation of computing degrees in Pakistan.

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ROAD TO
SUCCESS



Institute Profile

NFC Institute of Engineering & Fertilizer Research (IE&FR), Faisalabad, is one of the new-generation Pakistani institutions with a progressive and innovative outlook. The Institute is envisaged to grow as a modern center of excellence for research and development in the fields of science, engineering, and technology. NFC IE&FR is committed to providing intellectual leadership and aims to emerge as a beacon of light for the country's scientific and technological progress and needs.

The Institute places equal weight on the dissemination of knowledge (teaching), the creation of knowledge (research), and the application of knowledge (development). IE&FR also contributes in developing competent scientific and technical manpower with an international level of higher education to meet the needs of the country's public and private sectors.

The Institute has maintained the standard of quality education, research & development services in line with international standards.

Historical Background

Agriculture is central to Pakistan's economy, prompting the establishment of the first fertilizer plant in 1958 to boost productivity. To support this sector with local research solutions, the Fertilizer Research & Development Institute (FR&DI) was founded in Faisalabad in 1986, with technical and financial assistance from the United Nations Industrial Development Organization (UNIDO) and funding of 20 million rupees from UNIDO and the National Fertilizer Corporation (NFC) of Pakistan.

In 1998, responding to national needs for engineering education, FR&DI was upgraded to offer a Bachelor's degree in Chemical Engineering while continuing its research activities. Approved by the Government of Pakistan and affiliated with the University of Engineering & Technology (UET), Lahore, the institute was renamed NFC Institute of Engineering and Fertilizer Research (IE&FR) to reflect its expanded role.

Initially managed by the National Fertilizer Corporation—a subsidiary of the Ministry of Industries and Production—the institute leveraged its industrial connections to provide practical training and internships for students. Recognizing its valuable contribution to engineering education and professional training, the institute has now been placed under the administrative control of the Ministry of Federal Education and Professional Training.





Departmental Highlights – Engineering Excellence at NFC IE&FR

Chemical Engineering Department

Established with the aim of enhancing research and providing high-quality education, the Department of Chemical Engineering equips students to thrive in a dynamic technical environment. The department nurtures a strong ethical foundation, professionalism, and collaborative abilities.

- Initial Intake: 30 students
- Increased to 60 seats: In 2000
- First Batch Graduated: 2002
 - Job Placement Rate: 90%

Expansion of Engineering Disciplines

- Electrical Engineering: Launched in September 2003 to meet the industry's demand for skilled electrical engineers in Pakistan.
- Mechanical Engineering: Started in 2004, the 4-year Bachelor's program emphasizes technical skills in the design and operation of mechanical systems.

Postgraduate Excellence

To meet modern industrial demands, NFC IE&FR launched the Master's in Chemical Engineering in September 2007, affiliated with UET Lahore.

- NFC IE&FR is the first institute permitted by UET Lahore to start M.Sc. classes.

Global & National Recognition

All engineering programs are affiliated with UET Lahore and accredited by PEC for their academic excellence and facilities. The programs are currently recognized under OBE Level II (Outcome-Based Education). Research collaborations with international universities are actively ongoing.

Distinguishing Features of NFC IE&FR

- Skill Development Programs & Industrial Trainings
- Regular Theory-Practical Presentations
- Monthly Surprise Tests & Quizzes
- Management & Spoken English Courses
- Timely Completion of Academic Programs
- Modern Mid-Term & Final Exam System
- Regular Seminars, Workshops, and Exhibitions

Program Affiliations & Accreditations

Program Level	Engineering Discipline	Affiliation
Bachelor's (B.Sc)	Chemical, Electrical, Mechanical, Civil	UET Lahore & PEC (Accredited, OBE Level-II)



High Profile Faculty

At NFC IE&FR, our faculty represents a dynamic fusion of academic excellence and hands-on industrial expertise. Many of our educators hold advanced degrees from prestigious international institutions, bringing with them global insights and a deep understanding of their specialized fields. Beyond their scholarly credentials, our faculty members possess practical experience and a profound awareness of the challenges and innovations shaping Pakistan's industrial landscape. This unique combination enables them to deliver not just knowledge, but wisdom rooted in real-world relevance.

Our teaching philosophy centers on unlocking student potential through:

- *Rigorous and engaging classroom instruction*
- *Collaborative learning environments that foster critical thinking*
- *Interactive discussion culture, promoting analytical exploration*
- *Mentorship in research and innovation*
- *Strategically planned industrial visits and trainings to align academic learning with practical exposure*

Through this holistic approach, NFC IE&FR ensures that every student is empowered to evolve into a competent, creative, and industry-ready professional.



"Shaping Innovators Through Insight, Excellence, and Industrial Experience."



Demographic Location

Over the past five decades, Faisalabad has transformed from a barren landscape into one of Pakistan's most dynamic metropolitan centers. It has emerged as a key hub of industry, agriculture, culture, commerce, and education.

Founded in the 1880s and originally named Lyallpur, the city was part of the Chenab Canal Colony - a British-era development initiative. The area, then known as Sandal Bar, was largely uninhabited, with Pakka Marri serving as a stopover for caravans journeying between Jhang and Lahore. Urban planning began under British rule, and in 1895, the foundation for the first residential zone was laid.

Lyallpur was named after Lt. General Sir James B. Lyall, then Governor of Punjab, and by the early 20th century, it was thriving. Thanks to its rapid industrialization, particularly in textiles, it earned the nickname "Manchester of Pakistan" and became known as the "Multicolored Jewel of the Lower Chenab."

Today, Faisalabad stands as a symbol of resilience, innovation, and economic progress reflecting its rich heritage and pivotal role in Pakistan's industrial development.





By 1902, Lyallpur's population exceeded 4,000, supported by a growing network of homes and marketplaces. It became a district in 1904, and by 1906, its iconic Clock Tower - designed under the supervision of Ghulab Khan, a descendant of the artisans behind the Taj Mahal was completed. The city's unique layout, crafted by British architect Desmond Yong, mirrors the Union Jack, with eight bazaars radiating from the Clock Tower, all interconnected through the central Goal Bazaar, covering a total of 110 acres.

By 1916, Lyallpur had established a thriving grain market and expanded its Civil Hospital, laying the groundwork for political consciousness during World War II. The period saw increased civic engagement, public speeches, and nationalistic fervor. In 1943, Quaid-e-Azam Muhammad Ali Jinnah addressed a landmark gathering at Dhobi Ghat Ground, further galvanizing public spirit.

Post-independence in 1947, Lyallpur experienced accelerated industrial growth, driven by the vision and dedication of entrepreneurs and workers alike. In 1977, the city was renamed Faisalabad in honor of King Faisal bin Abdul Aziz of Saudi Arabia.

Today, Faisalabad is Pakistan's third-largest city and a powerhouse of textile manufacturing. It hosts 67 large and 161 small textile units, including 22 spinning mills, alongside a strong agricultural market. The city also houses Pakistan's oldest agricultural university and supports a wide range of industries: Chemical fertilizers, synthetic fibers, pharmaceuticals, food processing, oil and ghee, soap, sugar, hosiery, and flour. It is a vital wholesale center for cloth and grain, with primary crops such as wheat, cotton, and sugarcane. Blending heritage with modernity, Faisalabad continues to thrive as a center of education, innovation, and industrial progress, maintaining its status as a cornerstone of national development.

NFC IE&FR Faisalabad – A Pillar of Industrial and Agricultural Advancement

At the heart of this dynamic city lies the NFC Institute of Engineering & Fertilizer Research (IE&FR), which has played a pivotal role in supporting Faisalabad's industrial and agricultural sectors.

The Institute maintains strong collaborative ties with local industries and agricultural enterprises, and actively engages in research and development projects in partnership with various organizations.

NFC IE&FR also enjoys a close association with the Faisalabad Chamber of Commerce & Industry, ensuring real-world engagement and relevance in its academic programs. This strategic linkage with the region's industrial ecosystem offers exceptional employment and internship opportunities for IE&FR graduates, preparing them to be impactful contributors in Pakistan's evolving economy.



REGISTRAR OFFICE



Welcome to NFC IE&FR, Faisalabad - an institution where academic excellence meets industry relevance. As Registrar, I take pride in our legacy of producing competent professionals through a commitment to quality education, research, and innovation.

With strong industrial and agricultural linkages, the Institute offers a dynamic learning environment supported by modern infrastructure and PEC-recognized Outcome Based Education (OBE). We strive for efficient academic administration, inter-departmental synergy, and student focused services to foster continuous growth.

Together, we remain dedicated to strengthening NFC IE&FR's role as a premier center of higher learning and national development.

Mr. Muhammad Adeel Safdar

Registrar/Head (Persl. & Admn.)

HR & Administrative Management



Mr. Shabeeb Ahmad Gill
Manager
(Persl. & Admn./HR)



Syed Iftikhar ul Hassan
Deputy Registrar
Deputy Manager (Persl.)



Mr. Mehboob Ashraf
Deputy Manager
(Persl. & Admn.)



Rana Shamas-ul-Haq Khan
Assistant Registrar
Assistant Manager
(Admn./Legal)



NFC IE&FR campus covers 25 acres on Faisalabad, Jaranwala Road, near Kohinoor and People's Colony, a well-developed area with essential urban facilities. Designed to support academic excellence, the campus offers modern infrastructure and a learning-focused environment.

The Institute boasts a well-structured and purpose-built campus featuring an administrative block, a central library, a fully air-conditioned and aesthetically designed auditorium, a grand Jamia Mosque, separate hostels for male and female students, and dedicated academic buildings.

Each departmental facility houses faculty offices, modern air-conditioned classrooms, and state-of-the-art laboratories to support advanced learning and research. To further enhance campus life, a multi-purpose sports complex, swimming pool, expansive playing fields, and jogging tracks are currently under development—designed to seamlessly integrate into the Institute's impressive architectural landscape.

CAMPUS & FACILITIES

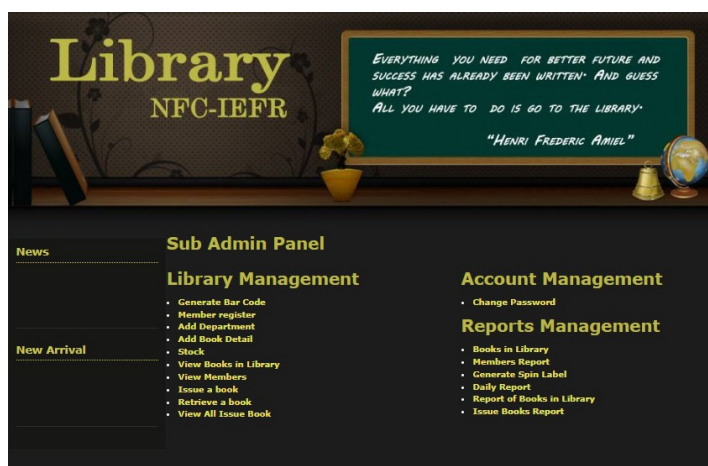
NFC Institute of Engineering & Fertilizer Research, Faisalabad
Ministry of Federal Education & Professional Training

LIBRARY

The library serves as a cornerstone of academic and research excellence in an institution, offering access to the collective knowledge and experiences of others. At IE&FR, the central library is committed to delivering high-quality resources and services that empower learning, support research, and enrich the academic journey of students, faculty, staff, and the broader community.

The library maintains a rich collection of over 20,000 technical books, reports, and seminar proceedings, covering key fields including engineering, computer science, environmental sciences, and fertilizer technology.

The IE&FR Library regularly subscribes to leading journals in engineering, environmental sciences, and chemical process industries, enabling students and researchers to stay informed of the latest global advancements. The library is fully automated, utilizing the Dewey Decimal Classification System and a barcode based circulation system. Its automation software developed in-house functions efficiently and supports seamless library operations.



 **Advancing Learning
with Every Page and Click.**

Digital Library Services

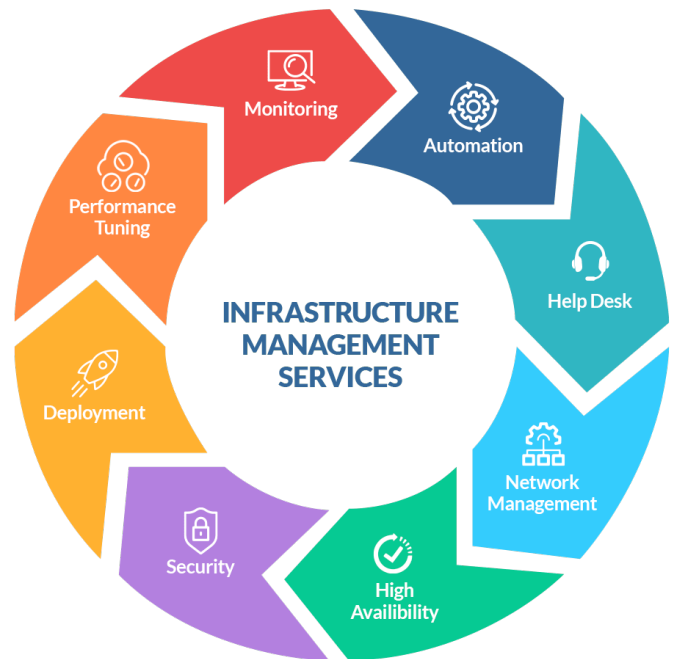
NFC IE&FR is proud to offer comprehensive Digital Library Services in collaboration with the Higher Education Commission (HEC). This initiative aims to enhance academic and research excellence across Pakistan by providing seamless access to international scholarly resources. Through this platform, faculty, researchers, and students benefit from a vast repository of over 17,000 peer-reviewed journals and databases, spanning disciplines such as science, technology, social sciences, and humanities.

The digital library features content from eight globally renowned publishers, enabling users to explore cutting-edge research and stay current with global academic developments—all through a convenient online interface.



IT INFRASTRUCTURE & Management Services

IE&FR is committed to maintaining cutting edge computing infrastructure that aligns with the rapid evolution of information technology. Recognizing the critical role of a modern digital environment in delivering quality education, the Institute offers state-of-the-art computing and internet facilities to support academic, research, and administrative functions.



**Empowering Innovation
Through Seamless
Connectivity and
Cutting-Edge Technology.**

With over 100 high-performance workstations equipped with Intel Core-series processors and the latest software environments, all systems are seamlessly integrated into a robust Local Area Network (LAN). This infrastructure ensures efficient data access, collaboration, and learning across departments.

IE&FR also provides high-speed internet connectivity, including both DSL and wireless access, supporting advanced research and learning. Students enjoy complimentary internet access across campus from 7:30 AM to 10:00 PM, enabling continuous engagement with academic resources and global research platforms.



Professional Skills Development Program

The Professional Skill Development Centre stands as a distinguished initiative of the Institute, dedicated to fostering continuous learning and capacity building within the engineering and industrial sectors.

The Centre organizes a diverse array of seminars, workshops, certification programs, short courses, and training sessions tailored for senior and mid-level professionals across various industries.

These programs are strategically designed to address pressing industrial challenges and enhance professional competencies. Over the past nine years, the Centre has successfully conducted sessions on a wide range of contemporary topics including analytical techniques, energy and fuel conservation, chemical process optimization, marketing and communication strategies, human resource management, advanced computer applications, environmental management systems, modern instrumentation, process control, and industrial automation.



Prime Minister's Youth Skill Development Program (PMYSDP)



MISSION

To provide direction, support and an enabling environment to the public and private sectors to implement training for skills development in order to enhance social and economic profile.



**NFC INSTITUTE OF
ENGINEERING AND
FERTILIZER RESEARCH
FAISALABAD**

**Registered Institute with
NAVTTTC**



VISION

**Skills for Employability,
Skills for All.**

“Empowering Futures Through a Legacy of Skills and Employability”

NAVTTTC FUNCTIONS

1. Policy Formulation

Developing policies and strategies to enhance the quality and relevance of technical and vocational education and training (TVET) programs in Pakistan.

2. Curriculum Development

Creating standardized curricula for various vocational courses to ensure alignment with industry needs and standards.

3. Accreditation and Certification

Accrediting TVET institutions and programs while overseeing the certification process for individuals completing vocational training to maintain quality standards and recognition of skills.

4. Skill Assessment and Testing

Conducting assessments and testing to evaluate the proficiency of individuals in different vocational trades, ensuring they possess required competencies.

5. Industry Linkages

Facilitating partnerships between TVET institutions and industries to promote industry-relevant training programs and provide practical training opportunities such as internships and apprenticeships.

6. Capacity Building

Supporting the professional development of TVET instructors and staff through training programs and workshops to ensure effective delivery of vocational education.



- Connecting Academia with Industry
- Internship Opportunities
- Structured Industrial Training
- Hands-on Experience & Certification
- Industry Collaboration & Liaison
- Career Placement
- Support for Graduates



iNTERNSHIP & JOB PLACEMENT BUREAU



Student ADVISOR



Mrs. Tanzila Samin Khan
Student Advisor

As the Student Advisor, my role is to support you in both your academic journey and personal growth. Our office ensures that your study schedules are well-structured across all departments and that your progress particularly attendance is regularly communicated to your parents for transparency and support.

Beyond academics, we actively encourage your involvement in co- and extracurricular activities through various student societies. These platforms are designed to nurture leadership, creativity, and collaboration essential traits for future professionals.

We also assist departments in managing scholarship opportunities based on merit and financial need, ensuring that deserving students receive the support they require. Our mission is to guide you in becoming not just successful graduates, but well-rounded individuals ready to make a positive impact.



SPORTS FOR ALL

At NFC IE&FR, we believe in fostering a balanced academic and physical lifestyle. Our comprehensive Sports and Fitness Program encourages students to engage in recreational and competitive sports, promoting teamwork, resilience, and overall well-being. Students are actively motivated to explore their athletic interests through access to top-tier sports infrastructure. The Institute proudly offers well-maintained facilities for cricket, hockey, football, table tennis, lawn tennis, badminton, basketball, squash, and athletics. A state-of-the-art sports complex and an upcoming swimming pool further enrich the campus's recreational environment.



LIFE AT NFC IEFR

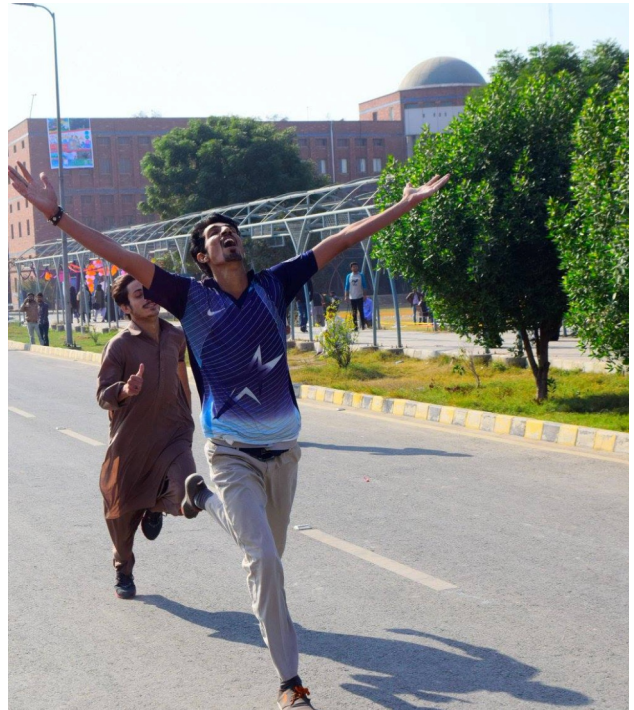
At NFC IE&FR, we envision your academic journey as a transformative experience one that challenges you to explore new realms of thought, discovery, and values.

We encourage you to cultivate new skills, confront real-world problems, and emerge with a broadened perspective shaped by your dedication and active engagement in campus life.

The knowledge and experiences you gain here will mirror your personal commitment and participation in our academic community.

Our campus fosters a vibrant, inclusive, and collaborative environment where students pursue excellence in both academics and extracurricular.

With a wide range of student-led societies, the Institute supports diverse interests, enabling holistic development and preparing students to shape the future with confidence.



SOCIETIES

Academic & Professional Societies

These societies focus on organizing educational events such as seminars, debates, workshops, and lectures that enhance intellectual growth and professional development. They serve as a platform for students to explore ideas beyond the classroom and engage with academic and industry leaders.

Recreational & Cultural Societies

These student-led societies are dedicated to planning co-curricular and recreational activities like annual nights, fun fairs, sports festivals, and cultural programs. Such events offer students a break from academics while fostering creativity, teamwork, and leadership skills. The administration actively supports these initiatives, recognizing their value in building a vibrant campus life.



A PLACE TO *STUDY*





A PLACE TO SOCIALIZE



IEEE - NFC STUDENT BRANCH

The IEEE–NFC Student Branch is part of a global network of over 1,600 IEEE student branches, dedicated to fostering innovation and technical growth among Electrical and Electronics Engineering students. It connects students with the professional world by organizing seminars, expert talks, technical competitions, and project exhibitions. The branch helps students build skills, gain exposure to emerging technologies, and engage with peers and professionals across the country. It plays a key role in bridging the academic–industry gap and promoting professional development.



ASHRAE NFC STUDENT BRANCH

ASHRAE NFC Faisalabad, established in 2022, ranks 4th in Pakistan and 41st globally among student branches. Affiliated with the global ASHRAE network, it promotes innovation, sustainability, and professional growth in HVAC&R engineering. The branch offers students access to research, design guides, scholarships, and events like workshops, webinars, industrial tours, and national competitions. Notable events include expert-led webinars, “TECHNOVA-I” design contest, and a visit to an 800-ton chiller plant, enhancing student learning and industry exposure.

IAHRNFC - IE&FR PAKISTAN Young Professional Network

The IAHR Young Professionals Network (YPN) at NFC-IE&FR, established in 2016, is affiliated with the International Association for Hydro-Environment Engineering and Research an independent global body of engineers and water experts founded in 1935. Focused on river hydraulics, water resource development, and eco-hydraulics, YPN supports Civil Engineering students through workshops, seminars, and events to enhance their academic and professional growth.



IEFR ACM Chapter - Computer Science Department

Established in 2011, the IEFR ACM Chapter connects students with the global computing community through the Association for Computing Machinery (ACM). It offers access to ACM’s Digital Library, educational resources, and career development tools. The chapter regularly hosts events such as the IEFR Computer Science Software Competition (ICSSC’19), drawing participation from leading universities across Pakistan. Through seminars, workshops, and competitions, students gain valuable experience in computing, teamwork, and communication, aligning with ACM’s mission to advance computing as a science and profession.



Literary & Debating Society

Established in 1999, the IE&FR Literary Society holds the distinction of being the oldest society on campus. It plays a vital role in nurturing students' personalities by offering a platform for co-curricular engagement. The society organizes signature events such as the Annual Night, Funfair, Seerat-un-Nabi Conference, and the All-Faisalabad Qirat & Naat Competition. It also hosts community-building events like Iftar dinners and various social gatherings.

The Debating Society, founded to harness the art of persuasion, empowers students with public speaking and critical thinking skills. It organizes inter-faculty and inter-university declamation contests and debate events. Members of the society have earned accolades at external competitions, strengthening IE&FR's presence in national academic circles.

Engineers' Blood Donor Society (EBDS)

Inspired by the Quranic message, "To save one life is to save all humanity," EBDS dedicates itself to community service through voluntary blood donation. With the motto "Just a Drop Can Crop," the society has facilitated life-saving blood donations for over 100 individuals. EBDS also conducts annual blood camps and awareness seminars. In collaboration with Mujahid Hospital, a blood screening camp was held on February 14, 2023, collecting 350 samples to build a reliable donor database.

IE&FRian Engineers Forum

This forum connects IE&FR alumni with current students and the industrial sector. Its mission includes enhancing the Institute's professional image, fostering industry relations, supporting internship placements, and organizing career development workshops. Senior alumni contribute to training initiatives, helping young engineers transition into the professional world.

IE&FRian's Hostel Society

This pioneering society supports residential students in personal and communal development. Known for its transparent selection process, it fosters a welcoming environment for newcomers and promotes values such as discipline and cultural awareness. Activities include national day celebrations, educational seminars, arts events, and personality development sessions. The society also provides comprehensive residential support and counseling services, working to ensure a peaceful, supportive hostel atmosphere.

ADMISSIONS COMMITTEE



Dr. Nasif Raza Jaffri
Convener
Admission Committee



Mrs. Tanzila Samin
In-charge
Admission Cell



Syed Shamim Raza
Convener
Refund Committee

Members - Admission Committee



Mr. Saeed Qadir
Member



Dr. Umair Munir
Member



Mr. Atif Ali Khan
Member



Mr. Zeeshan Amjad
Member



ADMISSION REGULATIONS

Who Can Apply

An applicant seeking admission in any of the following Degree Programs must fulfill the general requirements and specific criteria mentioned below:

- B.Sc. Computer Science
- B.Sc. Mechanical Engineering
- B.Sc. Civil Engineering
- B.Sc. Electrical Engineering
- B.Sc. Chemical Engineering
- Bachelor of Business Administration (BBA)
- Bachelor of Business & Information Technology (BBIT)
- BS Information Technology
- BS Artificial Intelligence
- BS Cyber Security
- BS Data Science
- BS Tourism & Hospitality Management
- BS Biochemistry
- BS Environmental Science
- BS International Relations

ADMISSION POLICY – 2025

ADMISSION CYCLE

Role of the Admission Committee

The Admission Committee serves as an advisory body to assist the Admission Cell, which is responsible for achieving higher legal admission numbers.

Recognizing the challenges in meeting admission targets and filling available seats across various disciplines, the committee has identified several contributing factors, including:

- High-percentage applicants prioritize Public Sector Universities (i.e., UET Lahore, UET Taxila, and BZU Multan).
- Timing differences in the merit list publication compared to competitive institutions.
- Effectiveness of social media marketing and outreach strategies.
- Competition from other institutions offering similar programs at varied fee structures.

Policy Measures

1. Admission Start Timeline

Admissions should commence following the announcement of the first entry test result by UET Lahore.

2. Admission Based on Intermediate Part-I Result

Admission should be considered on Intermediate Part-I / equivalent available result from the applicant.



3.1 Eligibility & Merit Determination for UET Lahore (Engineering) Programs

Program Category	Qualification Stream	Minimum Eligibility	Merit Components	Merit Formula
UET - Engineering Programs	Intermediate (F.Sc.)	60% marks in F.Sc.	ECAT Matric 1st Year	ECAT 33% Matric 17% 1st Year 50%
	DAE	60% marks	ECAT, DAE (First + Second Year Result)	ECAT 33% DAE 67%
	B.Sc. Engg Tech / Equivalent	60% marks (or CGPA)	ECAT, 7th Sem CGPA	ECAT 33% CGPA 67%
	Foreign	Equivalent to F.Sc.	ECAT, 11th Grade	ECAT 33% 11th grade 67%

3.2 Eligibility & Merit Determination for UET Lahore (Non-Engineering/CS) Programs

Program Category	Qualification Stream	Minimum Eligibility	Merit Components	Merit Formula
UET - Non-Engg. / CS	Intermediate (F.Sc. / I.CS.)	50% marks	ECAT Matric 1st Year	ECAT 33% Matric 17% 1st Year 50%
	DAE	50% marks	ECAT, DAE (First + Second Year Result)	ECAT 33% DAE 67%
	B.Sc. Engg Tech / Equivalent	50% marks (or CGPA)	ECAT, 7th Sem CGPA	ECAT 33% CGPA 67%
	Foreign	Equivalent to F.Sc.	ECAT, 11th Grade	ECAT 33% 11th grade 67%

3.3 Eligibility & Merit Determination for UET Lahore (Non-ECAT) Programs

Program Category	Qualification Stream	Minimum Eligibility	Merit Components	Merit Formula
UET - Non-ECAT Programs	Intermediate (F.Sc. / FA)	50% marks	Matric 1st Year	Matric 25% 1st Year 75%
	DAE	50% marks	First + Second Year	DAE 100%
	B.Sc. Engg Tech / Equivalent	50% marks (or CGPA)	7th Sem CGPA	100% CGPA
	Foreign	Equivalent to F.Sc.	11th Grade	11th grade 67%

NOTE:

- PEC-accredited programs: 60% minimum in Intermediate
- Non-PEC programs: 50% minimum in Intermediate
- Minimum aggregate (weighted) required in all cases: 50%

4. Eligibility & Merit Determination for KFUEIT Programs

Program Category	Qualification Stream	Minimum Marks	Test Requirements
BS Artificial Intelligence	FSc (Pre-Engg/Pre-Med), ICS, DAE (Relevant Fields)	50%	KFAT / NAT / KFEAT / ECAT / MDCAT
BS Biochemistry	FSc (Pre-Med) with Chemistry & Biology, DAE (Relevant Fields)	50%	KFAT / NAT / MDCAT
BS Cyber Security	FSc (Pre-Eng/Pre-Med), ICS, DAE (All Fields)	50%	KFAT / NAT / KFEAT / ECAT / MDCAT
BS Data Science	FSc (Pre-Eng/Pre-Med), ICS, DAE (All Fields)	50%	KFAT / NAT / KFEAT / ECAT / MDCAT
BS Environmental Science	FSc (Pre-Eng/Pre-Med), DAE (All Fields)	45%	KFAT / NAT / KFEAT / ECAT / MDCAT
BS Information Technology	FSc / ICS with defined subject combos, DAE, A-Level	50%	KFAT / NAT / KFEAT / ECAT
BS International Relations	FSc / DAE (All Fields)	45%	KFAT / NAT / KFEAT / ECAT / MDCAT
BS Tourism & Hospitality Management	FA / FSc / ICS / I.Com / D.Com / DAE / A-Level	45%	KFAT / NAT / KFEAT / ECAT

Relevant DAE Fields for KFUEIT Undergraduate Programs

Program Category	Relevant DAE Fields
BS Artificial Intelligence	All DAE fields considered relevant (including Electrical, Electronics, Computer Information Technology, Instrumentation, Telecom, etc.)
BS Biochemistry	- Biomedical Technology- Chemical Technology - Chemical Processing Technology - Food Technology - Food Processing & Preservation - Critical Health Technology - Agriculture Science
BS Cyber Security	All DAE fields accepted (e.g., Computer Information Technology, Electronics, Electrical, Telecom, Instrumentation)
BS Data Science	All DAE fields accepted (e.g., Computer Information Technology, Electronics, Electrical, Telecom, Instrumentation)
BS Environmental Science	All DAE fields accepted (e.g., Civil, Environmental, Chemical, Food, Energy, Agriculture, etc.)
BS Information Technology	All DAE fields accepted (including Computer Information Technology, Electronics, Electrical, Telecom, etc.)
BS International Relations	All DAE fields accepted
BS Tourism & Hospitality Management	All DAE fields accepted

NOTE:

- Eligibility criteria for all KFUEIT programs will be applied as per KFUEIT's official policy for affiliated institutions provided on their website. Provisionally admitted candidates must meet KFUEIT's eligibility criteria; failure to do so will result in the cancellation of their admission due to registration constraints.

5. Merit Data Presentation

The compiled merit data may be presented to all the academic heads before the display of the 1st Merit List in a meeting.

6. Merit Policy for Pre-Medical with Additional Mathematics

For applicants with Pre-Medical and Mathematics as an additional subject, the marks obtained in first-year Biology will be used for merit calculation, provided the candidate passes Mathematics.

7. Credit for Hafiz-e-Quran

Applicants who are Hafiz-e-Quran may receive up to 20 additional marks toward their merit score, subject to the following conditions:

- The applicant must check the designated box in the admission form.
- The applicant must appear before a Verification Committee constituted by the Director, which will conduct an oral test to assess the degree of memorization. Marks will range from 0 to 20 based on proficiency.

The oral test will be held at 10:00 AM on the date specified in the admission schedule at the Institute. No separate call letters will be issued.



Credit for Sports

Applicants with a sports background may be awarded up to 10 additional marks based on the following conditions:

- The applicant must check the designated box in the admission form.
- The applicant must appear before the Verification Committee appointed by the Director, NFC-IEFR.

Marks Distribution Criteria:

<i>Criteria</i>	<i>Marks Awarded</i>
Physical Test (Performance & Endurance)	05
Inter-College Champion	01
District-Level Champion	02
Divisional-Level Champion	03
Provincial-Level Champion	04
National-Level or Under-18 International Representation	05

The sports evaluation will be held at 10:00 AM on the specified date in the admission schedule at the Institute. No separate call letters will be issued.

Conditional Admission

As admissions are granted prior to the announcement of Intermediate Part-II or equivalent results, the following conditions apply:

- ***UET-Affiliated Programs:*** Candidates failing to obtain 60% or above in Intermediate, DAE, or equivalent qualifications will have their admission cancelled. All dues will be reimbursed in full without deduction.
- ***KFUEIT-Affiliated Programs:*** Candidates failing to achieve 50% or above in Intermediate, DAE, or equivalent will also have their admission cancelled with full refund of dues.

Age and Gender Eligibility

There is no age restriction for applying to any bachelor's degree programs offered at the Institute. Male, female, and transgender candidates are all eligible to apply for all available seats.

Merit Determination in Case of a Tie

If two or more applicants attain equal aggregate admission marks (up to four decimal places), they will be treated equally for admission. In such cases:

- If a tie occurs for the last seat in any program/ category, all applicants with the same marks will be admitted.
- No further transfers or new admissions into that category will be entertained unless the admitted number falls below the allocated seats.



Seat Allocation, Admission Categories & Symbols for UET-Affiliated Programs

Description	Category	B.Sc. Civil Engineering	B.Sc. Mechanical Engineering	B.Sc. Electrical Engineering	B.Sc. Chemical Engineering	B.Sc. Computer Science	BBA	BBIT
Punjab/Islamabad	A	39	39	39	26	52	14	20
Sindh	B	04	04	04	03	06	01	02
Khyber Pakhtun Khawa	C	03	03	03	03	05	01	02
Balochistan	D	01	01	01	01	02	01	01
FATA/Gilgit Baltistan	E	01	01	01	01	02	01	01
AJK/PATA	F	01	01	01	01	02	01	01
IEFR Employee Son/Daughter	G	06	06	06	03	06	02	02
Self-Finance	H	14	14	14	08	16	05	06
Overseas Pakistani/ Foreigners	I	02	02	02	01	02	01	01
Female	J	05	05	05	02	05	02	03
B. Tech/B.Sc. Engg. Tech	L	02	02	02	0	0	-	-
Armed Forces	M	02	02	02	01	02	01	01
Total		80	80	80	50	100	30	40

Category-Wise Merit Evaluation

Admission seats are allocated under various categories, details of which are provided in the Seat Allocation Chart. Applicants are grouped category-wise, and merit is determined within each group based on percentage admission marks.

Overall Merit Determination

Merit for admission is calculated on the basis of overall adjusted marks, in accordance with UET Lahore Admission Policy 2025.

Ineligibility Criteria for UET-Affiliated Programs

Applicants will be ineligible for admission under the following conditions:

- Less than 60% marks in Intermediate/A-level or equivalent.

- Failure in or non-appearance in any subject of Intermediate Part I/II.
- Did not appear in Combined Entry Test or equivalent eligible test.
- For CS program: Aggregate merit is less than 50%.





HOW TO APPLY

The easiest way to apply is online at:  admissions.iefr.edu.pk/web/signin

How to Apply?

- Visit our website: www.iefr.edu.pk
- Apply Online or Download Application Form
- Submit via Courier or by hand to:
 - **Admission Office, NFC IE&FR, Faisalabad**
- Attach required documents
- Admission Office Hours: 8:00 AM to 4:00 PM (Mon–Fri)

Scan Here for
ONLINE Application



Seat Allocation, Admission Categories & Symbols for KFUEIT-Affiliated Programs

Description	Category	BS. Artificial Intelligence	BS. Cyber Security	BS. Data Science	BS. Information Technology	BS. Biochemistry	BS. International Relation	BS. Tourism & Hospitality Management	BS. Environmental Science
Punjab/Islamabad	A	39	39	26	39	26	26	26	26
Sindh	B	04	04	03	04	03	03	03	03
Khyber Pakhtun Khawa	C	03	03	03	03	03	03	03	03
Balochistan	D	01	01	01	01	01	01	01	01
FATA/Gilgit Baltistan	E	01	01	01	01	01	01	01	01
AJK/PATA	F	01	01	01	01	01	01	01	01
IEFR Employee Son/Daughter	G	06	06	03	06	03	03	03	03
Self-Finance	H	14	14	08	14	08	08	08	08
Overseas Pakistani/ Foreigners	I	02	02	01	02	01	01	01	01
Female	J	05	05	02	05	02	02	02	02
B. Tech/B.Sc. Engg. Tech	L	02	02	0	02	0	0	0	0
Armed Forces	M	02	02	01	02	01	01	01	01
Total		80	80	50	80	50	50	50	50

IMPORTANT GUIDELINES

- ✓ Apply for Multiple Departments/Categories using Single Form
- ✓ Automatic Transfer to higher preference (based on Merit and Seat Availability)
- ✓ Seats May Vary at the discretion of Institute Authorities
- ✓ Un-utilized Reserved Seats will be reallocated by Admission Committee
- ✓ No Erasing or Overwriting allowed — such forms will be rejected
- ✓ Duplicate Forms available at the Admission Office



Special Note for Reserved Seats Applicants

Applicants for categories G, H, I, J, L & M must also apply for their respective Provincial Categories, or their Open Merit application will not be considered

DOCUMENTS REQUIRED FOR APPLICATION SUBMISSION

1. Demand Draft (for Self-Finance/Overseas/Foreign applicants) or Admission Dues (if applicable), in favor of NFC IE&FR, Faisalabad
2. Matric & Intermediate Certificates or Equivalence/Detail Marks Certificates
3. 1st Year Roll No. Slip (if applying on First Year basis)
4. Valid Entry Test Result (if applicable)
5. Equivalence Certificate from IBCC (for equivalent qualifications)
6. Domicile Certificate of the candidate
(For Balochistan seats: father's domicile acceptable if candidate is under 21)
7. 4 Recent Passport Size Photographs (attested)
8. Filled Address Form (included in admission package)
9. B.Sc./ADP/ADS Certificate (if applicable)
10. DAE Certificate (if applicable)
11. Sports or Hafiz-e-Quran Certificate (must be from Govt.-registered Madaris)
12. Overseas Applicants: Copy of father's passport & work permit (if applicable)
13. NFC/IEFR Employee's Seat: Filled Form-1 (available online or at admission office)
14. CNIC/Form-B of Candidate & Father/Guardian

Preference-Based Merit Criteria (Prompt Processing)

Seats under categories A, B, C, D, E, F, H, and K (Technology Programs only) will be allocated on a preference-based merit (% aggregate) system. Applicants falling within the specified merit threshold for a category and discipline will be granted Provisional Admission at the time of form submission, strictly against their first preference, if a seat is available.

Applicants seeking preference-based admission must:

- *Submit admission dues within 03 days of application submission.*
- *Provide an undertaking on non-judicial stamp paper confirming they meet the eligibility criteria upon declaration of Part-II results.*

Once a provisional seat is offered, no changes in discipline will be allowed. Admission remains valid regardless of final aggregate changes, subject to meeting minimum eligibility criteria.

For UET Lahore–affiliated programs:

Candidates applying on Part-I result must submit their final result with at least 60% marks within 15 days of official board result declaration.

Merit Lists for BBA & BBIT

Two types of merit lists will be generated:

- ***Preference-Based List:*** For applicants listing BBA & BBIT as first preference.
- ***General Merit List (if seats remain):*** For applicants listing BBA/BBIT as a lower preference.

Category-Wise Merit

Merit for each applicant will be determined within their respective admission category (as per seat distribution chart).

Preferences & Merit Upgradation

Vacant seats will be filled based on recommendations from the Admission Committee. Applicants may be automatically upgraded to higher preferences if a seat becomes available and merit permits.

To freeze admission in a currently offered discipline and avoid further upgrades, candidates must submit a written request at least 03 days before the next merit list.

Notification of Selection

- Complete merit lists will be displayed on Institute Notice Boards.
- Minimum aggregate percentages will be posted on www.iefr.edu.pk
- Applicants are solely responsible for keeping track of their admission status.

Class Sections

Programs with more than 60 students will be divided into Section A and B, with alternating timings each semester. Sectional distribution is the sole discretion of the Admission Committee.

Conflict in Admission Rules

In the event of any conflict between admission rules of NFC IE&FR and its affiliating university, rules of the University of Engineering & Technology, Lahore and Khawaja Fareed University of Engineering & Information Technology, Rahim Yar Khan will prevail.

Grant of Provisional Admission

Provisional admission will be offered based on merit and eligibility. If an applicant fails to meet final eligibility (after declaration of results), admission will be cancelled automatically.

Admissions are subject to:

- Verification of original documents
- Registration approval from UET Lahore / KFUEIT Rahim Yar Khan

Any discrepancy during studies may lead to cancellation of admission and academic credits. Only refundable dues (if any) will be returned.

Submission of Admission Dues & Documents

Selected candidates must deposit dues within 05 days of merit list display via Demand Draft/Pay Order/Bank Challan or direct deposit in NFC IE&FR bank account. No late submissions will be accepted.

Documents to submit at fee deposit:

- Original certificates for verification
- Original CNIC & Domicile (non-Punjab applicants)
- 03 photocopy sets of SSC, HSSC/DAE or equivalent
- 02 copies of Entry Test result
- 06 recent passport-size photos
- 01 set of CNIC & Domicile (non-Punjab categories)
- Undertaking on Rs.100/- non-judicial stamp paper
- Completed Bio-data Form-III



Forfeiture of Admission Rights

Failure to fulfill requirements within the prescribed deadline will result in loss of admission rights.

Fee-Refund Policy

As per HEC refund policy vide letter No. 10-1/HEC/A&C/2015/6542

%age of Fee*	Timeline** for Semester System
Full (100%) Fee Refund	Upto to 7th Day of commencement of Classes
Half (50%) Fee Refund	From 8th - 15th Day of commencement of Classes
No Fee (0%) Refund	From 16th Day of commencement of Classes

- * %age of fee shall be applicable on all components of fee, except for security & admission charges.
- ** Timeline shall be calculated continuously, covering both weekdays and weekend.

Rejection of Application

The Institute reserves the right to reject any application without assigning a reason.



Important Warnings

- Admissions granted due to error, omission, or mistake are not binding.
- Involvement in political activity during study tenure will result in admission cancellation.
- Applicants applying on Part-I result must submit the complete Intermediate result card within 15 days of result declaration.

Failure to do so will lead to forfeiture of admission.

Apply Now and Secure Your Future with NFC IE&FR Faisalabad.

ACCOUNTS OFFICE



Mr. Saeed Qadir
Head (Accounts)



Mr. Zahid Aziz
Manager/Internal Auditor



Mr. Asif Masood
Deputy Manager



Mr. Ijaz Ali
Assistant Manager



Mr. Humanyun Sharif
Superintendent



Mr. Abid Rauf
Superintendent



Mr. Rehman Aziz
Senior Assistant

FEE STRUCTURE FOR SESSION 2025-26

Serial #	PARTICULARS	B.Sc. Computer Science & All Engineering Disciplines	BS. IT, AI, CYS, DS, BBIT	BS. Biochemistry, Tourism & Hospitality Management, BBA	BS. Environmental Science, International Relations
Admission Dues (Rs.)					
1	Security (Refundable)*	8,000	8,000	8,000	8,000
2	Admission Fee (Non-Refundable)	35,000	35,000	15,000	15,000
3	Welfare Contribution	5,000	5,000	5,000	5,000
4	Documents Verification	6,000	6,000	6,000	6,000
5	University Registration Fee	30,000	30,000	30,000	30,000
A - (Once at the time of Admission)		84,000	84,000	64,000	64,000
Quarterly Tuition Fee (Rs.)					
First Year					
1	1st Quarter	49,800	37,900	32,600	20,000
2	2nd Quarter	49,800	37,900	32,600	20,000
3	3rd Quarter	49,800	37,900	32,600	20,000
4	4th Quarter	49,800	37,900	32,600	20,000
Second Year					
1	1st Quarter	52,300	39,800	34,200	21,000
2	2nd Quarter	52,300	39,800	34,200	21,000
3	3rd Quarter	52,300	39,800	34,200	21,000
4	4th Quarter	52,300	39,800	34,200	21,000
Third Year					
1	1st Quarter	55,000	41,800	35,900	22,050
2	2nd Quarter	55,000	41,800	35,900	22,050
3	3rd Quarter	55,000	41,800	35,900	22,050
4	4th Quarter	55,000	41,800	35,900	22,050
Fourth Year					
1	1st Quarter	57,700	43,900	37,700	23,150
2	2nd Quarter	57,700	43,900	37,700	23,150
3	3rd Quarter	57,700	43,900	37,700	23,150
4	4th Quarter	57,700	43,900	37,700	23,150
B - (Tuition Fee for Regular Merit)		859,200	653,600	561,600	344,800
Quarterly Utility Charges (Rs.)					
C - (Rs. 3000/- Per Quarter)**		48,000	48,000	48,000	48,000
A + B + C = (Total Fee for 4 Years)		991,200	785,600	673,600	456,800
* On Completion of Degree			** Fuel Adjustment Charges Rs. 1000/- per month		

Rebate in Quarterly Tuition Fee	
B.Sc. Chemical Engineering	25%
B.Sc. Electrical Engineering	10%
Bachelor of Business Administration	20%

For Category (H) Self-Finance & (I) Overseas Pakistani Foreigners	
B.Sc. Mechanical & Civil Engineering	Rs. 500,000
B.Sc. Chemical & Electrical Engineering	Rs. 300,000
B.Sc. Computer Science, BS IT, BS AI, BS Cyber Security & BS Data Science	Rs. 250,000
Bachelor of Business Administration (BBA) and BS Tourism & Hospitality Management	Rs. 150,000

Self-Finance Payment Method
25% at the time of Admission
25% between 1st January to 10th January 2026
50% between 1st April to 10th April 2027

Hostel Dues	
Security (Refundable)	Rs. 5,000
Annual Hostel Dues	Rs. 72,000

Rs. 6,000/- per student per month

Examination Dues	
Examination Fee Per Semester	Rs. 7,500

Summer School Examination Dues	
Tuition Fee Per Credit Hour for All Engineering Programs	Rs. 4,000
Tuition Fee Per Subject for B.Sc. Computer Science & BBA	Rs. 3,000
Examination Fee Per Subject for All Programs	Rs. 1,000

Project Fee	
Project Fee For All Programs (7th Semester)	Rs. 10,000

Survey Camp Fee	
B.Sc. Civil Engineering (7th Semester)	Rs. 15,000



FEE STRUCTURE

Tuition Fee (Category G)

Quarterly Tuition Fee Engineering Programs (Mechanical & Civil Engineering)	Rs. 19,200
Quarterly Tuition Fee Engineering Programs (Chemical Engineering)	Rs. 14,600
Quarterly Tuition Fee Engineering Programs (Electrical Engineering)	Rs. 17,200
Quarterly Tuition Fee Computer Science Program	Rs. 17,800
Quarterly Tuition Fee BBA Program	Rs. 11,400

Industrial Tour & Annual Function

Industrial Tours and Annual Functions will be organized by the respective department and students. Moreover, at the time of arrangements of industrial tours and annual functions, the students shall contribute these charges, as per actual.

Dues Rebate/Concession

A rebate/ concession of 5% will be given on the payment of lump sum fee of the whole year.

Payment of Dues

Payment of dues will be made on quarterly basis and will be payable up-to 10th of starting month of each quarter. A fine of Rs.50 per day will be charged after 10th of first month of that quarter till the last date of that month. After first month of the quarter, the name of the student will be struck off from the role of the Institute and he will not be allowed to attend the classes. For the readmission, he will have to pay the Institute dues standing against him with (as per actual admission fee given in table) as readmission fee.



Mode of Dues/Payment Submission

Manage all your payments with ease from a single platform - Kuickpay or Fee voucher will be generated by the Account Department to the students and Fee shall be payable via Online banking Apps.

kuickpay

Policy on Semester Freezing

1. Students intending to freeze one or more semesters are required to submit a written application to their respective department.
2. During the frozen period, students are liable to pay all institutional dues excluding the tuition and examination fees.
3. Upon resumption of studies, students must pay the prevailing tuition fee and dues applicable to the session in which they rejoin.

Clarification Regarding Course Fee Exemption for B. Tech Students

1. For Students Admitted on the Basis of B. Tech (Relevant Field) Prior to 2022:

- These students are required to pay the regular tuition fee and dues from the 3rd semester onward until the completion of their degree program.
- They are eligible for an exemption from the 1st and 2nd semester tuition fee and related dues.
- All non-tuition dues (as applicable through office orders from the competent authority) shall also be payable from the 3rd semester onward.

2. For Students Admitted on the Basis of B. Tech (Relevant Field) From 2022 Onward:

- These students are required to pay the full tuition fee and dues for all four years (or for the full duration of their academic program), in accordance with the respective year's prospectus.
- Non-tuition dues issued via office orders from the competent authority shall also be applicable from the 3rd semester onward until program completion.

Further Clarification

Students admitted on the basis of B. Tech from the year 2022 onward are recommended to be exempted from all non-tuition dues for the 1st and 2nd semesters. Only tuition fee and standard dues for these semesters shall be applicable.





Services Departments And Committees

NFC Institute of Engineering &
Fertilizer Research, Faisalabad

Office of the Students' Advisor

Mrs. Tanzila Samin

Students' Advisor

Mr. Farukh Ahmad

Superintendent

Mr. Ali Wasif

Superintendent

Mr. Muhammad Akram

Attendant

The Office of the Students' Advisor oversees academic scheduling across all departments and maintains communication with parents through monthly attendance and progress updates. It also promotes students' personal development by organizing co- and extracurricular activities via student societies. Additionally, the office supports departments in processing merit-based and need-based scholarships, serving as a bridge between academics and personality development.

The Internship & Job Placement Bureau at IE&FR bridges academics with industry by organizing 8–12 week summer internships in reputed organizations. These internships help students apply theoretical knowledge, explore career paths, and gain practical skills. Interns submit reports and receive certificates upon completion.

The Bureau also supports final-year students with job placement by maintaining strong industry ties, sharing opportunities, and providing career guidance.

Quality Enhancement Cell (QEC)

Mr. Zafar Abbas

Lecturer (Mech. Engg.), Convener

Dr. M. Awais Ashraf

Assistant Professor (Chem. Engg.), Member

Dr. Nasif Raza Jaffri

Assistant Professor (Elec. Engg.), Member

Dr. Salman Arain

Assistant Professor (SCS), Member

Dr. Hammad Hussain Awan

Assistant Professor (Civil Engineering), Member

Dr. Zulfiqar Ali

Assistant Professor (SCS), Member

The Quality Enhancement Cell (QEC) ensures academic excellence by upholding and improving degree standards. It liaises with accreditation bodies, sets benchmarks for quality, and evaluates teaching and learning across departments. QEC aligns institutional practices with national standards, promotes global compatibility, and supports continuous improvement in higher education. Its ultimate goal is to produce competent, ethical, and socially responsible professionals.



Internships & Job Placement Bureau

Dr. M. Junaid Alvi

Convener

Mr. Atif Ali Khan

Member

Mr. Muhammad Imran

Member

Mr. Rashid Yousaf

Member

Mr. Omair Ashraf

Member

Dr. Umair Munir

Member

Office of Research, Innovation & Commercialization (ORIC)

Mr. Shabeeb Ahmad Gill

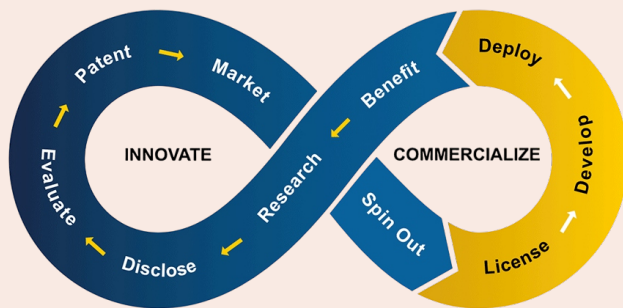
In-Charge / Focal Person

Dr. Nasif Raza Jaffri

Assistant Professor (Electrical Engineering), Member

Mr. Rashid Yousaf

Lecturer (School of Business Management), Member



Research transforms theory into practical solutions, with most student projects featuring unique, innovative aspects. To ensure societal impact, these innovations require market research and economic feasibility. The Office of Research, Innovation & Commercialization (ORIC) promotes interdisciplinary research, assisting faculty and students in conducting impactful studies, securing grants, and connecting with funding sources from government, private, and industry sectors.



Redressal of Students' Grievances Committee

Mr. M. Shafiq

Assistant Professor (Electrical Engineering), Convener

Mr. Adeel Safdar

Head (Personnel & Administration), Member

Mrs. Tanzila Samin

Students' Advisor, Member

Relevant Head of Department (HOD)

Member

A grievance refers to a student's formal complaint regarding the interpretation, application, or violation of institutional policies and procedures. The Grievance Redressal Committee is responsible for reviewing such concerns and determining their validity. The committee addresses issues such as harassment, classroom teaching quality, syllabus completion, teaching methods, and infrastructure concerns. It ensures timely and impartial handling of student complaints by listening, documenting, and assessing each case. When necessary, findings are forwarded to the Management for appropriate action.

STUDENTS' GRIEVANCE REDRESSAL CELL





IE&FR ALUMNI SOCIETY

Mr. Tahir Ishfaq
Convenor

Mr. Tauseef Abid
Member

Mr. Atif Ali Khan
Member

Mr. Abu Bakar
Member

"All graduates of the institute are considered members of the IE&FR Alumni Society. The society's core objective is to maintain strong connections with alumni through various channels, including contact networks and social media platforms. It organizes annual reunions and department-wise gatherings to foster engagement. Alumni play a valuable role in mentoring graduating students, offering career guidance, and often supporting financially disadvantaged students—primarily through personal contributions."

Dr. Wajeeha Qamar
Convenor

Mr. Zaeem Fakhar
In-Charge
Mr. Qasim Ali Khan
Superintendent

Mr. Ali Abbas
In-Charge
Mr. Shafqat Munir
Superintendent
Mr. Qasim Ali Khan
Supervisor

Rana Shams ul Haq
Convenor
Mr. Arfan Ali
Assistant

Mr. Shafeeq Ahmad
Convenor
Syed Shamim Raza
Member
Mr. Mehboob Ashraf
Member
Mr. Saeed Qadir
Member
Mr. Atif Ali Khan
Member
Mr. Zeeshan Amjad
Member
Mr. Subh-e-Sadiq
Clerk

Material Testing Services

The Material Testing Services Committee offers commercial testing of construction materials as per ASTM standards. Contractors and vendors use these services to assess material strength and quality. Equipped with advanced tools like the Universal Testing Machine (UTM) and certified technicians, the facility delivers precise results and detailed reports.

Civil Construction & Works

The Civil Construction & Works Committee is responsible for executing repair and maintenance across the campus infrastructure to ensure its longevity and functionality. Supported by a skilled team of masons and laborers, the committee manages all stages of construction—from planning, design, and drawings to on-site execution—strictly adhering to specified standards and requirements.

Repair & Maintenance (R&M)

The Repair & Maintenance Department ensures continuous utility supplies and generator backup across the campus. It also handles furniture and fixture repairs in classrooms and offices. Staffed with skilled technical personnel, the department operates through departmental work orders, adhering to safety standards and procedures. Necessary tools are used, and indents are raised for damaged parts or required materials.

Horticulture & Housekeeping Committee

The Horticulture & Housekeeping Committee maintains green spaces and ensures campus cleanliness. It operates a nursery with fruit and ornamental plants, designs floral landscapes using modern techniques, trims plants decoratively, and produces organic fertilizer in collaboration with the R&D department.

Commercial Department

The Commercial Department oversees the procurement of laboratory equipment, furniture, consumables, office supplies, chemicals, and stationery. It coordinates with relevant departments to prepare tender documents and publish tender notices. All procurement processes strictly adhere to government-defined public procurement rules and procedures, ensuring transparency, efficiency, and compliance.



Main Store

Mr. Imran Shamshad

In-Charge

Mr. Amanat Ali

Superintendent

Mr. Waqas Mohsin

Superintendent

Mr. Mujtaba

Attendant

The Main Store manages inventory, receives procurements, and distributes items to departments. It maintains records of supplies from stationery to lab equipment. After service life, items are returned, documented, and disposed of following defined salvage procedures.

Security Department

Mr. Mehboob Ashraf

In-Charge (Security)

Mr. Tariq Mahmood

Supervisor

Mr. Ihsan ul Haq

Supervisor

Mr. Babar Nadeem

Supervisor

The Security Department ensures the safety of personnel and property, enforces entry/exit protocols for people and vehicles, and operates 24/7 in rotating shifts. It checks all incoming materials, requires gate passes for outgoing items, and monitors employee attendance and official vehicle movement.

Anti-Harassment Committee for Women at the Workplace

Syed Shamim Raza

Convener

Mrs. Tanzila Samin

Member

Syed Iftikhar ul Hassan

Member

Harassment at the workplace includes any act that causes discomfort, fear, or panic.

It may take the form of:

(A) Abuse of Authority

When someone in power demands sexual favors in return for job-related benefits like promotions or continued employment.

(B) Hostile Work Environment

Unwelcome sexual behavior or gender-based discrimination that hinders performance or creates an intimidating atmosphere. Even a single serious incident, especially involving physical contact, qualifies.

(C) Retaliation

Punishment for refusing advances, such as denied promotions, biased evaluations, or restricted opportunities.

Such actions violate workplace ethics and are strictly prohibited.

NFC IE&FR Main Library

The main library at NFC IE&FR serves as a cornerstone of academic and research support, providing access to a vast collection of knowledge and learning resources. It holds over 20,000 technical books, reports, and conference proceedings across diverse fields, including engineering, computer science, IT, business, Islamic studies, and literature.

To keep users informed of global advancements, the library subscribes to prominent journals in engineering and IT. All materials are catalogued using Anglo-American Cataloguing Rules (AACR2) and Dewey Decimal Classification (DDC) standards and managed through an automated system. Users can search and reserve items via the Online Public Access Catalogue (OPAC) at:

www.library.iefr.edu.pk



Syed Shamim Raza

In-charge (Library)



Mr. Umair Ahmad

Librarian



Digital Library

The Digital Library, accessible through a fully equipped computer lab, offers thousands of peer-reviewed journals, databases, and e-books via HEC's Digital Library Program. These resources are available both within the library and across the campus network.

PROSPECTUS 2025 COMMITTEE

The Prospectus Committee is entrusted with overseeing the complete process of developing and producing the Institute's prospectus each year. The committee ensures the content is accurate, visually appealing, and delivered on time. Its core responsibilities include:

- *Preparation of Tender Documents*
- *Departmental Coordination*
- *Support to Design Team*
- *Content Review & Quality Assurance*
- *Approval Facilitation*
- *Timely Printing & Delivery*

Engr. Tayyab Ali Joiya
Convenor



Our Team:

- | | |
|----------------------------------|---------------|
| - <i>Syed Shamim Raza</i> | <i>Member</i> |
| - <i>Mr. Zeeshan Amjad Khan</i> | <i>Member</i> |
| - <i>Mr. Fiaz Waheed</i> | <i>Member</i> |
| - <i>Mr. Muhammad Irfan Khan</i> | <i>Member</i> |



NFC Institute of Engineering & Fertilizer Research, Faisalabad
Ministry of Federal Education & Professional Training
Government of Pakistan



CHEMICAL ENGINEERING

Bachelor Degree Program

Chemical Engineering blends science and engineering to create essential products like fuels, medicines, and clean water. It builds critical thinking and technical skills valued across industries. Chemical engineers drive progress in energy, healthcare, food, and environmental sectors. With global demand and strong career prospects, this degree opens doors to innovation, sustainability, and a meaningful, rewarding future.

Students of Chemical Engineering develop a strong foundation in chemistry, physics, and mathematics, combined with engineering principles. They gain expertise in process design, thermodynamics, material science, and safety management. Through lab work and simulations, students learn to analyze data, optimize processes, and design efficient, real-world solutions for complex chemical systems.

This degree fosters critical thinking and creative problem-solving abilities. Students learn to tackle industrial and environmental challenges—such as clean energy production, pollution control, and product development by applying innovative techniques and sustainable practices. The program nurtures the mindset to think logically, act responsibly, and adapt to emerging technologies.

Graduates enjoy diverse career prospects in energy, pharmaceuticals, food, materials, and environmental sectors. Chemical engineers are in high demand worldwide, offering excellent job security, competitive salaries, and opportunities for advancement. Most importantly, students gain the ability to positively impact society by contributing to health, safety, and sustainability on a global scale.

DEPARTMENT MISSION:

"To empower the graduates with excellent technical & leadership skills, integrity and moral values for sustainable development of society & to prepare them in academia. R&D organization & industry with the pursuit of advanced studies & innovations."

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

PEO-1

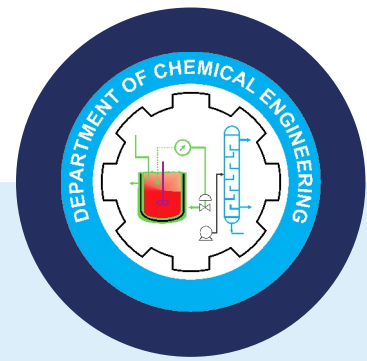
To serve the chemical and allied industries in leading positions with strong technical and professional education skills.

PEO-2

To be capable to copy with rapidly changing technological advancements with core knowledge in multidisciplinary sectors i.e. in education, entrepreneurship, research & development.

PEO-3

To be able as contributor in society & environment for sustainable development with social responsibility & ethical values.



Importance of B.Sc. Chemical Engineering

- Builds strong foundation in process design and engineering principles
- Prepares graduates for diverse industries: energy, fertilizers, food, pharma, etc.
- Develops skills in problem-solving, innovation, and safety
- Addresses global challenges like sustainability and clean energy

- Offers wide career opportunities and higher study pathways

Industrial Liaison & Consultancy Services offered by the Chemical Engineering Department:

- Offers research, consultancy, and enterprise development services to industry and community
- Aims to foster industrial growth and innovation for job creation
- Backed by highly qualified faculty with expertise in R&D, training, and consultancy
- Specialized training programs
- Seminars and workshops
- Business and technology mentoring

Some National & Multinational organizations:



Affiliated with:
University of Engineering & Technology, Lahore



Accredited with:
**Pakistan Engineering Council
OBE LEVEL-II**

CHEMICAL ENGINEERING

Bachelor Degree Program

HEAD's MESSAGE

Welcome to the Department of Chemical Engineering at NFC IE&FR, Faisalabad. We offer a strong academic foundation with real-world industry exposure to help you grow as innovative, skilled engineers. Join us to explore, learn, and build a rewarding future in the ever-evolving world of chemical engineering.



Dr. Najaf Ali Awan
Professor



Syed Shamim Raza
Assistant Professor



Mr. M. Tahir Ishfaq
Assistant Professor



Mr. Ahtsham Razaque
Assistant Professor



Dr. Hina Mukhtar
Assistant Professor



Dr. M. Awais Ashraf
Assistant Professor



Mr. Bilal Ahmed Awan
Lecturer



Dr. Shahid Mirza
Assistant Professor



Mr. Tayyab Ali
Lecturer



Mrs. Hina Arshad
Lecturer



Mr. Masood-ur-Rauf Zafar
Lecturer



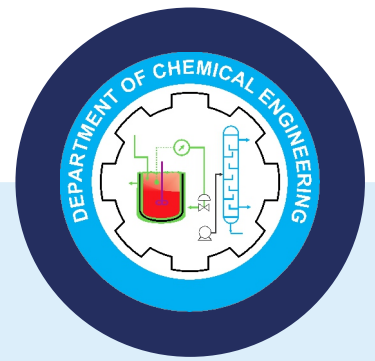
Mr. Muhammad Imran
Lecturer



Hafiz Miqdad Bin Masood
Lecturer



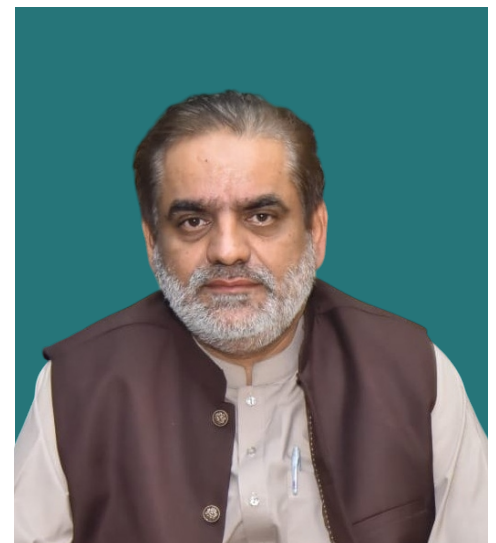
Ms. Shazma Nisar
Lab. Engineer



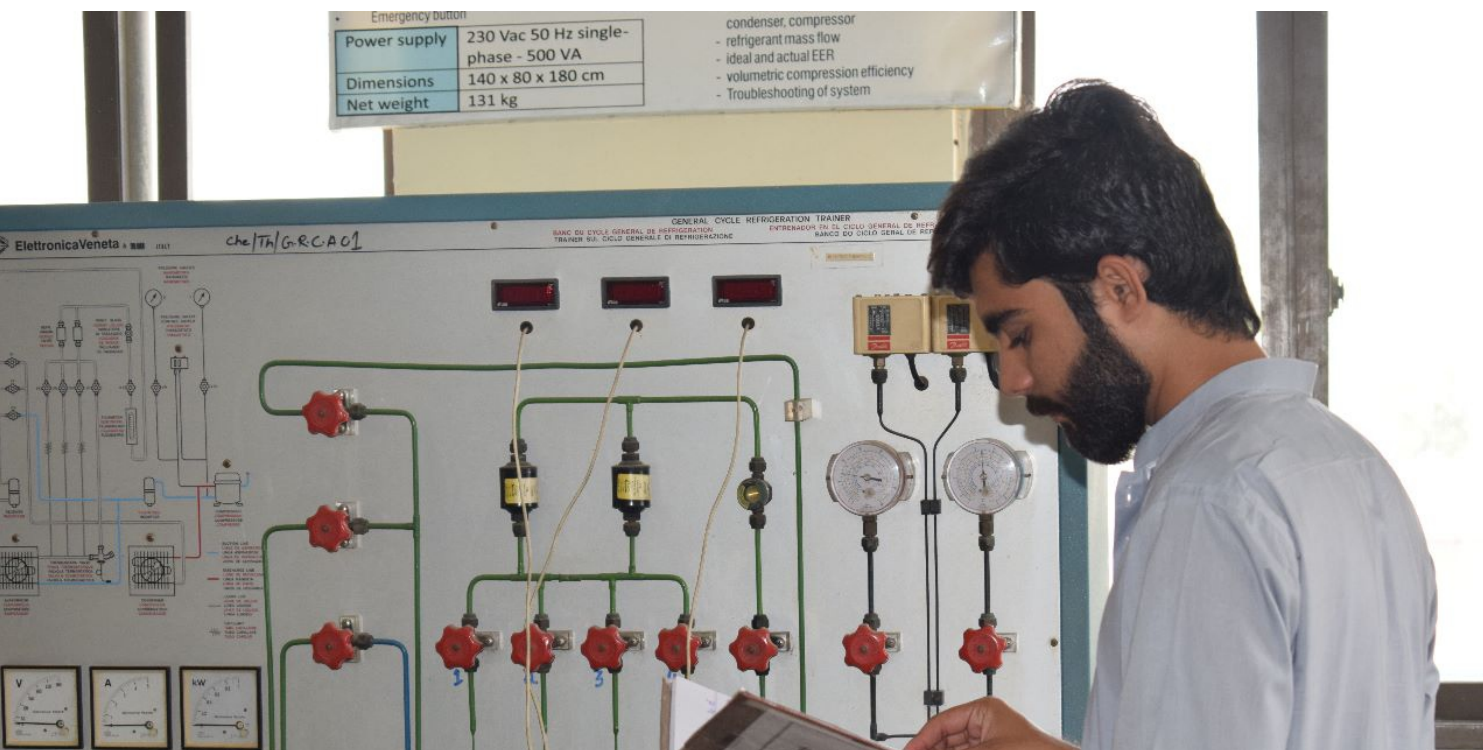
Faculty of Chemical Engineering

- Supportive and accessible teachers committed to students' academic and professional development.
- Strong mentorship for final year projects, internships, and career guidance.
- Emphasis on interactive teaching methods and practical lab-based learning.

Head of Department Chemical Engineering



Dr. Waqar Ali Khan
Associate Professor
Ph.D. Chemical Engineering



CHEMICAL ENGINEERING LABORATORIES



OUR OUTSTANDING *Alumni*

At Chemical Engineering Department, we are extremely proud of our graduates. When you study with us, you'll join the thousands of alumni who have used their experiences to make their mark on the world. Many have gone on to achieve great success in their careers; becoming business leaders, undertaking ground-breaking research, or finding their place in the limelight. Here we share some of their inspirational stories.



Dr. Humbul Suleman
FHEA, AMIChemE, SMAIChE
B.Sc. Chemical Engineering
Session 2004 - 2008
Currently working as
Senior Lecturer/Course Leader
(Chemical Engineering)
At Teesside University and
Member, Heads of Chemical
Engineering UK

"As an IEFER Chemical Engineering alumnus and now a UK based academic, I see our field as the quiet force behind a better tomorrow. We question limits, reshape industries, and prove that true progress needs both precision and courage. To the next generation: dare to think bigger than the process, and braver than the problem."



Engr. Asif Javaid Sindhu
B.Sc. Chemical Engineering
Session 2000 - 2004
Currently working as Market
Head of EHS & Sustainability
At Ingredion Incorporated

As a proud alumnus of NFC IEFER's Chemical Engineering Department, I've built a career spanning production, projects, and EHS & Sustainability. From Sapphire Fiber to Nestlé Pakistan as SH&E Manager, each role sharpened my expertise.

Currently, I lead EHS & Sustainability at Ingredion Incorporated, driving safety, environmental performance, and community engagement across Pakistan."



Engr. Muhammad Ashraf
B.Sc. Chemical Engineering, Session 2009 - 2013
Currently working as Director Admin & Operations
At Oxygen Pakistan

"As an alumnus of NFC IEFER Faisalabad, I began my career as a Trainee Engineer at Foundation Power Company Daharki Limited. In 2016, fueled by entrepreneurial ambition, I founded Oxygen Pakistan with limited means. Today, the company is a growing player in Pakistan's FMCG sector, offering trusted cleaning brands like Mr. Mop and Meky in 30+ cities. To future engineers: start small, stay focused, and believe in your vision—it's the foundation of meaningful success."

Some More Alumni Stories of Chemical Engineering Department

NFC Institute of Engineering & Fertilizer Research, Faisalabad



Engr. Sohaib Hassan

B.Sc. Chemical Engineering
Session 2020-2024

Currently working as Quality Assurance Officer and EHS Officer (Environment, Health and Safety) At Nutrifactor Laboratories (Pvt.) Ltd

"As a recent graduate of NFC IE&FR's Chemical Engineering program, I can confidently say the foundation built here has been instrumental in shaping my professional journey. The department's focus on technical depth and industrial relevance prepared me for real-world challenges in quality assurance and EHS. To all freshers, embrace every learning opportunity, stay inquisitive, and never underestimate the power of discipline. Your journey starts here; make it count."



Engr. Muhammad Usman Anwar Khan

B.Sc. Chemical Engineering
Session 2010-2014

Currently working as Global Sustainability Advocate

"In 2014, I graduated from NFC IE&FR with a degree in Chemical Engineering and a vision to create meaningful impact."

Today, as Manager Sustainability at Masood Textile Mills, I lead initiatives advancing environmental responsibility and sustainable industrial practices.

I've proudly represented MTM and Pakistan through collaborations with GIZ, WWF, JICA, and others, driving certifications, conservation programs, and international projects. My foundation at NFC IE&FR continues to shape my purpose-driven journey."



Engr. Hub-e-Fatima

B.Sc. Chemical Engineering
Session 2020-2024

Currently working as a Trainee Engineer

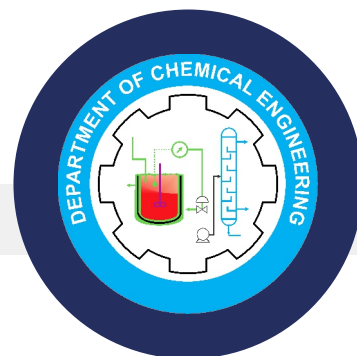
At Masood Textile Mills (MTM)

"Reflecting on my time at NFC IE&FR, I'm grateful for the academic rigor, practical training, and lasting connections that shaped my professional journey. The institute's supportive environment and dedicated faculty equipped me to enter the industry confidently as a Trainee Engineer. My experience at IE&FR empowered me to pursue impactful, purpose-driven solutions through chemical engineering."

CHEMICAL ENGINEERING

Bachelor Degree Program

B.Sc. Chemical Engineering Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - I	ChE-101	Industrial Stoichiometry-I	3	0	SEMESTER - II	ChE-108	Fluid Flow-I	3	0
	CSC-106 & CSC-106L	Application of Information and Communication Technologies	2	1		ChE-109 & ChE-109L	Chemical Process Industries	2	1
	CY-142 & CY-142L	Physical and Analytical Chemistry	2	1		CS-103 & CS-103L	Introduction to Computer Programming for Data Science	2	1
	HU-111L	Communication Skills	0	1		MA-116	Linear Algebra and Differential Equations	3	0
	IS-102	Islamic Studies or Ethics (Non-Muslim Students)	3	0		ME-100L	Workshop Practice	0	1
	MA-113	Calculus and Analytic Geometry	3	0		PHY-113 & PHY-113L	Applied Physics	2	1
	ME-125L	Engineering Drawing	0	1		QT-101	Translation of the Holy Quran-I SE-101 (Non-Muslims)	1	0
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	ChE-201	Industrial Stoichiometry-II	3	0		ChE-105L	Occupation Health and Safety	0	1
	ChE-203 & ChE-203L	Particle Technology	3	1		ChE-208 & ChE-208L	Fluid Flow-II	2	1
	ChE-204 & ChE-204L	Chemical Engineering Thermodynamics-I	3	1		ChE-209 & ChE-209L	Process Heat Transfer	3	1
	CY-221 & CY-221L	Inorganic and Organic Chemistry	2	1		ChE-211	Separation Processes-I	3	0
	HU-221	Technical Writing and Presentation Skills	3	0		IS-202	Ideology and Constitution of Pakistan / Ethics (Non-Muslims)	3	0
QT-201	Translation of the Holy Quran-II SE-201 (Non-Muslims)	1	0	MA-242	Engineering Statistics	3	0		
				HU-003	International Language	0	0		
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	ChE-301 & ChE-301L	Chemical Reaction Engineering	3	1		ChE-308 & ChE-308L	Energy Engineering	3	1
	ChE-304	Chemical Engineering Thermodynamics-II	3	0		ChE-322 & ChE-322L	Separation Processes-II	3	1
	ChE-311	Engineering Materials	2	0		ChE-319 & ChE-319L	Chemical Engineering Mathematics	2	1
	ChE-312 & ChE-312L	Unit Processes	2	1		ChE-321 & ChE-321L	Chemical Process Design and Economics	3	1
	MA-240 & MA-240L	Numerical Analysis	2	1		HU-212	Civics and Community Engagement	2	0
MGT-318	Entrepreneurship and Management	2	0	QT-301	Translation of the Holy Quran-III SE-301 (Non-Muslims)	1	0		
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	ChE-432 & ChE-432L	Elective-I	2	0		ChE-413	Transport Phenomena	3	0
	ChE-404 & ChE-404L	Instrumentation and Control	3	1		ChE-421 to ChE-431	Elective-III	3	0
	ChE-406 & ChE-406L	Environmental Engineering	3	1		ChE-401	Chemical Reactor Design	2	0
	ChE-409	Chemical Process Equipment Design and Rating	3	0		ChE-432 to ChE-444	Elective-II	2	0
	ChE-461	Final Year Project-I	0	3		ChE-462	Final Year Project-II	0	3
ChE-414	Internship	0	0	MGT-320	Project Management in Engineering	2	0		
MGT-103	Sociology for Engineering	2	0	QT-401	Translation of the Holy Quran-IV SE-401 (Non-Muslims)	1	0		

CHEMICAL ENGINEERING

Bachelor Degree Program

B.Sc. Chemical Engineering – Elective Curriculum Overview

Arts & Humanities Electives (2+0)

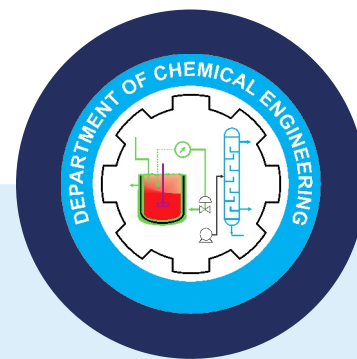
Communication & Presentation Skills
 Beginners Spanish- Elementary Arabic
 Elementary French- Elementary Chinese
 History
 Philosophy
 Professional Ethics
 Any other course/language as per HEI requirement

Social Science Electives (2+0)

Sociology for Engineers
 Sociology
 Social Psychology
 Critical Thinking
 Human Resource Management
 Organizational Behavior
 Engineering Law
 Engineering Economics
 Any other relevant course as per HEI requirement

Proposed Streams / Technical Electives (2+0)

Chemical Engineering	A-1: Polymer Engineering A-2: Novel Separation Process A-3: Mineral Processing Technology A-4: Nanotechnology Engineering A-5: Chemical Process Design and Simulation A-6: Industrial Safety and Hazardous Waste Management	Design Engineering	B-1: Computational Fluid Dynamics (CFD) B-2: Experimental Design & Data Analysis B-3: Advanced Machine Learning Technology B-4: Operation Management & Risk Assessment
Oil & Gas Engineering	C-1: Petroleum Refinery Engineering C-2: Gas Processing & Transmission C-3: Petrochemical Engineering C-4: Fuel & Energy Management C-5: Advanced Fuel Technology C-6: Drilling Engineering C-7: Natural Gas Processing & Pipeline Management C-8: Field Operations and Production C-9: Reservoir Engineering Management C-10: Principles of Enhanced Oil Recovery	Biochemical Engineering	D-1: Biochemical Engineering D-2: Biochemical Operation and Kinetics D-3: Bio Separations D-4: Biomaterials Engineering D-5: Bioreactor Design D-6: Biofuels and Biorefineries D-7: Biochemical Treatment of Wastes
Green Engineering	E-1: Green Technologies & Sustainable Development E-2: Industrial Ecology E-3: Environment Impact Assessment E-4: Sustainability in Process & Energy Systems	Nuclear Engineering	F-1: Introduction to Nuclear Engineering F-2: Nuclear Physics & Reactor Theory F-3: Nuclear Materials & Fuels F-4: Radiation Detection and Measurement F-5: Nuclear Waste Assessment & Management
Process Engineering	G-1: Chemical Process Design, Analysis and Optimization G-2: Chemical Wet Processing of Textiles G-3: Food Processing Engineering G-4: Advanced Process Control G-5: Computer Aided Process Synthesis G-6: Process Intensification G-7: Advanced Process Safety	Energetic Materials	H-1: Thermodynamics of Energetic Materials H-2: Material Characterization Techniques H-3: Polymer & Composites H-4: Alloy Processing and Characterization H-5: Corrosion Engineering H-6: Computer Aided Design and Manufacturing
Energy & Power	I-1: Industrial Energy Systems I-2: Energy Auditing and Management I-3: Fuel Cell, and Sustainable Energy Technologies I-4: Internal Combustion Engines I-5: Clean Coal Technology and Co-Generation I-6: Combustion Engineering		



What does a Chemical Engineer do?

- Develop and design manufacturing processes/equipment
- Plan and test production methods
- Direct facility operations
- Transform raw materials into products

Chemical Engineer: Powering the Progress while sustaining the Future!

Categories for Proposed Streams/Technical Electives:

A - Chemical Engineering
B - Design Engineering
C - Oil & Gas Engineering
D - Biochemical Engineering
E - Green Engineering
F - Nuclear Engineering
G - Process Engineering
H - Energetic Materials
I - Energy & Power

Note:

Additional electives may be offered based on faculty expertise, market trends, and available facilities.



“B.Sc. Chemical Engineering empowers you to turn chemistry into innovation - designing cleaner energy, smarter materials, and sustainable solutions for a better tomorrow.”

BIOCHEMISTRY

Bachelor Degree Program

Program Overview – BS Biochemistry

The BS Biochemistry program is structured to cultivate a strong foundation in biology, biochemistry, and human physiology, while drawing comparisons with other species through the development of analytical and research skills. The curriculum integrates modern advancements in biotechnology, molecular ecology, climate science, and antimicrobial resistance. Emphasizing both theoretical and practical knowledge, the program engages students in the critical understanding of biochemical principles and laboratory practices, preparing them for research, diagnostics, and applied sciences.

Introduction

The Department of Biochemistry is committed to advancing a central objective of modern biology, achieving a comprehensive understanding of cellular structure and the dynamic molecular mechanisms underlying biological systems. Biochemistry, by its nature, applies molecular-level approaches to explain biological processes. Our research spans a wide range of disciplines including Clinical Biochemistry, Enzymology, Nutritional and Metabolic Biochemistry, Plant Biochemistry and Molecular Biology, Human Disease Molecular Biology, Proteomics, Genomics, and Cell Biology. With state-of-the-art research facilities and a dedicated, research-driven faculty, the department offers well-rounded graduate programs designed to equip students with a strong and diverse foundation in Biochemistry and Molecular Biology.

Our Mission

To excel in undergraduate, graduate, and postgraduate education and research in the field of Biochemistry and life sciences.



Dr. Shahid Mirza
Assistant Professor



Mrs. Humera Yasmeen
Lecturer



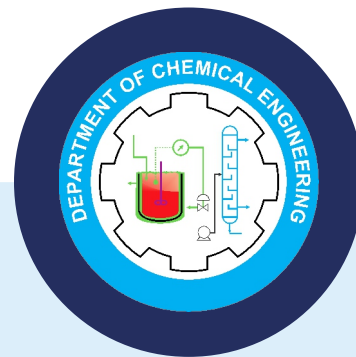
Dr. M. Awais Ashraf
Assistant Professor



Ms. Noreen Siffat
Lecturer



Affiliated with:
Khawaja Fareed University of
Engineering & Information Technology
Rahim Yar Khan



Strategic Academic Expansion:
Chemical Engineering Department took the lead in diversifying academic offerings by introducing Biochemistry, aligning with global trends in interdisciplinary sciences.

Bridging Disciplines:
This initiative bridges chemical engineering with life sciences, fostering innovation at the intersection of chemistry, biology, and health-related technologies.

Coordinator BS Biochemistry



Ms. Shazia Saeed
Assistant Professor

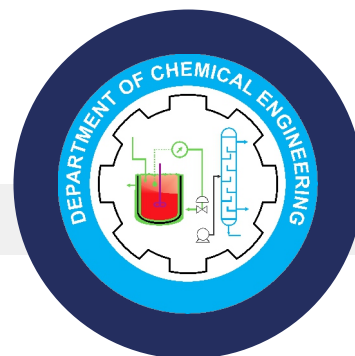
Job options as Biochemist:

- Forensic scientist
- Nanotechnologist
- Pharmacologist
- Research scientist (life sciences)
- Analytical chemist
- Clinical scientist, biochemistry
- Neuroscientist
- Product/process development scientist
- Physician associate

BIOCHEMISTRY

Bachelor Degree Program

BS Biochemistry Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - I	ENGL-1118	Functional English	3	0	SEMESTER - II	ENGL-1119	Communication Skills	3	0
	PAKS-1113	Pakistan Studies	2	0		ISLS-1112	Islamic studies	2	0
	MATH-1111	Mathematics-I	3	0		CHEM-1151	Inorganic Chemistry	3	0
	HLTH-1113	Basic Health Awareness	2	0		CHEM-1251	Inorganic Chemistry-Lab	0	1
	CHEM-1162	Organic Chemistry	3	0		SSCI-3120	Constitution & Legal System-Pakistan	2	0
	CHEM-1262	Organic Chemistry-Lab	0	1		MATH-1112	Mathematics-II	3	0
	BOCH-1101	Introductory Biochemistry	3	0		BOCH-1103	Carbohydrates & Lipids	3	0
	BOCH-1201	Introductory Biochemistry-Lab	0	1		BOCH-1203	Carbohydrates & Lipids-Lab	0	1
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - III	ENGL-2111	Technical Writing and Presentation Skills	3	0	SEMESTER - IV	BIOL-2102	Genetics	3	0
	ECON-2118	Applied Economics	3	0		BOCH-2104	Human Physiology	3	0
	BOCH-2103	Proteins & Amino Acids	2	0		CHEM-2171	Physical Chemistry	3	0
	BOCH-2203	Proteins & Amino Acids-Lab	0	1		BIOL-2103	Microbiology	2	0
	CHEM-2112	Analytical chemistry	3	0		BIOL-2203	Microbiology-Lab	0	1
	CHEM-2212	Analytical chemistry-Lab	0	1		BOCH-2105	Enzymology	2	0
	STAT-2104	Probability and Statistics	3	0		BOCH-2205	Enzymology-Lab	0	1
						BOCH-2106	Immunology	3	0
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - V	BOCH-3107	Metabolism	4	0	SEMESTER - VI	BOCH-3112	Industrial Biochemistry	2	0
	BOCH-3108	Molecular Biochemistry	3	0		BOCH-3212	Industrial Biochemistry-Lab	0	1
	BOCH-3109	Nutritional Biochemistry	2	0		BOCH-3113	Clinical Biochemistry	2	0
	BOCH-3110	Biochemistry	2	0		BOCH-3213	Clinical Biochemistry-Lab	0	1
	BOCH-3111	Bioenergetics	2	0		BOCH-3114	Techniques in Molecular Biology	2	0
	COSC-1105	Introduction to ICT	2	0		BOCH-3214	Techniques in Molecular Biology-Lab	0	1
	COSC-1205	Introduction to ICT-Lab	0	1		MSCI-4101	Marketing Management	3	0
						BOCH-3115	Plant Biochemistry	2	0
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - VII	BOCH-4117	Research Projects and Scientific Writing	3	0	SEMESTER - VIII	BOCH-4119	Current Trends in Biochemistry	3	0
	BOCH-4118	Biomembranes & Cell	3	0		BOCH-4120	Review Report	3	0
	BIOI-2101	Signaling	2	0		BOCH-4121	Seminar	1	0
	BIOI-2201	Introduction to Bioinformatics	3	0		BIOL-2101	Biosafety & Ethics	2	0
	BIOI-2202	Introduction to Bioinformatics-Lab	0	1		-----	Elective-III	3	0
	-----	Elective-I	3	0		-----	Elective-IV	3	0

LIST OF ELECTIVE COURSES

Sr. #	COURSE CODE	COURSE TITLE	Th.	Pr.
1	BOCH-4130	Cancer Biology	3	0
2	BIOI-3103	Genomics	3	0
3	BIOI-3105	Proteomics	3	0
4	BOCH-4131	General Virology	3	0
5	BOCH-4132	Antimicrobials and Chemotherapeutics	3	0
6	BOCH-4133	Structural Biology	3	0
7	BIOT-4121	Fermentation Biotechnology	3	0
8	BOCH-4134	Toxicology	3	0

ENVIRONMENTAL SCIENCE

Bachelor Degree Program

Program Overview – BS Environmental Science

BS Environmental Science program is designed to equip students with the scientific knowledge, technical skills, and analytical tools required to address complex environmental challenges. The program integrates core concepts from biology, chemistry, geology, environmental policy, and sustainability. Emphasis is placed on climate change, pollution control, natural resource management, environmental impact assessment, and ecological restoration. Graduates will be prepared for dynamic careers in environmental consultancy, research, governmental organizations, and industries committed to sustainable practices.

Introduction

BS Environmental Science program, launched under the leadership of the Department of Chemical Engineering, reflects the growing need for multidisciplinary solutions to environmental issues. The program emphasizes a hands-on, systems-based approach to understanding environmental processes and their interactions with human activity. Students are trained to critically evaluate environmental data, develop sustainable solutions, and implement effective policies. Modern laboratories, field studies, and industry partnerships support experiential learning and applied research.

Our Mission

To foster a new generation of environmentally conscious professionals capable of leading efforts in sustainability, conservation, and environmental innovation. The program is committed to academic excellence, research advancement, and community engagement to support global and national environmental goals.



Syed Shamim Raza
Assistant Professor



Dr. Hina Mukhtar
Assistant Professor



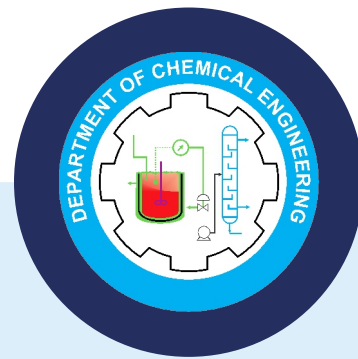
Mr. Muhammad Imran
Lecturer



Mr. Miqdad Bin Masood
Lecturer



Affiliated with:
Khawaja Fareed University of
Engineering & Information Technology
Rahim Yar Khan



Academic Leadership in Sustainability:
Chemical Engineering Department led the academic innovation by introducing the BS Environmental Science program, addressing pressing environmental and climate-related challenges.

Industry-Responsive Curriculum:
The program is designed in line with national and international environmental regulations, equipping graduates with skills needed for environmental consultancy, EIA, climate resilience, and green industry.

Coordinator BS Environmental Science



Engr. Masood-ur-Rauf Zafar
Lecturer

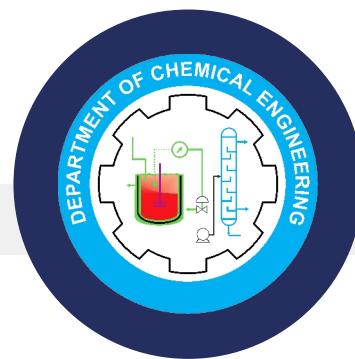
Job options as Biochemist:

- Environmental Health & Safety (EHS) Officer
- Climate Change Analyst
- Waste Management Specialist
- Environmental Impact Assessment (EIA) Coordinator
- Conservation Scientist / Ecologist
- Policy Analyst or Environmental Educator
- Air Quality Analyst

ENVIRONMENTAL SCIENCE

Bachelor Degree Program

BS Environmental Science Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	ENSC-1101	Introduction to Environmental Science	3		ENSC-1103	Introduction to Earth Sciences	3
	BIOL-1181	Applied Biology	3		PHYS-1121	Applied Physics	3
	CHEM-1120	Applied Chemistry	2		PHYS-1221	Applied Physics Lab	1
	CHEM-1220	Applied Chemistry Lab	1		STAT-1100	Statistical Theory	2
	MATH-1120	Applied Mathematics	3		SSCI-1111	Introduction to Sociology	3
	ENGL-1118	Functional English	3		ENGL-1119	Communication Skills	3
	PAKS-1113	Pakistan Studies	2		ISLS-1112	Islamic Studies/Ethics*	2
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.
	CPEN-1114	Introduction to Computing	2		ENSC-2102	Applied Ecology	3
	CPEN-1214	Introduction to Computing-Lab	1		ENSC-2103	Environmental Toxicology	2
	CHEM-4181	Environmental Chemistry	2		ENSC-2203	Environmental Toxicology-Lab	1
	ENSC-2101	Environmental Microbiology	3		ENSC-2104	Environmental Pollution	3
	ECON-2118	Applied Economics	3		ENSC-2105	Biodiversity and Conservation	3
	ENGL-2111	Technical Writing and Presentation Skills	3		SSCI-4101	Principles of Psychology	3
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.
	ENSC-3101	Air and Noise Pollution	3		ENSC-3104	Environmental Economics	3
	ENSC-3102	Environmental Engineering	2		ENSC-3105	Environmental Biotechnology	3
	ENSC-3202	Environmental Engineering-Lab	1		ENSC-3106	Environmental Policy and Law	3
	ENSC-3103	Environmental Monitoring	2		ENSC-3107	Natural Resources and Management	3
	ENSC-3203	Environmental Monitoring-Lab	1		ENSC-XXXX	Elective – I	3
	MSCI-2110	Project Management	3				
	PAKS-2222	International Relations	3				
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	ENSC-4101	Global Warming and Climate Change	3		ENEN-3206	Water Quality Analysis Lab	2
	ENSC-4102	Renewable Energy and Environment	3		ENSC-4106	Occupational Safety and Health	3
	ENSC-4103	Environmental Impact Assessment	2		ENSC-4107	Environmental Management Systems	3
	ENSC-4203	Environmental Impact Assessment-Lab	1		ENSC-XXXX	Elective – II	3
	ENSC-4104	Wastewater Treatment and Management	3		ENSC-4301	Final Year Project	6
	ENSC-4105	Solid Waste Management	3				

LIST OF ELECTIVE COURSES:

- Water Resource Management
- Soil and Environment
- Urban Environmental Management
- Disaster Risk Management
- Pollutant Movement in Soil
- Energy and Environment
- Hydrology
- Agro-ecology
- Occupational Safety, Health and Environment
- Solid Waste Management
- Ecotourism
- Project Management
- Environmental Biotechnology
- Air and Noise Pollution

ELECTRICAL ENGINEERING

Bachelor Degree Program

Electrical and Electronics Engineering drives modern innovation, from early inventions to today's global networks and smart technologies. It revolutionizes industries like power, robotics, medicine, and multimedia. Blending science, technology, and creativity, it equips engineers to design advanced systems and solve real-world problems through a multidisciplinary approach, shaping the future of technology.

At NFC IEFER, Electrical Engineering is more than just classroom learning, it's an immersive, hands-on journey that prepares students to become skilled and industry-ready engineers. The department is housed in a modern, multi-storey building spanning 80,000 square feet, equipped with lecture halls, advanced labs, faculty offices, conference rooms, an auditorium, exam hall, and student support services.

Practical exposure is a key component of the program. Students engage in industrial visits, internships, and lab projects where they design, build, and present circuits, gaining critical technical and market experience. They are also encouraged to explore technologies beyond the curriculum, supported by training in modern simulation tools and participation in regular seminars and technical workshops.

Co-curricular growth is equally emphasized through the IEEE NFC Student Branch, which links students to a global network of engineering professionals. This platform offers opportunities to attend national and international events, student congresses, and workshops, developing leadership, communication, and professional skills essential for career success.

DEPARTMENT MISSION:

"To prepare electrical engineering graduates having a concrete knowledge-base and analytical/ problem solving skills that shall empower them to undertake challenging job positions, innovative research and entrepreneurship."

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

PEO-1

To edify and train the graduates in design, synthesis, applications and project management are as to resolve electrical engineering problems.

PEO-2

To prepare the graduates for acquiring the international standards of advanced or higher education and innovative research.

PEO-3

To establish the leadership skills that will enable them to command their departments and organizations.

PEO-4

To indulge professional, social and ethical responsibilities in the graduates.



Importance of B.Sc. Electrical Engineering

- Powers advancements in energy, electronics, communication, and automation.
- Opens career paths in industry, research, academia, and entrepreneurship.
- Supports essential systems like power grids, smart devices, and industrial automation.

- **Future-Ready Skills:** Emphasizes hands-on learning, software tools, and emerging technologies.

Industrial Liaison & Consultancy Services offered by the Electrical Engineering Department:

- Final year design projects and research assignments are often developed in collaboration with industry partners, addressing real-world engineering challenges.
- Students gain hands-on experience through internships and industrial training programs, enhancing their understanding of workplace dynamics and professional practices.
- The department provides consultancy services in areas such as circuit design, energy optimization, control systems, and embedded technologies, supporting local industry and R&D initiatives.

Some National & Multinational organizations:



Affiliated with:
University of Engineering & Technology, Lahore



Accredited with:
**Pakistan Engineering Council
OBE LEVEL-II**

ELECTRICAL ENGINEERING

Bachelor Degree Program

HEAD's MESSAGE

Welcome to the Electrical Engineering Department at NFC IE&FR. With globally-aligned curriculum, specialized streams, modern labs, and strong industry linkages, we equip students with the skills, leadership, and innovation needed to excel in their careers and shape the future of engineering.



Engr. Hamid Ali Rao
Assistant Professor



Engr. M. Shafique
Assistant Professor



Engr. Hassan Ijaz Tarar
Assistant Professor



Dr. Rizwan-ul-Hassan
Assistant Professor



Dr. Nasif Raza Jafferi
Assistant Professor



Engr. Toseef Abid
Lecturer



Engr. Uzma Azam
Lecturer



Engr. Awais Anjum
Lecturer



Engr. Maira Naz
Lecturer



Engr. Ayesha Javaid
Lecturer



Dr. Usama Abrar
Assistant Professor



Engr. Amir Haider
Lecturer



Engr. Ali Ghalib
Lecturer



Engr. Ali Abbas
Lecturer



Engr. M. Junaid Razzaq
Lecturer



Engr. Usama Ali
Lab. Engineer



Engr. Awais Altaf
Lab. Engineer



Faculty of Electrical Engineering

- Supportive and accessible teachers committed to students' academic and professional development.
- Strong mentorship for final year projects, internships, and career guidance.
- Emphasis on interactive teaching methods and practical lab-based learning.

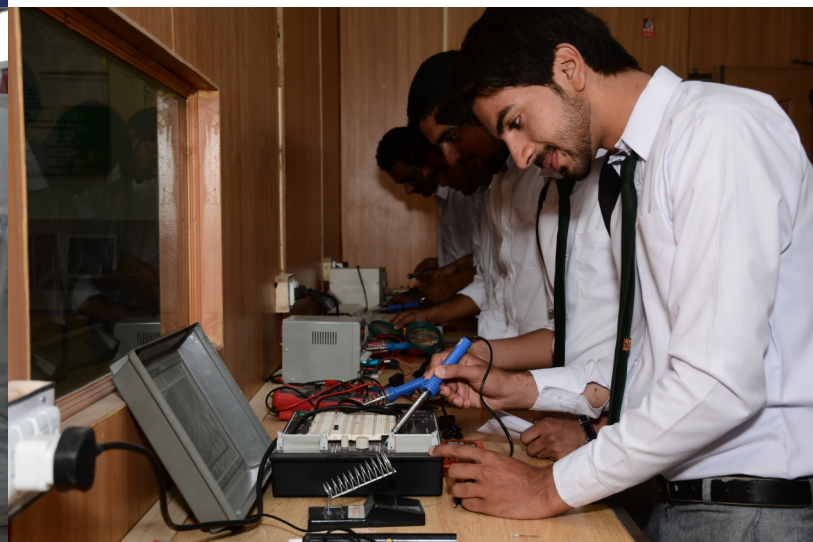
Head of Department Electrical Engineering



Engr. Dr. Muhammad Junaid Alvi
Assistant Professor

ELECTRICAL ENGINEERING LABORATORIES

The department houses fully equipped labs with state-of-the-art equipment, regularly upgraded through a dedicated development budget. A modern computer lab with internet access supports learning of engineering software, offering students both virtual simulations and hands-on training for a comprehensive practical experience.



ICT-Funded Final Year Projects (FYP)

The Department of Electrical Engineering actively promotes a research and development culture by encouraging students to pursue innovative Final Year Projects (FYP). Selected undergraduate projects are submitted to the National ICT R&D Fund under the Ministry of IT, Islamabad, for financial support. This funding helps students develop prototypes and working models, enabling them to apply practical engineering skills and showcase creative solutions. It covers essential equipment and development costs

Career Prospects for Electrical Engineers

Electrical and Electronics Engineering remains a dynamic and foundational discipline that underpins modern technology. Graduates are well-positioned for diverse career opportunities across power systems, telecommunications, automation, circuit design, data communication, and control systems. Their expertise is essential in industries ranging from electric power generation to high-speed networking and smart systems. Many alumni have secured roles in renowned organizations such as Mobilink, Zong, Wateen, Telenor, Sitara Group, WAPDA, PTCL, and even internationally with companies like Hitachi, ABB Sweden, and Nokia. Some have pursued advanced studies abroad or joined Pakistan's civil services after clearing CSS.

Faculty Excellence

The department boasts a highly qualified and dedicated faculty, committed to technical excellence and ethical education. Over 60% of faculty hold postgraduate or doctoral degrees and actively engage in research, often collaborating with students. Their involvement in project supervision and lab development enhances student learning. Notably, a faculty-led proposal was approved and funded by the ICT R&D Fund, highlighting the department's research impact and innovation culture.

OUR ALUMNI Experiences



Mirza Ali Imran Baig
B.Sc. Electrical Engineering
Session 2003 - 2007
Currently working as
Manager L1 Optimization
at Telecom Industry

"NFC IE&FR gave me the foundation for success, from technical skills to leadership and confidence. The learning environment and faculty support helped me grow beyond the classroom.

Today, many of us from NFC are leading in various industries, locally and globally. If you're ready to grow and lead, this is where your journey begins. Apply now and shape your future."



Engr. M. Tauheed Baig
B.Sc. Electrical Engineering
Session 2009 - 2013
Currently working as
Assistant Manager
(Maintenance) at NTDC

"My time at NFC IE&FR provided a strong foundation in both technical skills and leadership. The practical learning and faculty support prepared me well for industry challenges. At NTDC, I apply these principles daily to help maintain the national grid.

My advice to students: stay consistent, be hands-on, and keep learning. I'm proud to be a part of NFC IEFR."



Dr. M. Anwar Ul Haq Bajwa
B.Sc. Electrical Engineering
Session 2003 - 2007
Currently working as
Executive Director @EVOSTEL &
Saleh Zaid Al Quraishi & Partner
Saudi Arabia

"Proud to be part of the first Electrical Engineering batch at NFC IEFR. My time here, founding the first student magazine, engaging in leadership and extracurricular roles, laid the foundation for my global career.

To students: Make the most of every opportunity. NFC IEFR is where your journey begins."

ELECTRICAL ENGINEERING

Bachelor Degree Program

B.Sc. Electrical Engineering – Elective Curriculum Overview

Arts & Humanities Electives (2+0)

Communication and Presentation Skills
 Beginners Spanish
 Elementary Arabic
 Elementary French
 Elementary Chinese
 History
 Philosophy
 Professional Ethics
 Any other relevant course/language decided by the HEI as per requirement

Social Science Electives (2+0)

• Sociology for Engineers
 • Sociology
 • Social Psychology
 • Critical Thinking
 • Human Resource Management
 • Organizational Behavior
 • Engineering Law
 • Engineering Economics
 • Applied Psychology
 • Engineering Management
 • Financial Management
 • Marketing Management
 • Leadership and Personal Grooming
 • Any other relevant course decided by the HEI as per requirement

Proposed Streams / Technical Electives (2+0)

Power Stream Electives

Electrical Power Transmission
 Power System Protection
 Power System Operation & Control
 Electrical Machine Design & Maintenance
 High Voltage Engineering
 Renewable Energy Systems
 FACTS and HVDC Transmission
 Smart Grid
 Power Electronics
 Artificial Intelligence
 Instrumentation & Measurement
 Any other relevant course decided by the HEI

Telecom/Communication Stream Electives

Digital Communications
 Wireless and Mobile Communications
 Satellite Communications
 Navigation Systems
 Next Generation Networks
 Internet of Things (IoT)
 Wireless Network System
 Telecommunications Standards & Regulations
 Network Management
 Telecommunications Traffic Engineering
 Optical Communications
 Microwave & Radar System
 Transmission & Switching System
 Antenna & Wave Propagation
 Any other relevant course decided by the HEI

Electronics Stream Electives

Analogue Integrated Electronics
 FPGA Based Digital Design
 VLSI Design
 Optoelectronic
 Digital Control
 Biomedical Instrumentation
 Digital Signal Processing
 RF and Microwave Engg.
 Nanotechnology
 Micro Electromechanical Systems
 Industrial Electronics
 Application Specific Integrated Circuits (ASIC) Design
 Embedded Systems
 Internet of Things (IoT)
 Artificial Intelligence
 Any other relevant course decided by the HEI

Electric Vehicles Stream Electives

Sensors and Actuators
 EV Batteries and Ancillaries
 EV Software
 EV Control Systems
 EV Integration with Power Grid
 Autonomous Vehicles
 EV Circuits and Electronics
 EV Body and Chassis Design
 Vehicular Networking
 EV Dynamics
 Any other relevant course decided by the HEI

Computer Systems Stream Electives

• Data Base Systems
 • Digital Image Processing
 • Data Communication
 • Computer Graphics
 • Computer Vision
 • Image and Video Coding
 • Network Protocols and Standards
 • Network Security
 • Network and System Programming
 • Computer Organization
 • Computer Architecture
 • Digital Systems Design Robotics
 • Unmanned Aerial Vehicles (UAVs)
 • Cloud Computing
 • Cyber Security Systems
 • Geo Informatics
 • Digital Signal Process
 • Digital Control
 • Internet of Things (IoT)
 • Embedded Systems
 • Artificial Intelligence
 • Any other relevant course decided by the HEI



NOTE:

Additional electives may be offered based on faculty expertise, market trends, and available facilities.

Multi-Disciplinary Domain Electives (MDEE)

Applied Mechanics
 Fluid Mechanics
 Thermodynamics
 Surveying & Leveling
 Bio-Mechanics
 Environmental Engineering
 Software Engineering
 Optimization Techniques
 Any other relevant course decided by the HEI

Natural Science Electives (3+0)

• Multivariable Calculus
 • Discrete Mathematics
 • Numerical Analysis
 • Applied Chemistry
 • Biology or any related course
 • Any other relevant course decided by the HEI as per requirement

Major-Based Core (MBC) Depth Electives

Power Stream (Depth Core)

Power Generation (Depth Core-I)
 Power System Analysis (Depth Core-II)

Telecom/Communications Stream (Depth Core)

Electric Circuit Design (Depth Core-I)
 Computer Communication Networks (Depth Core-II)

Electronics Stream (Depth Core)

Electronic Circuit Design (Depth Core-I)

Computer Systems Stream (Depth Core)

Computer Communication Networks (Depth Core-I)
 Operating Systems (Depth Core-II)

Electric Vehicles Stream (Depth Core)

Automotive Engineering (Depth Core-I)
 EV Charging Devices and Technologies (Depth Core-II)

ELECTRICAL ENGINEERING

Bachelor Degree Program

B.Sc. Electrical Engineering Curriculum

- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)



SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - I	PHY-123	Mechanics and Wavemotion	3	1	SEMESTER - II	PHY-132	Electricity and Magnetism	3	1
	EE-100	Electric Circuits	3	1		MA-228	Differential Equations	3	0
	ME-100L	Workshop Practice	0	1		EE-110	Circuit Analysis and Design	3	1
	IS-102	Islamic Studies/Ethics-I	3	0		EE-133	Programming Fundamentals	3	1
	MA-113	Calculus and Analytical Geometry	3	0		HU-111L	Communication Skills	0	1
	CS-103	Introduction of Computer Programming for Data Science	2	1		QT-101	Translation of the Holy Quran-I	1	0
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - III	EE-250	Electric Machinery Fundamentals	3	1	SEMESTER - IV	EE-272	Digital Systems	3	1
	EE-216	Electronic Device and Circuits	3	1		EE-220	Signals and Systems	3	0
	HU-212	Civics and Community Engagement	2	0		EE-302	Applied Probability	3	0
	MA-234	Linear Algebra	3	0		HU-200	Technical Report Writing	3	0
	EE-234	Data Structure and Algorithms	2	1		HU-213/ HU-214/	Anthropolgy/ Psychology/	2	0
	MA-240	Numerical Analysis	2	0		HU-215	Social Work		
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - V	EE-339/	Core Breadth Elective-I	3	1	SEMESTER - VI	EE-338	Core Breadth Elective-II	3	1
	EE-356/	Analysis and Design of Algorithms/Power Transmission Distribution and				EE-312	Introduction to Machine Learning/		
	EE-384	Utilization/Digital Signal Processing				EE-313	Electronics		
	EE-383	Electromagnetics and its Applications	3	0		EE-351/	Core Depth Elective-I	3	1
	MGT-211	Principles of Management	3	0		EE-375/	Power System Analysis and Design/		
	EE-373	Microprocessor Systems	3	1		EE-386	Computer Architecture/Microwave and Antena Engineering		
SEMESTER - VII	EE-313/	Integrated Electronics/Analogue and Digital Electronics	3	1	SEMESTER - VIII	EE-322	Analogue & Digital Communications	3	1
	EE/314					EE-340	Control Systems	3	1
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - VII	EE-xyz	Core Depth Elective-II	3	1	SEMESTER - VIII	EE-xyz	Core Depth Elective-IV	3	1
	EE-xyz	Core Depth Elective-III	3	0		EE-xyz	Core Depth Elective-V	3	1
	IS-202	Ideology and Constitution of Pakistan/Ethics-II	3	0		MGT-349	Entrepreneurship	2	0
	EE-499a	Project (Phase-I)	0	3		EE-499b	Project (Phase-II)	0	3
	EE-399	Internship	0	0		QT-401	Translation of the Holy Quran-IV	1	0
	CMPE-341	Artificial Intelligence/ Robotics	3	1					
SEMESTER - VIII	MCT-351				SEMESTER - VIII				

MECHANICAL ENGINEERING

Bachelor Degree Program

The Mechanical Engineering Department offers a four-year bachelor's degree in affiliation with UET Lahore. The program equips students with core engineering knowledge and practical skills to solve real-world industrial problems. It emphasizes engineering sciences, system operations, design, teamwork, and communication. Students also develop business and project management capabilities, preparing them for diverse careers in engineering and industry leadership roles.

Mechanical Engineering is a broad and versatile field that applies physical principles to design, analyze, manufacture, and maintain mechanical systems. It covers everything from nano-scale gears to large-scale machines like supertankers, with applications in robotics, computational mechanics, materials science, and more. Mechanical engineers are essential in developing innovative technologies and industrial processes that improve everyday life.

The discipline blends theory with practical application, requiring strong scientific and technical knowledge along with problem-solving skills to tackle real-world challenges. In industry, mechanical engineers often combine engineering expertise with management skills to drive innovation and maintain competitiveness.

At NFC-IEFR, the Mechanical Engineering Department aims to deliver high-quality education and research while serving society. The academic program balances intellectual development and hands-on experience, preparing students to work in multidisciplinary teams, lead effectively, and make ethically sound decisions with a focus on sustainability and societal impact.

DEPARTMENT MISSION:

"Department of Mechanical Engineering at NFC Institute of Engineering & Fertilizer Research (NFC-IEFR) dedicates itself to providing students with the skills, knowledge, and attributes needed to succeed as engineers and leaders. The department endeavors to prepare its graduates for lifelong learning, professional service, and meeting intellectual, ethical, and career challenges."

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

PEO-1

Enable graduates with the knowledge and skills to analyze and develop solutions for complex mechanical engineering problems.

PEO-2

Apply modern techniques to investigate engineering challenges while addressing ethical, societal, environmental, and technical implications.

PEO-3

Effectively communicate and work in multidisciplinary teams to manage projects, finances and pursue lifelong learning.



Importance of B.Sc. Mechanical Engineering

- Diverse career options in industries like automotive, aerospace, and energy
- Opportunities in renewable energy technologies (solar, wind, geothermal)
- Continual growth with emerging fields like AI-driven design and Industry 4.0

- In-demand globally for advancing energy, manufacturing, and innovative product engineering.

Industrial Liaison & Consultancy Services offered by the Mechanical Engineering Department:

- Bridging Academia and Industry through collaborative research and real-world projects
- Customized Engineering Solutions for industrial design, automation, and optimization
- Support for Startups & SMEs in mechanical system design and innovation
- Continuous Professional Development (CPD) seminars and certifications for engineers

Some National & Multinational organizations:



Affiliated with:
University of Engineering & Technology, Lahore



Accredited with:
**Pakistan Engineering Council
OBE LEVEL-II**

MECHANICAL ENGINEERING

Bachelor Degree Program

HEAD's MESSAGE

Welcome to the Mechanical Engineering Department at NFC IE&FR. With globally-aligned curriculum, specialized streams, modern labs, and strong industry linkages, we equip students with the skills, leadership, and innovation needed to excel in their careers and shape the future of engineering.



Dr. Syed Amjad Ahmad
Associate Professor



Dr. Syed Murawat Abbas
Assistant Professor



Engr. M. Naheed Javed
Assistant Professor



Dr. Hafiz M. Waqas
Assistant Professor



Dr. Aqeel Abbas
Assistant Professor



Engr. Zafar Abas
Lecturer



Engr. M. Azhar Anwar
Lecturer



Engr. Romeeza Majeed
Lecturer



Engr. M. Zubair Afzal
Lecturer



Engr. Saqib Naseer
Lecturer



Engr. Hafiz M. Usman Iqbal
Lecturer



Engr. Bushra Riaz
Lecturer



Engr. M. Abubakar
Lab. Engineer



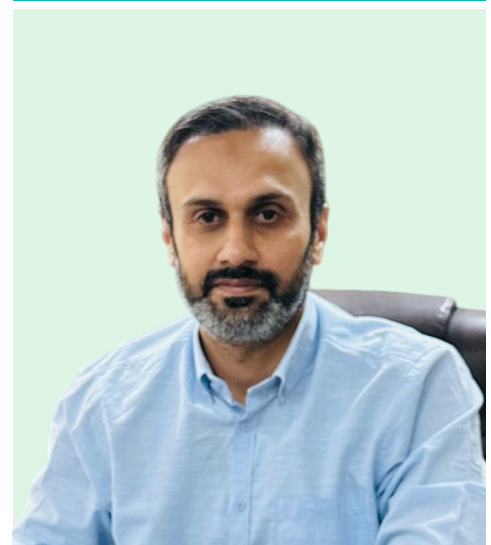
Engr. Khizar Siddique
Lab. Engineer



Faculty of Mechanical Engineering

- Supportive and accessible teachers committed to students' academic and professional development.
- Strong mentorship for final year projects, internships, and career guidance.
- Emphasis on interactive teaching methods and practical lab-based learning.

Head of Department Mechanical Engineering



Engr. Dr. Umair Munir
Assistant Professor

MECHANICAL ENGINEERING

Outstanding Alumni



Engr. M. Zeeshan Khan

B.Sc. Mechanical Engineering
Session 2018-2022

Working As

**Assistant Manager at
Aerospace Design &
Innovation Centre (ADIC),
National Aerospace Science &
Technology Park (NASTP)**

“My industry experience has been rewarding, Alhamdulillah. After 1.5 years in the sugar sector, I’m now working at an Aerospace Design and Innovation Center. Mechanical engineering offers vast opportunities in Pakistan. My advice: never rely on “Sifarish.” Your degree opens doors, but success comes from how you present your skills, competence, and professionalism.”



Engr. Mirza Noor-ul-Haq

B.Sc. Mechanical Engineering
Session 2018-2022

Working As

**Senior Production Engineer at
Qadri Engineers**

“As an alumnus of Department of Mechanical Engineering at NFC IE&FR Faisalabad, I credit the strong academic foundation and practical exposure I received here for shaping my professional journey.

Today, I serve as a Senior Production Engineer at Qadri Engineers, contributing to precision engineering and global manufacturing solutions.

To aspiring engineers, this institute can be your launchpad to a rewarding and impactful career.”



Engr. Muhammad Raza

B.Sc. Mechanical Engineering
Session 2018-2022

Currently pursuing

**Master of Science (M.Sc.) in
Hydrogen Technology from
Germany**

“If you’re passionate about designing, building, and innovating, then Mechanical Engineering is the perfect field for you. I strongly encourage students to join NFC IE&FR Faisalabad, as it offers a solid educational platform to help you achieve your dreams. With the right guidance and effort, you can build a successful and fulfilling career in engineering just like I did.
Best of luck!”



DEPARTMENT OF MECHANICAL ENGINEERING

MECHANICAL ENGINEERING

Bachelor Degree Program

B.Sc. Mechanical Engineering – Elective Curriculum Overview

Arts & Humanities Electives* (2+0)

1. Communication and Presentation Skills
2. Beginners Spanish
3. Elementary Arabic
4. Elementary French
5. Elementary Chinese
6. History
7. Philosophy
8. Professional Ethics
9. Any other relevant course/language decided by the HEI

Social Science Electives* (2+0)

1. Sociology for Engineers
2. Sociology
3. Social Psychology
4. Critical Thinking
5. Human Resource Management
6. Organizational Behavior
7. Engineering Law
8. Engineering Economics
9. Applied Psychology
10. Engineering Management
11. Financial Management
12. Marketing Management
13. Leadership and Personal Grooming
14. Any other relevant course decided by the HEI

Mathematics Electives***

1. Applied Statistics
2. Probability and Stochastic
3. Multivariable Calculus
4. Any other relevant course decided by the HEI

Technical Electives**** (3 Cr. Hrs.)

1. Tribology
2. Mechanical Engineering Design Analysis
3. Stress Analysis
4. Composite Materials
5. Renewable Energy Technology6
6. Gas Dynamics
7. Aerodynamics
8. Computational Fluid Dynamics (CFD)9
9. Nuclear Engineering
10. Automotive Engineering
11. Advanced Manufacturing Systems
12. Maintenance Engineering
13. Product Design and Development
14. Micro-Electromechanical Systems (MEMS)
15. Power Plant
16. Any other relevant course decided by the HEI



What does a Mechanical Engineer do?

Mechanical engineers design machines and other solutions to solve mechanical problems and challenges. They often create machines such as engines or HVAC systems and products ranging from medical devices to cars.

Career Choices for Mechanical Engineers & Job Prospects

- Design and manufacturing
- Research and development
- Management and project engineering
- Technical support
- Sales and marketing
- Power plants
- Aeroplanes and spacecrafts
- Automobiles
- Heating and air-conditioning systems
- Environmental, nuclear, and railway engineers
- Solar and wind energy systems
- Micromachines and precision engineering

Note:

Additional electives may be offered based on faculty expertise, market trends, and available facilities.



MECHANICAL ENGINEERING

Bachelor Degree Program

B.Sc. Mechanical Engineering Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	Sr. No.	COURSE TITLE	Credit Hrs.		SEMESTER - II	Sr. No.	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	1	Islamic Studies/Ethics	2	0		1	Linear Algebra & Differential Equations	3	0
	2	Calculus and Analytical Geometry	3	0		2	Electrical Engineering	2	0
	3	Functional English	3	0		3	Computer Aided Drawing	0	1
	4	Applied Chemistry/Applied Physics	2	1		4	Engineering Mechanics-I (Statics)	3	0
	5	Applications of ICT	2	1		5	Thermodynamics-I	3	0
	6	Engineering Drawing and Graphics	1	1		6	Materials Engineering	2	0
	7	Workshop Practice	1	1		7	Civics and Community Engagement	2	0
						8	Ideology and Constitution of Pakistan	2	0
SEMESTER - III	Sr. No.	COURSE TITLE	Credit Hrs.		SEMESTER - IV	Sr. No.	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	1	Engineering Mechanics-II (Dynamics)	2	0		1	Measurement and Instrumentation	2	0
	2	Mechanics of Material-I	3	0		2	Mechanics of Materials-II	3	0
	3	Computer Systems and Programming	2	1		3	Fluid Mechanics-II	2	0
	4	Complex Variables and Transforms	3	0		4	Machine Design-I	2	0
	5	Fluid Mechanics-I	3	0		5	Electronics Engineering	2	0
	6	Thermodynamics-II	3	0		6	Electrical and Electronics Engg Lab	0	1
	7	Engineering Mechanics Lab	2	0		7	Expository Writing	3	0
8	Thermodynamics Lab	0	1	8	Fluid Mechanics Lab	0	1		
					9	Mechanics of Materials Lab	0	1	
SEMESTER - V	Sr. No.	COURSE TITLE	Credit Hrs.		SEMESTER - VI	Sr. No.	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	1	Manufacturing Processes	2	0		1	Social Sciences Elective**	2	0
	2	Manufacturing Processes Lab	0	1		2	Heating, Ventilating and Air Conditioning	3	0
	3	Mechanics of Machines	2	0		3	Machine Design-II	2	0
	4	Control Engineering	2	0		4	Finite Element Methods	2	1
	5	Heat & Mass Transfer	3	0		5	HVAC and H&M Lab	0	1
	6	Applied Artificial Intelligence & Machine Learning	2	1		6	Probability & Stochastic/Math Elective***	3	0
	7	M&I Control Lab	0	1		7	Project Management	2	0
8	Numerical Analysis	2	1						
SEMESTER - VII	Sr. No.	COURSE TITLE	Credit Hrs.		SEMESTER - VIII	Sr. No.	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	1	Mechanical Vibrations	3	0		1	Reverse Engineering and Inspection Techniques	2	1
	2	Internal Combustion Engines	2	1		2	Mechatronics & Robotics Engineering	2	1
	3	Technical Elective-I****	3/2	0/1		3	Technical Elective-II****	3/2	0/1
	4	Arts and Humanities Elective*	2	0		4	Entrepreneurship	2	0
	5	Mechanisms and Mechanical Vibration Lab	0	1		5	Occupational Health & Safety	1	0
6	Final Year Design Project-I	0	3	6	Final Year Design Project-II	0	3		

CIVIL ENGINEERING

Bachelor Degree Program

Widely regarded as the foundation of all engineering disciplines, Civil Engineering is one of the most time-honored and impactful fields. It supports a wide array of industries by transforming natural resources into essential infrastructure. From buildings and bridges to water systems and roads, civil engineering shapes the environment we live in. As development accelerates globally, the need for skilled civil engineers continues to grow. Its role in enabling sustainable growth and modern living makes it an indispensable profession worldwide.

The Department of Civil Engineering at NFC IE&FR, Faisalabad, established in Fall 2010, is affiliated with UET Lahore and follows its approved B.Sc. Civil Engineering curriculum. The department offers a four-year, eight semester program focused on building strong foundational knowledge and core civil engineering skills.

Led by a dedicated and highly qualified faculty, the department operates in a purpose-built facility with well-equipped classrooms and laboratories. The academic structure integrates theory, tutorials, lab work, and regular field visits. Students undertake assignments, mini-projects, and a final-year capstone project to enhance research and practical application.

The department implements the Outcome Based Education (OBE) system to promote student-centered learning and ensure career readiness. Key competencies are assessed through CLOs, PLOs, and PEOs. Program effectiveness is regularly evaluated with input from faculty, alumni, employers, and an industrial advisory board, in alignment with Washington Accord standards through a four-step cycle: design, assessment, evaluation, and review.

DEPARTMENT MISSION:

"People are our priority. The world is our laboratory. To make contribution to a sustainable world, shaping public policy, enhancing health & safety and the quality of life by developing global leadership among students, alumni and faculty in different phases of planning, designing, constructing, managing and renewing built natural environments."

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

PEO-1

Graduates demonstrate their proficiency of applying the knowledge & skills to solve complex civil engineering problems.

PEO-2

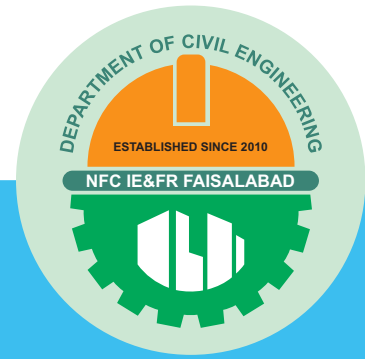
Graduates communicate effectively and contribute in the project team.

PEO-3

Graduates uphold principles of ethics and societal obligations with integrity throughout their professional practices.

PEO-4

Graduates engage themselves in continuous professional learning process for the sustainability.



Importance of B.Sc. Civil Engineering

A degree in Civil Engineering opens the door to diverse and impactful career opportunities in both national and international markets. In Pakistan, civil engineers play a crucial role in the development and maintenance of infrastructure and are employed in a variety of government and private organizations.

Key Employers

Public Sectors:

- WAPDA (Water and Power Development Authority)
- Communication and Works Department (C&W)
- Indus River System Authority (IRSA)
- Pakistan Railways
- Civil Aviation Authority (CAA)
- National Highway Authority (NHA)
- Irrigation and Power Department
- Public Health Engineering Department (PHE)

Private Sectors:

- National Engineering Services Pakistan (NESPAK)
- Associated Consulting Engineers (ACE)
- Descon Engineering
- Izhar Construction
- Habib Rafiq Pvt. Ltd., and many others.

Some Public & Private Sectors



Affiliated with:
University of Engineering & Technology, Lahore



Accredited with:
**Pakistan Engineering Council
OBE LEVEL-II**

CIVIL ENGINEERING

Bachelor Degree Program

HEAD's MESSAGE

Welcome to the Department of Civil Engineering at NFC IE&FR, Faisalabad. We offer a strong academic foundation with real-world industry exposure to help you grow as innovative, skilled engineers. Join us to explore, learn, and build a rewarding future in the ever-evolving world of civil engineering.



Dr.-Ing. Saqib Ehsan
Professor



Dr. Hammad Hussain Awan
Assistant Professor



Dr. Shehroze Ali
Assistant Professor



Engr. Atif Ali Khan
Lecturer



Engr. Sohail Afzal Gill
Lecturer



Engr. M. Zaeem Fakhar
Lecturer



Engr. M. Usman Shahid
Lecturer



Engr. M. Umair Ashfaq
Lecturer



Engr. Khushal Khan
Lecturer



Engr. Muhammad Imran
Lecturer



Engr. Mohiq Khalid
Lecturer



Engr. Khadija Saliha
Lecturer



Engr. M. Sohail Saleh
Lecturer



Engr. Rizwan Amjad
Lecturer



Engr. Suliman Khan
Lecturer



Engr. Suliman Khan
Lecturer



Engr. Sana Sadaf
Lab Engineer



Faculty of Civil Engineering

- Supportive and accessible teachers committed to students' academic and professional development.
- Strong mentorship for final year projects, internships, and career guidance.
- Emphasis on interactive teaching methods and practical lab-based learning.

Head of Department Civil Engineering



Dr. Wajeeha Qamar
Assistant Professor



DEPARTMENT OF CIVIL ENGINEERING LABORATORIES

- Concrete Lab
- Construction Materials Lab
- Fluid Mechanics Lab
- Hydraulic Engineering Lab
- Transportation Engineering Lab
- Strength of Materials Lab
- Surveying Lab
- Geotechnical Engineering Lab
- Computer Lab
- Structural Mechanics Lab
- Basic Mechanics Lab
- Environmental Engineering Lab



OUR OUTSTANDING ALUMNI



Engr. Mawra Abdul Jabbar
B.Sc. Civil Engineering
Session 2015 - 2019
Currently working as
SDO Buildings, Faisalabad
Communication and Works
(C&W) Department
Government of Pakistan

“Rooted in excellence and fueled by passion, I’m Mawra Attaria—a dedicated civil engineer and proud alumna of NFC IEFR (BSc Civil Engineering) and UET Lahore (Msc Structural Engineering). My academic journey has equipped me with a solid foundation in technical knowledge, research, and innovation. Along the way, I’ve built meaningful connections that continue to inspire my professional path. I’m deeply committed to applying my expertise to advance infrastructure development and create lasting impact. Grateful to both institutions for empowering me to dream big and pursue my goals with confidence and purpose.”



Engr. Muhammad Zahar Khan
B.Sc. Civil Engineering
Session 2013 - 2017
Currently working as
Resident Engineer
At Cameos Consultants

“My time at NFC Institute (2013–2017) was a transformative phase that laid the foundation for my academic and professional growth. The knowledge and experiences gained there shaped my path forward. I later earned a Master’s in Project Management in 2021. Currently, I serve as a Resident Engineer at Cameos Consultants, contributing to National Highway Authority (NHA) projects. This role has allowed me to apply both technical expertise and managerial skills. I’m deeply grateful for the journey so far and look forward to carrying forward the lessons and values instilled in me during my academic and professional experiences.”



Engr. Abu Bakar Khalid
B.Sc. Civil Engineering
Session 2014 - 2018
Currently working as Tehsil
Manager Operations At
Faisalabad Waste Management
Company (FWMC)

“Reflecting on my four years at NFC IEFR, I can confidently say they were transformative—both personally and professionally. The institute offered far more than academics; it was a vibrant environment of continuous learning, personal growth, and lasting connections with peers and mentors. The academic rigor and real-world challenges refined my analytical thinking and problem-solving abilities, equipping me to tackle professional demands with confidence. After graduation, I stepped into the role of Site Engineer on multiple development projects, where I applied my technical knowledge hands-on. Eventually, I ventured into entrepreneurship, managing my own business, which broadened my perspective on both engineering practices and business management. NFC IEFR truly laid the foundation for a dynamic and rewarding career.”



*The road to Success is
always Under Construction.*

CIVIL ENGINEERING

Bachelor Degree Program

B.Sc. Civil Engineering Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	CE-104A	Civil Engineering Materials	2	0		CE-101A	Engineering Surveying	2	1
	CE-105A	Engineering Drawing	1	2		CE-150A	Computer Programming and Application of ICT	2	1
	CE-102A	Engineering Mechanics	2	1		CE-111A	Mechanics of Solids-I	2	1
	MA-111	Applied Mathematics-I	3	0		HU-111L	Communication Skills	0	1
	PHY-124	Applied Physics and Electromechanical Fundamentals	2	1		IS-102	Islamic Studies/Ethics	3	0
	Mine-170A	Geology for Engineers	2	0		MA-112	Applied Mathematics-II	3	0
	QT-101	Translation of Holy Quran-I	1	0					
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	CE-231A	Fluid Mechanics	3	1		CE-205A	Computer Graphics and BIM	0	2
	MA-346	Numerical Methods	3	0		CE-207A	Economics for Engineers	2	0
	IS-202	Ideology and Constitution of Pakistan	3	0		CE-211A	Structural Analysis-I	3	0
	CE-208A	Quantity Surveying and Project Planning	1	1		CE-221A	Soil Mechanics	2	1
	CE-209A	Professional Ethics and Community Engagement	2	0		ATP-301	Introduction to Architecture and Town Planning	2	0
						QT-201	Translation of the Holy Quran-II	1	0
						CE-236A	Engineering Hydrology	2	1
						CE-200A	Occupational Health & Safety	0	1
						CE-100A	Survey Camp	0	0
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	CE-301A	Construction Project Management	2	0		CE-312A	Mechanics of Solids-II	3	1
	CE-311A	Structural Analysis-II	2	0		CE-314A	Reinforced Concrete Design-I	3	1
	CE-313A	Steel Structures	3	1		CE-331A	Advanced Fluid Mechanics	3	1
	CE-321A	Geotechnical Engineering	3	1		MA-356	Probability and Statistics in Engineering	2	0
CE-321A	Construction Engineering	2	0	MGT-319	Entrepreneurship for Engineers	2	0		
				CE-323A	Foundation Engineering	2	0		
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	CE-401A	Structural Engineering	3	0		CE-431A	Irrigation Engineering	3	1
	CE-411A	Reinforced Concrete Design-II	3	1		CE-412A	Computer Aided Design of Structures	1	2
	CE-421A	Transportation Engineering	3	1		CE-423A	Pavement Analysis and Design	2	0
	CE-434A	Hydraulic Engineering	3	1		ENE-440	Environmental Engineering	3	1
CE-499A	Final Year Design Project-I (FYDP-I)	0	3	QT-401	Translation of the Holy Quran-IV	1	0		
				CE-499A	Final Year Design Project-II (FYDP-II)	0	3		

SCHOOL OF COMPUTING SCIENCES

NFC INSTITUTE OF ENGINEERING & FERTILIZER RESEARCH, FAISALABAD

OUR VISION

To be a global leader in computing sciences by conducting ground-breaking research, providing high-quality education, fostering interdisciplinary collaboration, engaging with industry, promoting diversity and inclusion, and making a positive socio-economic impact through innovative technologies and solutions.

INTRODUCTION

Computers and computing play a significant role in our lives. In all technical and scientific disciplines, computing transforms the research, development, and discovery process. With more people accessing information technology, computing's social influence is growing. At the same time, the foundations of computers are also evolving quickly. The computing landscape is changing due to new technologies like multicore processors, mobile computing, and cloud computing, and as computer science becomes more interdisciplinary, new problems are emerging. Companies in various industries are looking for computer scientists with cutting-edge expertise. A strong computer science department is essential to NFC-IEFR's mission to be a valuable institute that prepares students to contribute to the advancement of society.

The Department of Computer Science was established as a separate department in 2006. It offered a BS (Computer Science) program in 2006. In 2022, the department started the BS Information Technology program. This journey continued, and the department began BS Artificial Intelligence, BS Data Science, and BS Cyber Security in 2023. The Department of Computer Science was upgraded to the School of Computing Sciences in 2023. These bachelor's Programs at NFC-IEFR are distinguished from similar degree courses in our vicinity. Our programs have a more diverse coverage of all related subjects like Artificial Intelligence, Computer Communication and Networking, Information Systems, Software Development, and Web Technologies, with a tinge of management courses. This has been carefully conceived to make our students up-to-date with market trends.



BS Computing Programs:

1. **B.Sc. Computer Science**
2. **BS Artificial Intelligence**
3. **BS Cyber Security**
4. **BS Data Science**
5. **BS Information Technology**

MISSION

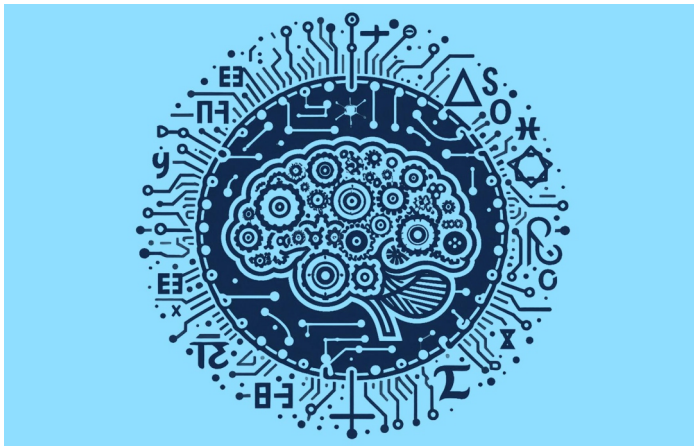
Our mission is to advance computing sciences through rigorous education, impactful research, and collaborative engagement. We are committed to fostering critical thinking, technical excellence, and ethical responsibility among our diverse academic community. Through a strong curriculum and interdisciplinary research, we aim to develop innovative, socially responsible solutions to real-world challenges. By actively partnering with industry and society, we strive to bridge knowledge with practice, shaping a sustainable and inclusive future driven by computing innovation.



Affiliated with:
University of Engineering & Technology, Lahore



Accredited with:
National Computing Education Accreditation Council



"Welcome to the School of Computing Sciences at NFC IE&FR — where innovation meets purpose. We empower the next generation of tech leaders through dynamic programs, cutting-edge research, and industry-driven learning. Rooted in excellence, driven by innovation, and committed to shaping a smarter, inclusive, and digitally advanced future."



IT HEIGHTS

**SCHOOL OF COMPUTING
SCIENCES**

B.Sc. COMPUTER SCIENCE

Bachelor Degree Program

The B.Sc. Computer Science program at NFC IEFER equips students with cutting-edge skills in software, hardware, and data technologies. Covering areas like AI, cloud computing, data science, and networking, the program emphasizes research, innovation, and industry exposure. With a rapidly evolving tech landscape, students are prepared to meet emerging challenges and contribute meaningfully to science, industry, and society through advanced computing knowledge and multidisciplinary applications.

Established in 2006, the Department of Computer Science at NFC IEFER began by offering a B.Sc. Computer Science program the same year. The program stands out for its broad, interdisciplinary curriculum, covering key areas like Artificial Intelligence, Networking, Information Systems, Software Development, Web Technologies, and relevant management courses, ensuring alignment with current industry needs.

The department follows an integrated approach to teaching, research, and application. With a strong teacher-to-student ratio, students receive personalized guidance throughout the four-year, eight semester program.

Emphasis is placed on internships, projects, technical writing, industry visits, and expert talks. Evaluations include quizzes, assignments, and GPA-based exams.

Supported by qualified faculty, the program fosters innovation, practical skills, and research-driven thinking, preparing students for success in today's dynamic computing industry.

DEPARTMENT MISSION:

"Provide quality education in both the theoretical and applied foundations of computer science and train students to effectively apply this education to solve real-world problems thus strengthening their potential for lifelong high-quality careers and giving them a competitive advantage in the ever-changing and challenging global work environment of the 21st century."

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

PEO-1

Graduates demonstrate theoretical and practical knowledge and skills in computer science to solve real-world complex problems.

PEO-2

Graduates demonstrate professionalism, leadership qualities and engage in continuous learning of new developments in diverse fields of computing..

PEO-3

Graduates communicate effectively, work in a multidisciplinary team environment, and exhibit an awareness of professional and social responsibility by making an impact on society in an ethical manner.



Importance of B.Sc. Computer Science

- Backbone of Modern Technology
- Foundation for Digital Transformation
- Empowers Problem Solving
- Supports Emerging Technologies
- Global Relevance & Mobility
- Catalyst for Innovation & Entrepreneurship
- Versatility of Career Paths

Key Employers:

National Organizations & Tech Giants

- NADRA (National Database and Registration Authority)
- PTCL Group (PTCL, Ufone)
- Pakistan Software Export Board (PSEB)
- Telenor Pakistan
- Jazz (Mobilink)
- Zong CMPak
- Ignite National Technology Fund
- Ministry of IT & Telecommunication
- Pakistan Aeronautical Complex (PAC)
- SUPARCO
- Pakistan Armed Forces IT branches
- Banks & Financial Institutions

Multinational Companies:

- Systems Limited
- Techlogix
- NETSOL Technologies
- 10Pearls
- Afiniti
- Contour Software (subsidiary of Constellation Software, Canada)
- S&P Global
- Folio3
- i2c Inc.



Affiliated with:
University of Engineering & Technology, Lahore



Accredited with:
National Computing Education Accreditation Council

B.Sc. COMPUTER SCIENCE

Bachelor Degree Program

HEAD's MESSAGE

Welcome to the School of Computing Sciences. As the world continues to evolve through technology, we are committed to equipping our students with the knowledge, skills, and mindset required to lead in the digital age. Our programs blend academic rigor with practical experience, fostering innovation, critical thinking, and ethical responsibility. At SCS, you will find a vibrant learning environment, dedicated faculty, cutting-edge labs, and opportunities to engage with industry and research. We invite you to be part of a community that inspires excellence and shapes the future through computing.

SCHOOL OF COMPUTING SCIENCES FACULTY



Dr. Muhammad Awais
Assistant Professor



Dr. Zulfiqar Ali
Assistant Professor



Dr. Salman Arain
Assistant Professor



Dr. Adnan Safdar
Assistant Professor



Dr. Syed Rizwan Hassan
Assistant Professor



Mr. M. Asim Mubarak
Assistant Professor



Mr. Muhammad Yaseen
Assistant Professor



Mr. Fiaz Waheed
Lecturer



Mr. Usman Ali Baig
Lecturer



Miss Anum Ejaz
Lecturer



Faculty of School of Computing Sciences

- Supportive and accessible teachers committed to students' academic and professional development.
- Strong mentorship for final year projects, internships, and career guidance.
- Emphasis on interactive teaching methods and practical lab-based learning.

Head of Department School of Computing Sciences



Dr. Muhammad Sultan Zia
Professor

B.Sc. COMPUTER SCIENCE

Bachelor Degree Program

SCHOOL OF COMPUTING SCIENCES FACULTY



Miss Aziza Butt
Lecturer



Mr. M. Arslan Barkaat
Lecturer



Ms. Mehwish Rasheed
Lecturer



Ms. Sana Younas
Lecturer



Mr. Rehan Ali
Lecturer



Ms. Omal Sahar
Lecturer



Ms. Anosh Fatima
Lecturer



Ms. Kanwal Amber
Lecturer



Ms. Fiza Khalil
Lecturer



Mr. Umair Shabbir
Lecturer



Ms. Fatima Shahid
Lecturer



Ms. Sana Ilyas
Lecturer



Mr. Muhammad Ismail
Lecturer



Mr. Sameer Munir
Lecturer



Mr. Saqlain Akmal
Lecturer



Scope of B.Sc. Computer Science

- Computer science professionals are in high demand across tech industries, startups, government sectors, and multinational companies.
- Graduates can pursue careers in software development, AI & machine learning, data science, cybersecurity, cloud computing, and more.
- One of the highest-paying fields worldwide, offering competitive salaries and rapid career growth.

Head of Department School of Computing Sciences



Dr. Muhammad Sultan Zia
Professor

B.Sc. COMPUTER SCIENCE

Bachelor Degree Program

Our Laboratories

The Department of Computer Science offers state-of-the-art laboratories equipped with modern computing tools and technologies. These labs provide hands-on experience in programming, networking, data science, AI, and software development to support practical learning and innovation.

FACULTY OF SCHOOL OF COMPUTING SCIENCES



Ms. Hina Akhtar
Lecturer



Ms. Huma Naeem
Lecturer



Engr. Umer Farooq Wahla
Lab. Engineer



Ms. Adeela Bashir
Lab. Engineer



Mr. Abu Marsad Ghurki
Lab. Demonstrator



Mr. Ashan Nasir
Lab. Engineer



Ms. Rida Rasheed
Network Administrator



Ms. Shafia Kiran
Demonstrator



School of Computing Sciences Laboratories:

- **Computer Lab**
- **Software Engineering Lab**
- **Network Technologies Lab**
- **Software Development Lab**
- **Databases Lab**
- **Electronics Lab**





SCHOOL OF COMPUTING SCIENCES
NFC INSTITUTE OF ENGINEERING & FERTILIZER RESEARCH FAISALABAD

***“From writing your first line of code
to securing the digital world,
your journey begins here.”***



Our Alumni

At the School of Computing Sciences, we proudly recognize our alumni who are shaping the digital world through innovation, leadership, and expertise. Graduates of SCS belong to a thriving community making a difference in industry, research, and entrepreneurship. Many have led digital change, created impactful solutions, and contributed globally. Their achievements reflect the strong academic foundation and forward-thinking mindset fostered at SCS. We celebrate their success stories and hope they inspire future generations to lead through computing.



Mr. Malik Asad Maqsood

FHEA, AMICHEM, SMAICHE

B.Sc. Computer Science

Session 2007 - 2011

Currently Serving in

Pakistan Air Force

As Squadron Leader

"Studying Computer Science at NFC IE&FR laid the foundation for my professional growth. The institute's academic excellence, dedicated faculty, and future focused programs shaped my career and character. Today, as a Squadron Leader in the Pakistan Air Force, I proudly credit NFC for the discipline and technical strength that continue to guide me forward."



Mr. Zubair Aziz

B.Sc. Computer Science

Session 2006 - 2010

Currently working as

RAN Specialist at

Huawei Technologies

Pakistan

"Pursuing Computer Science at NFC IE&FR was a life-shaping experience that fueled my interest in technology and equipped me with practical, industry-relevant skills. It laid the groundwork for my professional journey at Huawei Technologies.

To the newcomers: stay curious, challenge yourself, and keep learning. NFC is where your exciting journey into the tech world truly begins."



Dr. Altaf Khan Niazi

B.Sc. Computer Science, Session 2006 - 2010

Currently working as Assistant Professor

Department of CS & IT And Incharge Directorate of Students

Services at University of Mianwali

"As an alumnus of the B.Sc. Computer Science program at NFC IE&FR, I can confidently say this institute offers more than just a degree, it builds vision, discipline, and a lifelong foundation of technical excellence. The dedicated faculty, modern labs, and future-focused curriculum empowered me to grow beyond the classroom. To the freshers: your journey into the world of computing begins here, make it count."

B.Sc. COMPUTER SCIENCE

Bachelor Degree Program

B.Sc. Computer Science – Elective Curriculum Overview

Course Code	Course Title	ACM Knowledge Area
CS-381	Computer Architecture	Architecture & Organization
CS-481	Real Time Systems	Architecture & Organization
CS-382	Operations Research	Computational Science
CS-383	Simulation and Modelling	Computational Science
CS-384	Introduction to Data Science	Data Science
CS-385	Internet of Things	Data Science
CS-482	Big Data Analytics	Data Science
CS-483	Cloud Computing	Data Science
CS-386	Database Administration	Databases
CS-387	Database Performance & Optimization	Databases
CS-388	Database Backup & Recovery	Databases
CS-389	Distributed Databases	Databases
CS-484	Data Warehousing	Databases
CS-581	Graph Databases	Databases
CS-582	Web Semantics	Databases
CS-351	Computer Graphics	Graphics & Vision
CS-485	Computer Vision and Image Processing	Graphics & Vision
SE-325	UX/UI Design	HCI
SE-221	Human Computer Interaction	HCI
CS-487	Ethical Hacking	Information Assurance & Security
CS-353	Management Information Systems	Information Management
CS-488	Information Retrieval	Information Management
CS-354	Natural Language Processing	Intelligent Systems
CS-355	Data Mining	Intelligent Systems
CS-489	Machine Learning	Intelligent Systems
CS-490	Soft Computing	Intelligent Systems
CS-491	Wireless Networks	Networking and Communications
CS-492	Internetworking with Unix TCP/IP	Networking and Communications
CS-496	Linux Kernel Implementation	Operating Systems
CS-390	System Programming	Operating Systems
CS-391	Web Technologies	Platform Based Development
CS-392	Game Development	Platform Based Development
CS-393	Open Source Software Development	Platform Based Development
CS-493	Enterprise Application Development	Platform Based Development
CS-394	Mobile Application Development	Platform Based Development
CS-494	E-Commerce	Platform Based Development
CS-395	Introduction to Programming Languages	Programming Languages Fundamentals
CS-396	Object Oriented Analysis and Design	Software Design
CS-397	Design Patterns	Software Design
CS-495	Software Design & Architecture	Software Design
SE-211	Software Requirements Engineering	Software Engineering
SE-331	Software Quality Engineering	Software Engineering
SE-332	Software Measurement & Metrics	Software Engineering
CS-497	Intro to Program Analysis	Software Engineering
CS-498	Formal Methods	Software Engineering
SE-442	Software Re-Engineering	Software Engineering
SE-441	Software Project Management	Software Engineering
CS-583	Leading Software Teams	Software Project Management
CS-584	Habits of Highly Effective Software Engineer	Software Project Management
CS-585	Personal, Team and Executive Software Processes	Software Project Management
CS-586	Logical Paradigms of Computing	Theoretical Computer Science



Comprehensive Curriculum:

- Structure and organization of computer systems
- Theory of computing
- Software design, development, and maintenance
- Hardware/software integration

Key Highlights of the B.Sc. Computer Science Curriculum:

- Developed to meet the growing demand for professionals in Computer Science and IT.
- Combines Computer Science with Communication Technologies and Information Processing Tools.
- Focuses on real-world applications and problem solving using both software and hardware technologies.
- Builds a strong technical base to adapt to fast-evolving fields like computer science and telecom engineering.
- Uses diverse, real-world scenarios to illustrate computing principles.

Note:

Additional electives may be offered based on faculty expertise, market trends, and available facilities.

B.Sc. COMPUTER SCIENCE

Bachelor Degree Program

B.Sc. Computer Science Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	CSC-102	Programming Fundamentals	4(3-1)		CSC-103	Object Oriented Programming	4(3-1)
	CSC-100	Application of Information and Communication Technologies	3(2-1)		CSC-104	Database Systems	4(3-1)
	CSC-101	Discrete Mathematics	3(3-0)		CSC-105	Digital Logic Design	3(2-1)
	MA-123	Calculus	3(3-0)		MA-104	Calculus-II	3(3-0)
	PHY-111	Applied Physics	3(2-1)		MA-205	Applied Statistics and Probability	3(3-0)
					HU-111L	Communication Skills (Lab)	1(0-1)
					QT-101	Translation of the Holy Quran-I	1(1-0)
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.
	CSC-200	Data Structures and Algorithms	4(3-1)		CSC-205	Computer Organization and Assembly Language	3(2-1)
	MA-234	Linear Algebra	3(3-0)		CSC-201	Information Security	3(2-1)
	HU-102	Functional English	3(3-0)		CSC-202	Artificial Intelligence	3(2-1)
	CSC-203	Computer Networks	3(2-1)		CSC-206	Theory of Automata	3(3-0)
	CSC-204	Software Engineering	3(3-0)		CSC-208	Design and Analysis of Algorithms	3(3-0)
	IS-102	Islamic Studies / Ethics	3(3-0)		CSC-207	Advanced Database Management Systems	3(2-1)
					QT-201	Translation of the Holy Quran-II	1(1-0)
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.
	CSC-300	Operating Systems	3(2-1)		CSC-303	Compiler Construction	3(2-1)
	CSC-301	Introduction to Human Computer Interaction	3(3-0)		CSC-304	Parallel and Distributed Computing	3(2-1)
	CSC-302	Computer Architecture	3(3-0)		CSC-XXX	Domain Elective 3	3(3-0)
	CSC-XXX	Domain Elective 1	3(3-0)		CSC-XXX	Domain Elective 4	3(3-0)
	CSC-XXX	Domain Elective 2	3(3-0)		XX-XXX	Elective Supporting Course	3(3-0)
	HU-XXX	Social Science	2(2-0)		HU-222	Expository Writing	3(3-0)
					QT-301	Translation of the Holy Quran-III	1(1-0)
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	CSC-401	Final Year Project - I	2(0-2)		CSC-402	Final Year Project - II	4(0-4)
	CSC-XXX	Domain Elective 5	3(3-0)		CSC-XXX	Domain Elective 7	3(3-0)
	CSC-XXX	Domain Elective 6	3(3-0)		IS-202	Ideology and Constitution of Pakistan	3(3-0)
	HU-212	Civics and Community Engagement	2(2-0)		CSC-403	Professional Practices in Software Development	2(2-0)
	HU-200	Technical Report Writing	3(3-0)		QT-401	Translation of the Holy Quran-IV	1(1-0)
	MGT-349	Entrepreneurship	2(2-0)		HU-XXX	International Language	0(0-0)

BS ARTIFICIAL INTELLIGENCE

Bachelor Degree Program

The Bachelor of Science in Artificial Intelligence (BS-AI) program is designed to equip students with a strong foundation in both the theoretical and practical aspects of AI. It enables learners to analyze complex scenarios and derive intelligent, actionable decisions by leveraging vast datasets, vision systems, language inputs, and knowledge representations. The curriculum covers a wide range of subjects including machine learning, neural networks, natural language processing, computer vision, automated reasoning, computational modeling, and classical AI methodologies. With an emphasis on ethical considerations and societal impact, students are encouraged to engage in real-world projects targeting sectors like healthcare, education, agriculture, governance, finance, and more.

INTRODUCTION

The BS Artificial Intelligence program, offered by the School of Computing Sciences, is a future-oriented academic initiative designed to prepare students for the rapidly evolving world of intelligent technologies. The program promotes innovation through advanced coursework, hands-on experience, and interdisciplinary collaboration. With access to modern research labs and experienced faculty, students gain the skills needed to develop intelligent software and impactful AI solutions. This program shapes students into industry-ready professionals capable of addressing real-world challenges through smart technologies.

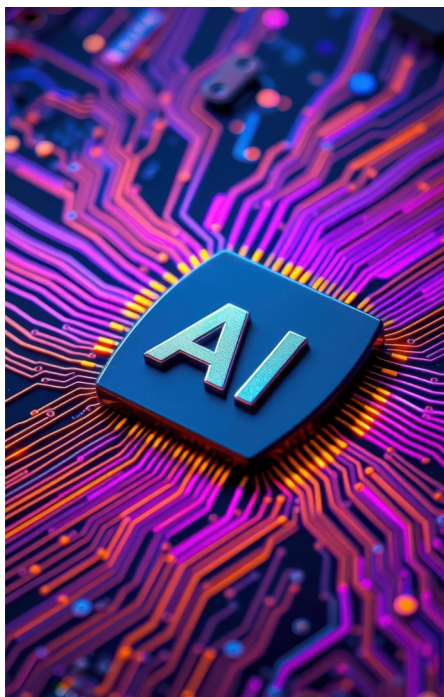
Program Objectives (PEO's)

PEO-01: Work in careers in Artificial Intelligence, associated technology fields, and become successful practicing professionals.

PEO-02: Become contributing members of multidisciplinary teams,

communicating effectively and successfully applying the fundamentals of their educational background.

PEO-03: Realize, mentor, and pursue professional development, including continuing or advanced education, relevant to their career path.



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**Khawaja Fareed University
of Engineering & Information
Technology**



Importance of BS Artificial Intelligence

- Provides students with a blend of theoretical foundations and hands-on skills to design and implement AI solutions.
- Equips students to work with emerging technologies like machine learning, robotics, natural language processing, and computer vision.
- Trains students to develop systems capable of analyzing data and making autonomous, intelligent decisions.

Key Employers:

National Organizations & Tech Giants

- NETSOL Technologies
- Shaukat Khanum Memorial Cancer Hospital (AI in diagnostics)
- 10Pearls
- Contour Software
- Arbisoft
- AI & Data Science Units for All Banking
- Ministry of IT & Telecom
- Ignite National Technology Fund
- NESCOM, SUPARCO, and other defense R&D bodies
- Punjab IT Board (PITB) – AI initiatives for public governance
- NCAI – National Centre of Artificial Intelligence

Multinational Companies:

- IBM Pakistan – AI solutions & enterprise services
- SAP Pakistan – Intelligent ERP and data solutions
- Google Developer Ecosystem (via Google Developer Groups)
- Amazon Web Services (AWS) – Cloud and machine learning services

ARTIFICIAL INTELLIGENCE

Bachelor Degree Program

BS Artificial Intelligence Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
SEMESTER - I	COSC-1101	Programming Fundamentals	3	0	SEMESTER - II	COSC-1102	Object Oriented Programming	3	0
	COSC-1201	Programming Fundamentals-Lab	0	1		COSC-1202	Object Oriented Programming-Lab	0	1
	COSC-1105	Introduction to ICT	2	0		SSCI-2126	Introduction to Psychology	2	0
	COSC-1205	Introduction to ICT-Lab	0	1		PAKS-1121	Ideology and Constitution of Pakistan	2	0
	ISLS-1112	Islamic Studies	2	0		ENGL-1118	Functional English	3	0
	MATH-1106	Quantitative Reasoning-I	3	0		MATH-1107	Quantitative Reasoning-II	2	0
	ENSC-1113	The Science of Global Challenges	3	0		ELEN-2100	Digital Logic Design	2	0
	AINT-1101	Programming for Artificial Intelligence	2	0		ELEN-2200	Digital Logic Design-Lab	0	1
AINT-1201	Programming for Artificial Intelligence-LAB	0	1						
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	COSC-2111	Information Security	2	0		INFT-4126	Professional Practices	2	0
	COSC-2211	Information Security-Lab	0	1		SSCI-2131	Civics and Community Engagement	2	0
	ENGL-2114	Expository Writing	3	0		AINT-2101	Knowledge Representation & Reasoning	2	0
	MSCI-2113	Introduction to Entrepreneurship	2	0		AINT-2201	Knowledge Representation & Reasoning -Lab	0	1
	COSC-2101	Data Structures & Algorithms	3	0		COSC-2103	Database Systems	3	0
	COSC-2201	Data Structures & Algorithms -Lab	0	1		COSC-2203	Database Systems-Lab	0	1
	MATH-2102	Linear Algebra	3	0		COSC-2112	Artificial Intelligence	2	0
	COSC-2104	Computer Networks	2	0		COSC-2212	Artificial Intelligence-Lab	0	1
COSC-2204	Computer Networks-Lab	0	1	COSC-1104	Software Engineering	3	0		
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	AINT-3101	Computer Vision	2	0		COSC-4115	Parallel & Distributed Computing	2	0
	AINT-3201	Computer Vision-Lab	0	1		COSC-4215	Parallel & Distributed Computing-Lab	0	1
	COSC-2105	Theory of Automata	3	0		AINT-3102	Speech Processing	2	0
	STAT-2104	Probability & Statistics	3	0		AINT-3202	Speech Processing -Lab	0	1
	COSC-3118	Operating Systems	2	0		AINT-3103	Artificial Neural Networks & Deep Learning	2	0
	COSC-3218	Operating Systems-Lab	0	1		AINT-3203	Artificial Neural Networks & Deep Learning-Lab	0	1
	DASC-3101	Data Mining	2	0		AINT-3104	Machine Learning	2	0
	DASC-3201	Data Mining-Lab	0	1		AINT-3204	Machine Learning-Lab	0	1
COSC-3115	Analysis of Algorithms	3	0	AINT-3105	Natural Language Processing	2	0		
				AINT-3205	Natural Language Processing-Lab	0	1		
				MSCI-2116	Principles of Accounting	3	0		
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	COSC-3117	Computer Organization & Assembly Language	2	0		AINT-4302	Final Year Project – II	4	0
	COSC-3217	Computer Organization & Assembly Language-Lab	0	1		COSC-4113	HCI & Computer Graphics	2	0
	AINT-4101	Reinforcement Learning	2	0		COSC-4213	HCI & Computer Graphics-Lab	0	1
	AINT-4201	Reinforcement Learning -Lab	0	1		MATH-3116	Numerical Analysis	3	0
	MATH-2122	Differential Equations	3	0		AINT-3401	Internship	3	0
	DASC-4101	Advanced Statistics	2	0					
	DASC-4201	Advanced Statistics-Lab	0	1					
AINT-4301	Final Year Project – I	2	0						

BS CYBER SECURITY

Bachelor Degree Program

The BS Cyber Security program aims to produce skilled professionals who understand the full scope of information security, from protecting digital assets to collecting and analyzing digital evidence. Students will gain a solid foundation in computer science while developing hands-on expertise through security labs and real-world simulations.

Rising Need for Cyber Security in the Digital Age

As organizations and businesses expand their digital presence, the risk of cyber threats has escalated dramatically. The demand for secure digital infrastructure has never been greater. The BS Cyber Security program is designed to address these challenges by equipping students with practical skills in building secure systems and solving complex security problems.



Global Growth and Career Opportunities

The global cyber security job market is expected to grow by 32% between 2018 and 2028, far surpassing the average for most professions. Career opportunities span a wide range of industries including financial institutions, ethical hacking, healthcare, smart cities, cyber warfare, IoT, digital surveillance, crypto technologies, mobile and web development, forensics, and information security auditing.

Program Objectives (PEO's)

PEO-1: Work in careers in Cyber Security, associated technology fields, and become successful practicing professionals.

PEO-2: Become contributing members of multidisciplinary teams, communicating effectively and successfully applying the fundamentals of their educational background.

PEO-3: Realize, mentor, and pursue professional development, including continuing or advanced education, relevant to their career path.



Importance of BS Cyber Security

- With increasing digital reliance, businesses and governments face growing risks of data breaches, hacking, and cyberattacks, making cybersecurity professionals essential.
- Cyber security protects sensitive sectors such as defense, energy, telecom, and financial institutions from espionage and sabotage.
- Offers diverse roles such as Security Analyst, Penetration Tester, Incident Responder, Cybercrime Investigator, and Security Architect.

Key Employers:

Government & Defense and other Public Sectors

- National Cyber Security Centre (NCSC)
- Pakistan Army – Cyber Command
- Inter-Services Intelligence (ISI)
- Federal Investigation Agency (FIA)
- Pakistan Telecommunication Authority
- Ministry of IT & Telecom
- Digital Pakistan Initiative
- Pakistan Stock Exchange (PSX)
- WAPDA, SNGPL, OGRA
- Punjab IT Board (PITB)
- FBR (Federal Board of Revenue)
- SUPARCO
- Pakistan Air Force & Navy (Cyber Divisions)
- State Bank of Pakistan (SBP)

Multinational Companies:

- Microsoft Security Operations
- IBM Security
- Cisco Systems
- Oracle Cybersecurity
- Google (Security & Trust teams)
- Amazon Web Services (AWS Security)
- Huawei & Ericsson (Telecom Security Divisions)



Affiliated with:
**Khawaja Fareed University
of Engineering & Information
Technology**

CYBER SECURITY

Bachelor Degree Program

BS Cyber Security Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	COSC-1101	Programming Fundamentals	3	0		COSC-1102	Object Oriented Programming	3	0
	COSC-1201	Programming Fundamentals – Lab	0	1		COSC-1202	Object Oriented Programming – Lab	0	1
	COSC-1105	Introduction to ICT	2	0		SSCI-2126	Introduction to Psychology	2	0
	COSC-1205	Introduction to ICT – Lab	0	1		PAKS-1121	Ideology and Constitution of Pakistan	2	0
	ISLS-1112	Islamic Studies	2	0		ENGL-1118	Functional English	3	0
	MATH-1106	Quantitative Reasoning-I	3	0		MATH-1107	Quantitative Reasoning-II	3	0
	ENSC-1113	The Science of Global Challenges	3	0		ELEN-2100	Digital Logic Design	2	0
	CSEC-1101	Cyber Security	2	0		ELEN-2200	Digital Logic Design – Lab	0	1
CSEC-1201	Cyber Security – Lab	0	1						
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	COSC-2111	Information Security	2	0		INFT-4126	Professional Practices	2	0
	COSC-2211	Information Security – Lab	0	1		SSCI-2131	Civics and Community Engagement	2	0
	ENGL-2114	Expository Writing	3	0		CSEC-2101	Secure Software Design and Development	2	0
	MSCI-2113	Introduction to Entrepreneurship	2	0		CSEC-2201	Secure Software Design and Development – Lab	0	1
	COSC-2101	Data Structures & Algorithms	3	0		COSC-2103	Database Systems	3	0
	COSC-2201	Data Structures & Algorithms – Lab	0	1		COSC-2203	Database Systems – Lab	0	1
	MATH-2102	Linear Algebra	3	0		COSC-2112	Artificial Intelligence	2	0
	COSC-2104	Computer Networks	2	0		COSC-2212	Artificial Intelligence – Lab	0	1
COSC-2204	Computer Networks – Lab	0	1	COSC-1104	Software Engineering	3	0		
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	CSEC-3103	Vulnerability Assessment & Reverse Engineering	2	0		COSC-4115	Parallel & Distributed Computing	2	0
	CSEC-3203	Vulnerability Assessment & Reverse Engineering – Lab	0	1		COSC-4215	Parallel & Distributed Computing – Lab	0	1
	COSC-2105	Theory of Automata	3	0		CSEC-3102	Information Assurance	2	0
	STAT-2104	Probability & Statistics	3	0		CSEC-3202	Information Assurance – Lab	0	1
	COSC-3118	Operating Systems	2	0		CSEC-3104	Basic Electronics	2	0
	COSC-3218	Operating Systems – Lab	0	1		CSEC-3204	Basic Electronics – Lab	0	1
	CSEC-3101	Network Security	2	0		CSEC-3105	Hardware Security	2	0
	CSEC-3201	Network Security – Lab	0	1		CSEC-3205	Hardware Security – Lab	0	1
COSC-3115	Analysis of Algorithms	3	0	CSEC-3106	Malware Analysis	2	0		
				CSEC-3206	Malware Analysis – Lab	0	1		
				MSCI-2116	Principles of Accounting	3	0		
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.		SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.	
			Th.	Pr.				Th.	Pr.
	COSC-3117	Computer Organization & Assembly Language	2	0		CSEC-4302	Final Year Project – II	4	0
	COSC-3217	Computer Organization & Assembly Language – Lab	0	1		COSC-4113	HCI & Computer Graphics	2	0
	CSEC-4102	Wireless and Mobile Security	2	0		COSC-4213	HCI & Computer Graphics – Lab	0	1
	CSEC-4202	Wireless and Mobile Security – Lab	0	1		MATH-3116	Numerical Analysis	3	0
	MATH-2122	Differential Equations	3	0		CSEC-3401	Internship	3	0
	CSEC-4101	Digital Forensics	2	0					
	CSEC-4201	Digital Forensics – Lab	0	1					
CSEC-4301	Final Year Project – I	2	0						

BS DATA SCIENCE

Bachelor Degree Program

Data Science is at the core of digital transformation in modern industries. It empowers businesses to extract insights, improve operations, and make data-driven decisions using a combination of statistical, mathematical, and programming techniques. As industries evolve with the rise of big data, the demand for skilled data scientists continues to grow globally and within Pakistan, particularly in industrial hubs like Faisalabad. The BS Data Science program prepares students for this evolving landscape with a strong foundation in computational and analytical skills.

Data is a critical asset in today's digital age, empowering organizations to optimize operations, enhance efficiency, and make smarter decisions. Data Science combines programming, mathematics, and statistics to turn raw data into actionable insights.

As Pakistan's industrial hub, Faisalabad highlights the power of data in driving innovation. With rising demand across finance, media, and retail, a degree in Data Science opens doors to impactful and future-ready careers.

Program Objectives (PEO's)

PEO-1: Work in careers in Data Science, associated technology fields, and become successful practicing professionals.

PEO-2: Become contributing members of multidisciplinary teams, communicating effectively and successfully applying the fundamentals of their educational background.

PEO-3: Realize, mentor, and pursue professional development, including continuing or advanced education, relevant to their career path.



Importance of BS Data Science

- Equips students to handle data as a critical business asset, driving better decisions and efficiencies.
- High demand for data scientists across sectors like finance, healthcare, retail, e-commerce, and manufacturing.
- Combines statistics, computer science, and domain knowledge to solve real-world problems using data.
- Opens diverse career paths in data analytics, business intelligence, software development, and research.

Key Employers:

National Employers

Sectors	Employers
Telecom	Jazz, Zong, Telenor, Ufone
Banking & Finance	State Bank of Pakistan, Meezan Bank, HBL, UBL, Bank Alfalah, Faysal Bank
E-commerce	Daraz, PriceOye, Sastaticket, Telemart
Government & Research	NADRA, PITB (Punjab IT Board), NITB, NESCOM, SUPARCO, Pakistan Bureau of Statistics
Startup Hubs	Airlift, Bykea, Dastgyr, QisstPay, Cowlar

Multinational Employers

- Google, Microsoft, IBM, Oracle, Amazon (AWS), SAP, Teradata
- Accenture, Deloitte, PwC, EY, McKinsey & Company
- Amazon, Alibaba, Uber, Careem (now part of Uber), Foodpanda
- Visa, Mastercard, Standard Chartered, PayPal, JPMorgan Chase



Affiliated with:
**Khawaja Fareed University
 of Engineering & Information
 Technology**

DATA SCIENCE

Bachelor Degree Program

BS Data Science Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
SEMESTER - I	COSC-1101	Programming Fundamentals	3	SEMESTER - II	COSC-1102	Object Oriented Programming	3
	COSC-1201	Programming Fundamentals-Lab	1		COSC-1202	Object Oriented Programming-Lab	1
	COSC-1105	Introduction to ICT	2		SSCI-2126	Introduction to Psychology	2
	COSC-1205	Introduction to ICT-Lab	1		PAKS-1121	Ideology and Constitution of Pakistan	2
	ISLS-1112	Islamic Studies	2		ENGL-1118	Functional English	3
	MATH-1106	Quantitative Reasoning-I	3		MATH-1107	Quantitative Reasoning-II	3
	ENSC-1113	The Science of Global Challenges	3		ELEN-2100	Digital Logic Design	2
	DASC-1101	Introduction to Data Science	2		ELEN-2200	Digital Logic Design-Lab	1
	DASC-1201	Introduction to Data Science-Lab	1				
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
	COSC-2111	Information Security	2		INFT-4126	Professional Practices	2
	COSC-2211	Information Security-Lab	1		SSCI-2131	Civics and Community Engagement	2
	ENGL-2114	Expository Writing	3		DASC-2101	Data Visualization	2
	MSCI-2113	Introduction to Entrepreneurship	2		DASC-2201	Data Visualization-Lab	1
	COSC-2101	Data Structures & Algorithms	3		COSC-2103	Database Systems	3
	COSC-2201	Data Structures & Algorithms -Lab	1		COSC-2203	Database Systems-Lab	1
	MATH-2102	Linear Algebra	3		COSC-2112	Artificial Intelligence	2
SEMESTER - V	COSC-2104	Computer Networks	2	SEMESTER - VI	COSC-2212	Artificial Intelligence-Lab	1
	COSC-2204	Computer Networks-Lab	1		COSC-1104	Software Engineering	3
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
	DASC-3103	Big Data Analytics	2		COSC-4115	Parallel & Distributed Computing	2
	DASC-3203	Big Data Analytics-Lab	1		COSC-4215	Parallel & Distributed Computing-Lab	1
	DASC-3104	Theory of Automata	3		DASC-3102	Data Warehousing & Business Intelligence	2
	DASC-3104	Theory of Automata-Lab	1		DASC-3202	Data Warehousing & Business Intelligence-Lab	1
	STAT-2104	Probability & Statistics	3		DASC-3105	Advanced Database Management Systems	2
	COSC-3118	Operating Systems	2		DASC-3205	Advanced Database Management Systems-Lab	1
	COSC-3218	Operating Systems-Lab	1		DASC-3106	Machine Learning	2
SEMESTER - VIII	DASC-3101	Data Mining	2	SEMESTER - VIII	DASC-3206	Machine Learning-Lab	1
	DASC-3201	Data Mining-Lab	1		DASC-3107	Text Mining	2
	COSC-3115	Analysis of Algorithms	3		DASC-3207	Text Mining – Lab	1
					MSCI-2116	Principles of Accounting	3
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
	COSC-3117	Computer Organization & Assembly Language	2		DASC-4302	Final Year Project – II	4
	COSC-3217	Computer Organization & Assembly Language-Lab	1		COSC-4113	HCI & Computer Graphics	2
	DASC-3106	Artificial Neural Networks & Deep Learning	2		COSC-4213	HCI & Computer Graphics-Lab	1
	DASC-3206	Artificial Neural Networks & Deep Learning-Lab	1		MATH-3116	Numerical Analysis	3
	MATH-2122	Differential Equations	3		DASC-3401	Internship	3
	DASC-4101	Advanced Statistics	2				
	DASC-4201	Advanced Statistics-Lab	1				
SEMESTER - VIII	DASC-4301	Final Year Project – I	2				

BS INFORMATION TECHNOLOGY

Bachelor Degree Program

The Bachelor of Science in Information Technology (BS IT) is a four-year graduate degree focused on equipping students with technical knowledge, practical skills, and professional ethics necessary to design, develop, implement, and manage IT-based systems and solutions. The program blends core concepts of computing, networking, databases, cybersecurity, cloud technologies, and software development to prepare future-ready IT professionals.

Introduction

Offered under the School of Computing Sciences, the BS IT program emphasizes real-world applications of information technologies in both business and industrial environments. The curriculum combines theoretical understanding with practical implementation through labs, projects, and industry engagements.

Students learn:

- Programming and software development
- System analysis and design
- Networking and cybersecurity
- Database design and administration
- Cloud and web-based applications
- IT infrastructure and project management

The program is supported by modern IT labs, industry-driven projects, and internship opportunities that help students build a strong professional portfolio.

Future Scope

With digital transformation driving global and local economies, the demand for skilled IT professionals continues to grow. The future of BS IT graduates is highly promising in the following areas:

- Digital Infrastructure Modernization
- Cloud-native Enterprise Applications
- Cybersecurity and Data Protection
- AI and Machine Learning Applications
- Digital Governance and Smart Cities
- IT-led Business Innovation

Program Objectives (PEO's)

PEO-1: Provide in-depth knowledge, analytical skills, and creativity in the domain of Information Technology.

PEO-2: Attain the ability to adapt in an evolving technological environment, assimilate new Information with a strong focus on application to solve real-world problems.

PEO-3: Instill moral and ethical values, along with the ability to communicate effectively.

PEO-4: Train graduates to contribute towards the knowledge economy and socio-economic growth of the country.



Importance of BS Information Technology

- BS IT graduates play a vital role in transforming traditional businesses and government systems into efficient, automated, and data driven digital platforms. A BS IT degree opens doors to diverse job roles such as software engineer, system analyst, cloud administrator, cyber security expert, IT consultant, and database manager. The skills acquired through the BS IT program are globally transferable, making graduates competitive in international job markets.

Key Employers:

National Employers

- Software houses like NetSol, Systems Limited, Techlogix
- Public sector organizations
- Educational and healthcare IT departments
- Startups in fintech, edtech, healthtech, and e-commerce

Multinational Employers

- Microsoft
- Amazon Web Services (AWS)
- Google (Cloud and App Services)
- IBM
- Cisco
- Oracle
- Dell Technologies
- Huawei
- SAP
- Ericsson
- Siemens



Affiliated with:
**Khawaja Fareed University
of Engineering & Information
Technology**

INFORMATION TECHNOLOGY

Bachelor Degree Program

BS Information Technology Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	ICTC-101	Introduction to ICT	2-1		CMPC-102	Object Oriented Programming	3-1
	CMPC-101	Programming Fundamentals	3-1		ENGL-102	Communication & Presentation Skills	3-0
	ENGL-101	English Composition & Comprehension	3-0		ITSC-102	Digital Logic Design	3-0
	MATH-101	Calculus & Analytical Geometry	3-0		MATH-102	Probability & Statistics	3-0
	PHYS-101	Applied Physics/Quantum Computing	3-0		BUSB-102	Business Economics	3-0
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.
	CMPC-203	Data Structures & Algorithms	3-1		CMPC-204	Operating Systems	3-1
	CMPC-205	Discrete Structures	3-0		CMPC-206	Software Engineering	3-0
	ITSCC-201	Professional Practices	3-0		CMPC-208	Computer Networks	3-1
	ITSC-201	Enterprise Systems	3-0		ITCC-202	IT Project Management	3-0
	MATH-203	Linear Algebra	3-0		BUSB-202	Entrepreneurship	3-0
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.
	CMPC-301	Database Systems	3-1		ITCC-302	Web Technologies	3-0
	CMPC-303	Information Security	3-0		BUSB-302	Human Resources Management	3-0
	ITSC-305	Design and Analysis of Algorithms	3-0		ITEC-302	Cloud Computing	3-0
	ITCC-301	System and Network Administration	3-1		ITEC-304	Network Design and Management	3-0
	ITEC-303	Mobile Application Development	3-0		ENGL-302	Technical & Business Writing	3-0
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	ITCC-403	Virtual Systems and Services	3-1		CMPC-402	Final Year Project – II	0-3
	CMPC-401	Final Year Project – I	0-3		ITCC-402	Cyber Security	3-0
	ITCC-407	IT Infrastructure	3-0		ITEC-420	Data Warehousing	3-0
	ITEC-405	Mobile and Wireless Networks	3-0		ITCC-406	Database Administration and Management	3-1
	PKST-401	Pakistan Studies	2-0		ISLS-402	Islamic Studies / Ethics	2-0



SCHOOL OF BUSINESS MANAGEMENT

NFC Institute of Engineering & Fertilizer Research, Faisalabad

Mission Statement

The mission of School of Business Management (SBM) is to provide students a balance of academic perspectives with practical implications as per the demand of the modern business era. SBM aims to produce efficient and responsible business leaders and researchers equipped with modern professional skills. SBM focuses on engaging students in learning practical experiences that empower them to become knowledgeable, resourceful and motivated business professionals.

The School of Business Management (SBM) at NFC IE&FR equips students with essential business knowledge in areas such as management, marketing, strategic planning, and decision-making. Blending theory with practical experience, SBM fosters leadership, critical thinking, and problem-solving skills.

The program prepares individuals to lead teams, manage resources, and navigate complex organizational challenges. With emphasis on planning, organizing, staffing, directing, and controlling, students gain the capabilities required for business success. Integrating general education with core business disciplines, SBM develops adaptable professionals ready to contribute meaningfully to both public and private sectors in a fast-changing global environment.

Program Objectives (PEOs)

PEO-1: To produce professional graduates in the fields of business administration, marketing, human resource and finance through the utilization of innovative educational processes in a modern, global and technological business environment.

PEO-2: Transform the business graduates to play a vital and leading role in the business community that enables them to contribute and solve problems through innovative thinking, self-development, reflection and collective work.

PEO-3: SBM focuses to link the academic programs and specializations with actual requirements of the surrounding market requirements by maintaining the effective participation and cooperation among the school of business management and local business organizations.

PEO-4: Conduct research activities to provide solutions for the persistent problems in the surrounding business environment via applied research and business consultation.

PEO-5: Grooming personalities of the SBM students by motivating and engaging them in co-curricular and extra-curricular activities.

PEO-6: To provide a long-term return on investment for SBM students and alumni.



Strategic Academic Expansion and Bridging Disciplines:

SBM is advancing academic excellence through strategic expansion and interdisciplinary integration.

The School currently offers four dynamic undergraduate degree programs:

1. **Bachelor of Business Administration (BBA)**
2. **Bachelor of Business & Information Technology (BBIT)**
3. **BS International Relations**
4. **BS Tourism & Hospitality Management**

These programs reflect the evolving demands of modern industries and global contexts.

Career Prospects:

- Business Analyst / Financial Analyst
- Marketing, Sales & Brand Manager
- Human Resource Specialist
- Entrepreneur / Startup Founder
- IT Project Manager / Business
- Technology Consultant
- Diplomatic Services / Policy Analyst
- International NGO
- Strategic Communications & Media Specialist
- Tourism Development Officer
- Hotel, Resort & Hospitality Manager
- Travel & Event Management Professional
- Airline & Cruise Industry Coordinator
- Public Sector & Think Tank Researcher

SCHOOL OF BUSINESS MANAGEMENT

NFC Institute of Engineering & Fertilizer Research, Faisalabad

HEAD's MESSAGE

Welcome to the School of Business Management. At the School of Business Management, we are committed to cultivating future leaders who are well-versed in modern business practices and equipped to drive meaningful change. Our programs are designed to merge academic rigor with real-world relevance, ensuring students are prepared for diverse careers in a competitive global landscape. We take pride in shaping professionals who are innovative, ethically grounded, and ready to lead with purpose.

SCHOOL OF BUSINESS MANAGEMENT FACULTY



Mrs. Tanzila Samin
Lecturer



Dr. Rana M. Shahid Imdad
Assistant Professor



Hafiz Muhammad Omar
Lecturer



Mr. M. Rashid Yousaf
Lecturer



Mr. Zishan Amjad Khan
Lecturer



Faculty of School of Business Management

- Engages in innovative teaching methodologies and applied research.
- Prepares students to meet modern business challenges with confidence and competence.
- Fosters leadership, critical thinking, and ethical responsibility among learners.

Head of Department School of Business Management



Mr. Shabeeb Ahmad Gill
Ph.D. Scholar

School of Business Management

BBA Program Overview

The BBA program equips students with essential business knowledge and practical skills to thrive in professional and administrative roles. It offers core learning in areas like Marketing, Management, and HRM, blending academic theory with real-world experience to promote personal and professional growth. Students also gain insights into the global business environment.

Career Opportunities

BBA is often called the “golden passport” for its career-enhancing potential. Graduates find opportunities in banking, IT, retail, advertising, consulting, and more across domains like marketing, finance, HR, and operations.

Campus Placements

The program includes placement support, connecting students to leading firms in various industries.

Why BBA over Other Degrees

Unlike traditional degrees (BA/B.Com), BBA emphasizes applied knowledge—developing skills in strategic decision-making, financial planning, marketing, and leadership. It shares foundational elements with MBA programs, preparing students to pursue advanced studies or step directly into impactful roles.



*Step into the world of business with a BBA,
where your ideas evolve, your leadership
begins, and your future takes shape.*

Our Alumni

At the School of Business Management, we take immense pride in our alumni. When you study with us, you become part of a thriving community of graduates who have transformed their academic journey into impactful careers. Our alumni have gone on to excel in diverse professional fields, becoming influential business leaders, innovative entrepreneurs, strategic thinkers, and change-makers in both the corporate world and society. Here, we proudly share some of their inspiring stories.



Muzammil Abid

BBA, Session 2012 - 2016

**Currently working as
Head of Public Relations at
Synergy Institute of Business &
Sciences (SIBAS) and Synergy
Education**

"Entrepreneurship is a tough but fulfilling path. I'm truly grateful to my teachers for their constant support and encouragement, which gave me the confidence to chase my vision. The School of Business Management (SBM) played a vital role by providing mentorship, resources, and belief in my potential, key elements behind my success."



Namia Naeem

BBA, Session 2013 - 2017

**Currently working as
Assistant Director at
State Bank of Pakistan**

"My time at the School of Business Management, NFC-IEFR, laid the foundation for my professional journey. The supportive environment, dedicated faculty, and practical learning experiences helped shape my skills and confidence. I'm proud to be an SBM alumna and grateful for the role it played in reaching where I am today."



Kainat Zaka

Bachelor of Business Administration (BBA), Session 2014 - 2018

**Currently working as Program Leader (Business), Coordinator, & Lecturer
At The International Programs, The University of Faisalabad**

"My journey to success began at the School of Business Management, NFC IE&FR (Batch 2014–2018). The institute offered countless opportunities, from academic growth to extracurricular exploration. I actively participated in debates and inter-university declamation contests that enhanced my confidence. In 2017, I represented NFC at a national-level Business Idea Competition at GC University, Faisalabad, where my idea was selected, and I was awarded a business office an early milestone in my career. I truly value the nurturing environment and mentorship at NFC-IEFR that shaped my academic and professional path."

BUSINESS ADMINISTRATION

Bachelor Degree Program - BBA

Program Overview – BBA

The BBA (Bachelor of Business Administration) is a four-year, eight semester undergraduate degree program designed to equip students with a strong foundation in core business disciplines. Offered by the School of Business Management at NFC IE&FR, Faisalabad, the program operates under the prestigious affiliation of the University of Engineering & Technology (UET), Lahore.

This comprehensive program prepares students for dynamic roles in management, marketing, finance, human resource development, and entrepreneurship. With a blend of theoretical knowledge and practical exposure, NFC IE&FR stands out as a leading institute in the region for nurturing future business leaders ready to thrive in today's competitive economic landscape.

BBA at NFC IE&FR is crafted to develop future business professionals equipped with strong analytical, managerial, and leadership capabilities. As industries grow more competitive, this degree empowers students to address real-world challenges through sound decision-making and strategic insight.

With a focus on core business disciplines, management, marketing, finance, human resource management, and entrepreneurship, the program blends academic theory with practical exposure. It nurtures critical thinking, communication, and organizational skills essential for success in today's global economy.

Aligned with Pakistan's economic and developmental vision, BBA program prepares graduates to thrive in diverse business environments, lead effectively, and contribute to sustainable growth at both national and international levels.

Mission Statement

"To cultivate business and IT professionals with interdisciplinary expertise, entrepreneurial vision, and ethical values, capable of leading innovation, driving digital transformation, and contributing effectively to the economic development of Pakistan and beyond."

Program Learning Outcomes (PLOs)

1. Integrate Business and IT Knowledge
2. Critical Thinking & Problem Solving
3. Communication & Teamwork
4. Technical Proficiency
5. Entrepreneurship & Innovation
6. Ethical & Social Responsibility
7. Lifelong Learning

Facilities & Resources

- Dedicated IT & Business Labs
- Multimedia-equipped classrooms
- Access to digital libraries and research databases
- Career counseling and placement support
- Student societies and entrepreneurship clubs



Program Objectives:

- Develop a solid foundation in core business disciplines such as management, marketing, finance, and human resources.
- Prepare students for leadership and managerial roles across diverse organizational settings.
- Foster entrepreneurial thinking, strategic planning, and effective problem-solving abilities.
- Equip graduates with strong communication, teamwork, and ethical decision-making skills.
- Encourage practical learning through internships, industry case studies, and real-world business projects.

Eligibility Criteria

- Intermediate or equivalent qualification (FA/FSc/ICOM/ICS or A-levels) with minimum 50% marks.

Why Choose BBA at NFC IE&FR?

- Affiliated with UET Lahore for Academic Excellence
- Experienced and Highly Qualified Faculty
- Strong Industry Linkages and Internship Opportunities
- Case Studies and Capstone Projects for Real-World Exposure
- Career-Oriented Learning Environment in the Heart of Faisalabad

Career Prospects

- Business & Systems Analysis
- E-Commerce & Digital Marketing
- Banking, Retail, and Tech
- Consulting Firms
- Entrepreneurship & Startups



Affiliated with:
University of Engineering & Technology, Lahore

BUSINESS ADMINISTRATION

Bachelor Degree Program - BBA

Bachelor of Business Administration (BBA) Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	HU 102	Functional English	3(3,0)		HU 211	Business Communication	3(3,0)
	BIT 101	Digital Toolbox for Business	3(3,0)		BUS 102	Microeconomics	3(3,0)
	BUS 101	Microeconomics	3(3,0)		BUS 112	Financial Accounting	3(3,0)
	BUS 111	Principles of Accounting	3(3,0)		BUS 131	Principles of Management	3(3,0)
	BUS 162	Business of Society	3(3,0)		IS 101	Islamic & Pak Studies-I	3(3,0)
SEMESTER - III	BUS 161	Academic and Professional Development-I	1(1,0)	SEMESTER - IV	QT 101	Translation of the Holy Quran-I	1(1,0)
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
	HU 221	Technical Writing & Presentation Skills	3(3,0)		MA 257	Business Statistics	3(3,0)
	MA 151	Business Mathematics	3(3,0)		BUS 212	Cost Accounting	3(3,0)
	BUS 262	World Today	3(3,0)		BUS 232	Organizational Behavior	3(3,0)
	BUS 231	Human Resource Management	3(3,0)		BUS 241	Principles of Marketing	3(3,0)
SEMESTER - V	IS 201	Islamic & Pak Studies-II	3(3,0)	SEMESTER - VI	BUS 263	Law and Society	3(3,0)
	BUS 261	Academic and Professional Development-II	1(1,0)		QT 201	Translation of the Holy Quran-II	1(1,0)
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
	BUS 321	Business Finance	3(3,0)		BIT 301	Management Information Systems	3(3,0)
	BUS 342	Marketing Management	3(3,0)		BUS 322	Financial Management	3(3,0)
	BUS 351	Production and Operations Management	3(3,0)		BUS 343	Digital Marketing	3(3,0)
SEMESTER - VII	BUS 362	Research Methods for Social Sciences	3(3,0)	SEMESTER - VIII	BUS 352	Supply Chain Management	3(3,0)
		Free Elective-I	3(3,0)		QT 301	Free Elective-II	3(3,0)
	BUS 361	Academic and Professional Development-III	1(1,0)			Translation of the Holy Quran-III	1(1,0)
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
	BUS 411	Taxation Management	3(3,0)		HU 400	International Language	3(3,0)
	BUS 471	Entrepreneurship Minor-I	3(3,0)		BUS 431	Strategic Management Minor-III	3(3,0)
SEMESTER - VIII		Minor-II	3(3,0)	SEMESTER - VIII		Minor-IV	3(3,0)
	BUS 498	Final Year Project-I	3(3,0)		BUS 499	Final Year Project-II	3(3,0)
	BUS 461	Academic and Professional Development-IV	1(1,0)		QT 401	Translation of Holy Quran-IV	1(1,0)
	CODE	COURSE TITLE	Credit Hrs.		CODE	COURSE TITLE	Credit Hrs.
	BUS 411	Taxation Management	3(3,0)		HU 400	International Language	3(3,0)
	BUS 471	Entrepreneurship Minor-I	3(3,0)		BUS 431	Strategic Management Minor-III	3(3,0)

BUSINESS & INFORMATION TECHNOLOGY

Bachelor Degree Program

Program Overview – BBIT

The BBIT (Bachelor of Business & Information Technology) is a four-year, eight-semester undergraduate degree program uniquely designed to integrate core business knowledge with cutting-edge information technology skills. This pioneering initiative by the School of Business Management at NFC IE&FR, Faisalabad, is being launched under the esteemed affiliation of the University of Engineering & Technology, Lahore.

As the first and only institute in Faisalabad offering BBIT, NFC IE&FR provides a unique opportunity for students to acquire dual competencies in business administration and IT, an essential combination in today's digital economy.

In today's dynamic landscape, BBIT program at NFC IE&FR is a strategic initiative aimed at preparing graduates with integrated expertise in business and technology. It addresses the rising demand for professionals who can navigate both corporate challenges and digital solutions.

The program combines core business education, management, marketing, finance, and accounting, with practical IT skills in programming, databases, e-commerce, and digital transformation. This equips students to tackle real-world business problems using technology.

BBIT aligns with Pakistan's vision for digital transformation, economic growth, and entrepreneurship. Graduates will be well-positioned to lead in the modern workforce and contribute to the country's innovation-driven future.

Mission Statement

"To cultivate business and IT professionals with interdisciplinary expertise, entrepreneurial vision, and ethical values, capable of leading innovation, driving digital transformation, and contributing effectively to the economic development of Pakistan and beyond."

Program Learning Outcomes (PLOs)

1. Integrate Business and IT Knowledge
2. Critical Thinking & Problem Solving
3. Communication & Teamwork
4. Technical Proficiency
5. Entrepreneurship & Innovation
6. Ethical & Social Responsibility
7. Lifelong Learning

Facilities & Resources

- Dedicated IT & Business Labs
- Multimedia-equipped classrooms
- Access to digital libraries and research databases
- Career counseling and placement support
- Student societies and entrepreneurship clubs



Program Objectives:

- Develop a comprehensive understanding of both business functions and technological solutions.
- Prepare students for leadership roles in information systems, e-business, and digital entrepreneurship.
- Foster innovation, analytical thinking, and data-driven decision-making.
- Equip graduates with professional communication, teamwork, and ethical reasoning skills.
- Encourage research and practical engagement through internships, case studies, and projects.

Eligibility Criteria

- Intermediate or equivalent qualification (FA/FSc/ICOM/ICS or A-levels) with minimum 50% marks.

Why Choose BBIT at NFC IE&FR?

- Exclusive Offering in Faisalabad
- UET Lahore Affiliation
- Industry-Relevant Curriculum
- Balanced Focus on Business & IT
- State-of-the-Art Computer Labs
- Highly Qualified Faculty
- Internships & Industry Linkages
- Capstone Projects for Practical Exposure

Career Prospects

- Business & Systems Analysis
- IT Project Management
- E-Commerce & Digital Marketing
- Banking, Retail, and Tech
- Consulting Firms
- Entrepreneurship & Startups



Affiliated with:
University of Engineering & Technology, Lahore

BUSINESS & INFORMATION TECHNOLOGY

Bachelor Degree Program



Bachelor of Business & Information Technology (BBIT) Curriculum

- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	MGT 100 IS 101 HU 102 MGT 102 MA 151 BIT 171 & BIT 171-L	Introduction to Business Islamic and Pakistan Studies-I Functional English Sociology Business Mathematics Introduction to Information Technology	3(3,0) 3(3,0) 3(2,1) 3(3,0) 3(3,0) 3(2,1)		HU 111 MGT 140 MA 152 MGT 160 BIT 172 & BIT 172-L BIT 173 & BIT 173-L QT 101	Communication Skills Financial Accounting-I Business Statistics-I Principles of Micro-economics Introduction to Programming Digital Logic & Design Translation of Holy Quran	1(0,1) 3(3,0) 3(3,0) 3(3,0) 3(2,1) 3(3,0) 1(1,0)
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.
	IS 201 MGT 211 HU 221 MA 254 BIT 272 & BIT 272-L BIT 271 & BIT 271-L	Islamic and Pakistan Studies-II Principles of Management Technical Writing & Presentation Skills Business Statistics-II Database Systems Object-Oriented Programming (OOP)	3(3,0) 3(3,0) 3(3,0) 3(3,0) 3(2,1) 3(2,1)		MGT 220 MGT 241 MGT 230 MGT 260 MGT 240 QT 201	Human Resource Management Managerial Accounting Principles of Marketing Principles of Macroeconomics Financial Accounting-II Translation of Holy Quran	3(3,0) 3(3,0) 3(3,0) 3(3,0) 3(3,0) 1(1,0)
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.
	MGT 300 MGT 350 BIT 376 & BIT 376-L BIT 371 & BIT 371-L BIT 372 & BIT 372-L MGT 302	Business & Corporate Law Business Finance Web Development Software Engineering Data Communication & Computer Networking Business Ethics	3(3,0) 3(3,0) 3(2,1) 3(2,1) 3(2,1) 3(3,0)		MGT 303 MGT 370 BIT 374 & BIT 374-L MGT 221 MGT 311 BIT 377 & BIT 377-L QT 301	International Language Management Information Systems Digital Marketing Organizational Behavior Business Research Methods Search Engine Optimization (SEO) Translation of Holy Quran	0(0,0) 3(3,0) 3(2,1) 3(3,0) 3(3,0) 3(2,1) 1(1,0)
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	MGT 410 MGT 413 MGT 419 Elective I Elective II MGT 402	Project Management Entrepreneurship Organizational Theory & Design Elective-I Elective-II Internship	3(3,0) 3(3,0) 3(3,0) 3(3,0) 3(3,0) 3(3,0)		MGT 270 BIT 472 Elective III MGT 400 QT 401	E-Commerce Internet of Things Elective-III Industrial/Research Project-I Translation of Holy Quran	3(3,0) 3(2,1) 3(3,0) 3(3,0) 1(1,0)

TOURISM & HOSPITALITY MANAGEMENT

Bachelor Degree Program

Program Overview

BS Tourism and Hospitality Management program aims to develop skilled professionals for the growing travel, tourism, and hospitality industry, both locally and globally. It offers a strong academic foundation in tourism operations and management, combined with interdisciplinary managerial skills. The curriculum includes general education courses to enhance students' understanding of both domestic and international tourism.

Vision

To develop competent professionals capable of addressing emerging challenges in the tourism and hospitality industry and to contribute to integrated tourism development through innovation and research.

Mission

To foster a collaborative, ethical, and inclusive learning environment that connects academia with industry. Through modern teaching methods, practical training, fieldwork, internships, and community engagement, the program aims to produce industry-ready leaders equipped with soft skills, critical thinking, and specialized knowledge in tourism and hospitality.

Aims and Objectives

- Develop versatile professionals and entrepreneurs for the tourism and hospitality sector.
- Explore and promote regional tourism potential.
- Bridge the gap between academia and industry.
- Support sustainable tourism development in the region.

Program Educational Objectives (PEOs)

- Create a learning environment that encourages ethical, innovative, and collaborative development in tourism and hospitality.
- Instill professional responsibility and teamwork skills to address contemporary issues in the tourism sector with ethical solutions.

Scope of the Program

Graduates will be prepared for roles as policy-makers, entrepreneurs, and managers in tourism and hospitality. They will be skilled in developing tourism products, applying academic knowledge in real-world settings, and promoting sustainable tourism. The program covers key areas such as tour operations, front office, housekeeping, food production, and guest services. It also emphasizes communication, innovation, cultural awareness, and hygiene standards essential for industry success.



Career Opportunities

Graduates of the BS Tourism & Hospitality Management program have diverse and rewarding career options in both public and private sectors, including:

- Tourism Development Officer
- Hotel & Resort Manager
- Travel Consultant / Tour Operator
- Event & Conference Manager
- Airline and Cruise Line Staff
- Entrepreneur in Tourism & Hospitality
- Hospitality Trainer

Eligibility Criteria

- HSSC or equivalent with at least 45% marks.
- DAE in any discipline



Affiliated with:
**Khawaja Fareed University of
Engineering & Information Technology**
Rahim Yar Khan

TOURISM & HOSPITALITY MANAGEMENT

Bachelor Degree Program

BS Tourism & Hospitality Management Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	ENGL-1118	Functional English	3		COSC-1105	Introduction to ICT	2
	MATH-1111	Mathematics-I	3		COSC-1205	Introduction to ICT - Lab	1
	MSCI-1102	Principles of Management	3		ENGL-1119	Communication Skills	3
	PAKS-1113	Pakistan Studies	2		FDST-1101	Introduction to Food Science and Technology	2
	TOHY-1102	Cultural History of Pakistan	3		ISLS-1112	Islamic Studies / Ethics	2
	TOHY-1103	Introduction to Tourism & Hospitality	3		TOHY-1104	Introduction to Archaeology	3
					TOHY-1105	Pakistan's Tourist Destinations	3
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.
	ENGL-2111	Technical Writing and Presentation Skills	3		MTH-404	Probability & Statistics	3
	HNAD-1101	Fundamentals of Human Nutrition	3		TOHY-2109	Hospitality Operations	3
	SSCI-4101	Principles of Psychology	3		TOHY-2110	Public Relations	3
	TOHY-2106	Sustainable Tourism	3		TOHY-2111	Housekeeping Operations and Management	3
	TOHY-2107	Organizational and Consumer Behaviour	3		TOHY-2112	Tourism Geography	3
	TOHY-2108	Cultural Tourism	3				
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.
	TOHY-3113	Tourism Management	3		TOHY-3119	Event Management	3
	TOHY-3114	Tourism and Hospitality Laws	3		TOHY-3120	Logic & Critical Thinking	3
	TOHY-3115	Front Office Operations and Management	2		TOHY-3121	Sacred/Religious Tourism	3
	TOHY-3116	Tourism: Concepts and Principles	3		TOHY-3122	Travel & Tour Operations	2
	TOHY-3117	Tourism Marketing	3		TOHY-3123	Sports and Adventure Tourism	3
	TOHY-3118	Heritage Management	3		TOHY-3124	Project Management	3
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	TOHY-4125	Restaurant Management	2		TOHY-4131	Research Project – II	3
	TOHY-4126	Accounting and Finance	3		TOHY-4132	Emerging Trends in Tourism and Hospitality	3
	TOHY-4127	Tourism Planning and Development	3		TOHY-4133	Human Resource Management	3
	TOHY-4128	Meal Planning and Management	2		TOHY-4134	Destination Branding	3
	TOHY-4129	Culinary Art	2		TOHY-4135	Tourism and Peace	3
	TOHY-4130	Research Project – I	3				

INTERNATIONAL RELATIONS

Bachelor Degree Program

Program Overview

The BS International Relations program is designed to provide students with a comprehensive understanding of global politics, diplomacy, foreign policy, international law, and the socio-economic factors influencing world affairs. This multidisciplinary program equips students with analytical and critical thinking skills to navigate complex international dynamics and prepares them for leadership roles in both governmental and non-governmental sectors.

Vision

To produce globally competent professionals and researchers in International Relations who contribute to peace, diplomacy, development, and global cooperation through academic excellence and innovative thinking.

Mission

The BS IR program at NFC IE&FR aims to foster an in-depth understanding of international political, economic, and social systems. Through a robust curriculum and practical engagement, the program prepares graduates to address contemporary global challenges, promote international peace and cooperation, and contribute positively to national and international policymaking and development.

Aims and Objectives

- Develop a sound understanding of global political and economic structures.
- Promote critical thinking and analytical skills for interpreting international events and trends.
- Prepare students for research, higher studies, and professional careers in international domains.

Program Educational Objectives (PEOs)

- Demonstrate in-depth knowledge of international relations and global governance.
- Analyze global issues and propose effective political, economic, and diplomatic solutions.
- Exhibit ethical and cross-cultural professionalism for international careers.
- Engage in lifelong learning and advanced research.
- Contribute to peacebuilding, policy-making, and global cooperation.

Scope of the Program

BS IR program addresses the growing global demand for professionals in diplomacy, policy, and international affairs. With a multidisciplinary approach, students study topics like:

- Global security, diplomacy, and conflict resolution
- International political economy and law
- Human rights and foreign policy analysis
- Regional and global political dynamics

It prepares graduates for roles in both public and private international sectors.



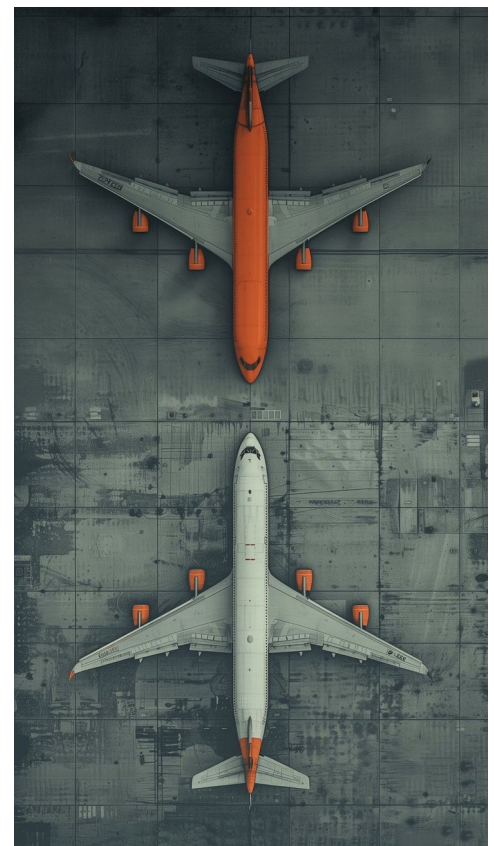
Career Opportunities

Graduates of the International Relations Program have diverse and rewarding career options in both public and private sectors, like:

- Ministry of Foreign Affairs
- Foreign Service of Pakistan
- Federal and Provincial Civil Services
- United Nations and its agencies
- World Bank, IMF
- International NGOs
- Foreign affairs journalism

Eligibility Criteria

- HSSC or equivalent with at least 45% marks.
- DAE in any discipline



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INTERNATIONAL RELATIONS

Bachelor Degree Program

BS International Relations Curriculum



- **Fall Semester** (1st, 3rd, 5th & 7th)
- **Spring Semester** (2nd, 4th, 6th & 8th)

SEMESTER - I	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - II	CODE	COURSE TITLE	Credit Hrs.
	ENGL-1118	Functional English	3		ENGL-1119	Communication Skills	3
	MATH-1111	Mathematics-I	3		PHED-1110	Trauma and Rehabilitation	3
	SSCI-1111	Introduction to Sociology	3		MATH-1112	Mathematics-II (Calculus)	3
	COSC-1105	Introduction to ICT	2		ENSC-1101	Introduction to Environmental Science	3
	COSC-1205	Introduction to ICT (LAB)	1		PAKS-1122	International Relations (General)	3
	PAKS-1113	Pakistan Studies (Compulsory)	2				
	ISLS-1112	Islamic Studies (Compulsory)	2				
SEMESTER - III	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - IV	CODE	COURSE TITLE	Credit Hrs.
	ENGL-2111	Technical Writing and Presentation Skills	3		IRRE-2104	Approaches and Theories of International Relations	3
	POSC-2101	Introduction to Political Science - I	3		IRRE-2105	International Relations Since 1945	3
	IRRE-2101	Public Administration	3		IRRE-2106	Introduction to International Security	3
	IRRE-2102	Globalization and International Relations	3		IRRE-2107	Evolution of State	3
	IRRE-2103	International Relations: 1648-1945	3		IRRE-2108	Foreign Policy Analysis	3
SEMESTER - V	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VI	CODE	COURSE TITLE	Credit Hrs.
	IRRE-3101	International Politics of Environment	3		PAKS-4147	Research Methodology	3
	IRRE-3102	Public International Law-II	3		IRRE-3107	Comparative Politics	3
	IRRE-3103	Regional and International Organizations	3		IRRE-3108	International Political Economy Strategic Studies	3
	IRRE-3104	Geo-Political Structure of the World	3		IRRE-3109	International Politics of Human Rights	3
	IRRE-3105	Foreign Policy of Pakistan	3		IRRE-3110	Ideology and Dynamics of Pakistan's Politics	3
SEMESTER - VII	CODE	COURSE TITLE	Credit Hrs.	SEMESTER - VIII	CODE	COURSE TITLE	Credit Hrs.
	IRRE-4101	Diplomacy	3		IRRE-4106	Regional Connectivity and CPEC	3
	IRRE-4102	Conflict Management and Resolution	3		IRRE-4107	Government and Politics in Pakistan	3
	IRRE-4103	Dynamics of Kashmir Conflict	3		IRRE-4108	Arms Control, Disarmament and Nuclear Non-Proliferation	3
	IRRE-4104	Comparative Foreign Policies of US, Russia, and China	3		IRRE-4109	Peace Studies	3
	IRRE-4105	Nuclear Studies	3		IRRE-4310	Research Report / Viva Voce	3
	IRRE-4310	Research Report / Viva Voce	3				

NEW COURSES

COMING SOON

B.Sc. Architecture Engineering

B.Sc. Computer Engineering

FIND OUT MORE



<https://www.iefr.edu.pk/departments.php>



Research & Development



Engr. Syed Shamim Raza
Convener R&D
Assistant Professor
(Chem. Engg.)



Mr. M. Naqushband
Member
Sr. Research Officer
(R&D)



Mr. M. Sibtain Majoka
Member
Assistant Manager
(R&D)

Research & Development

At NFC-IEFR, the Research & Development (R&D) programs are dedicated to advancing high-level research in engineering, science, and technology.

These efforts are continuously assessed based on improvements to existing initiatives and the development of new research areas. Services are offered to the farming community and national industries on a No Profit, No Loss basis.

Significance of R&D in National Growth

Research and Development play a crucial role in driving a nation's progress. In Pakistan, where agriculture forms the backbone of the economy, fertilizers are essential for enhancing agricultural productivity.



Addressing Agricultural and Food Security Challenges

Recent global crises related to food and fertilizers have underscored the urgent need for sustainable agricultural growth and food security. To meet these challenges, increasing agricultural productivity in an efficient and environmentally responsible way is imperative. This requires particular focus on the optimum use and quality improvement of fertilizers.

Establishment of FR&DI: A Step Towards Sustainable Agriculture

To keep pace with global technological advancements and to support the agriculture sector, a dedicated R&D facility was established. In 1986, the Fertilizer Research & Development Institute (FR&DI) was founded with support from the United Nations Development Programme (UNDP) and the National Fertilizer Corporation of Pakistan. This institute plays a key role in research and innovation within the fertilizer industry.

Strategic Focus Areas of R&D

The core thrust of R&D activities at NFC-IEFR revolves around the following strategic initiatives:

- *Fertilizer Research Program*
- *Fertilizer Development Program*
- *Research Support Services*



Fertilizer Research Program

The Fertilizer Research Program (FRP) focuses on the evaluation of raw materials and the enhancement of fertilizer production processes. It involves testing both local and imported resources, along with chemicals, lubricants, and other materials used in the industry.

Its core activities include:

- Development of experimental fertilizer products to meet evolving agricultural needs.
- Quality analysis and evaluation of fertilizers to ensure standard compliance.
- Pilot and lab-scale processing studies to identify technological improvements for manufacturing.
- Technical advisory services for process design and operational efficiency in the chemical industry.
- Feasibility and pre-investment studies to promote indigenous technological advancement.

Through these initiatives, FRP supports innovation, quality enhancement, and sustainable growth in the fertilizer and chemical sectors of Pakistan.

New Research Horizons

To boost food production for Pakistan's growing population, R&D introduced acidic fertilizers tailored for saline soils and alkaline water.

These NPK-rich, micronutrient-fortified, water-soluble solutions have shown superior results in field trials. The VC-10 product, in particular, has helped farmers cut Urea and CAN use by up to 50%, improving efficiency and soil health. Continued innovation aims to revolutionize fertilizer practices nationwide.



Areas of Upcoming FRP Program

As part of R&D upgradation, a pilot plant for producing NPK+TE fertilizers with a daily capacity of 40 tons is being planned in Faisalabad.

Fertilizer Development Program (FDP)

FDP supports farmers with technical guidance on efficient, safe, and eco-friendly fertilizer use. R&D staff provide assistance through field trials, training, and outreach via various platforms.

Fertilizer Development Section:

This section aims to boost fertilizer industry quality using local resources. It includes bench-scale units for producing various phosphate and nitrogen fertilizers, as well as upgrading low-grade phosphate rock.



New Developments in Fertilizers

R&D has created crop- and stage-specific NPK fertilizers in liquid and fully water-soluble forms, including Starter, Booster, Terminator, Seed Germinator, Anti-Drought, Anti-Frost Grades, and VC-10 soil conditioner. These products are efficient, cost-effective, eco-friendly, and easy to use.

Research Support Services (RSS)

IE&FR R&D offers expert support through:

- Special Chemicals Development
- Analytical Services
- Environmental Studies
- Technical & Commercial Support

Special Chemicals Development Section

This section focuses on synthesizing chemicals for fertilizer and chemical plants. Equipped with corrosion testing and IR spectroscopy tools, it develops new balanced, water-soluble NP/NPK fertilizer grades.

Analytical Section

This section offers advanced testing and analysis services to R&D labs and private industries. It houses modern instruments like Atomic Absorption Spectrophotometer, UV & IR Spectrophotometers, HPLC, Gas Chromatograph, Nutrient Analyzer, and more. Key labs include:

- Instrumentation Lab
- Chemical Analysis Lab
- Physical Testing Lab
- Water Treatment Plant

Environmental Section

Registered with Punjab EPA, the environmental lab monitors pollution from liquid effluents, emissions, and noise. It is equipped with gas analyzers, particulate monitors, noise meters, and other tools for environmental impact assessments.

Technical & Commercial Cell

This cell supports fertilizer development and farmer outreach. It specializes in fertilizer formulation, analysis, and crop-specific recommendations. Key activities include:

- Conducting field trials and gathering farmer feedback
- Recommending fertilizer grades based on soil/water quality
- Promoting experimental products through consultations and events

The commercial unit manages:

- Procurement and manufacturing of trial fertilizers
- Customized packing
- Timely delivery to farms or institute gate



Experimental Product's Coordination with Private Firm

Recently, R&D NFC IE&FR and Haq Sons Enterprises Burewala signed an agreement to coordinate mutually in order to disseminate R&D expertise and market R&D experimental products to the vast majority of the farming community. This experiment is the only way of hoping a favorable response from both sides. Main theme is to get farmer feedback about experimental products of R&D.

Future Initiatives

In the vast interest of Pakistan's agriculture, there is a need to start those techniques of fertilizer application which require a lesser quantity of fertilizer providing full nutrition to the crops without disturbing the soil environment.

Keeping in view the behavior of the farming community who took results and crop yield gained, there is dire need of making arrangements for large scale production units of experimental products like NPKs, VC-10 and CMM instead of producing at lab scale to meet the current and future demands.

The development of a centre of excellence for Water Research/ Waste Water treatment is also the near future plan in the R & D department. Also a proposal for budget allocation for Academic research is under consideration for fulfillment of OBE (different levels) requirement.

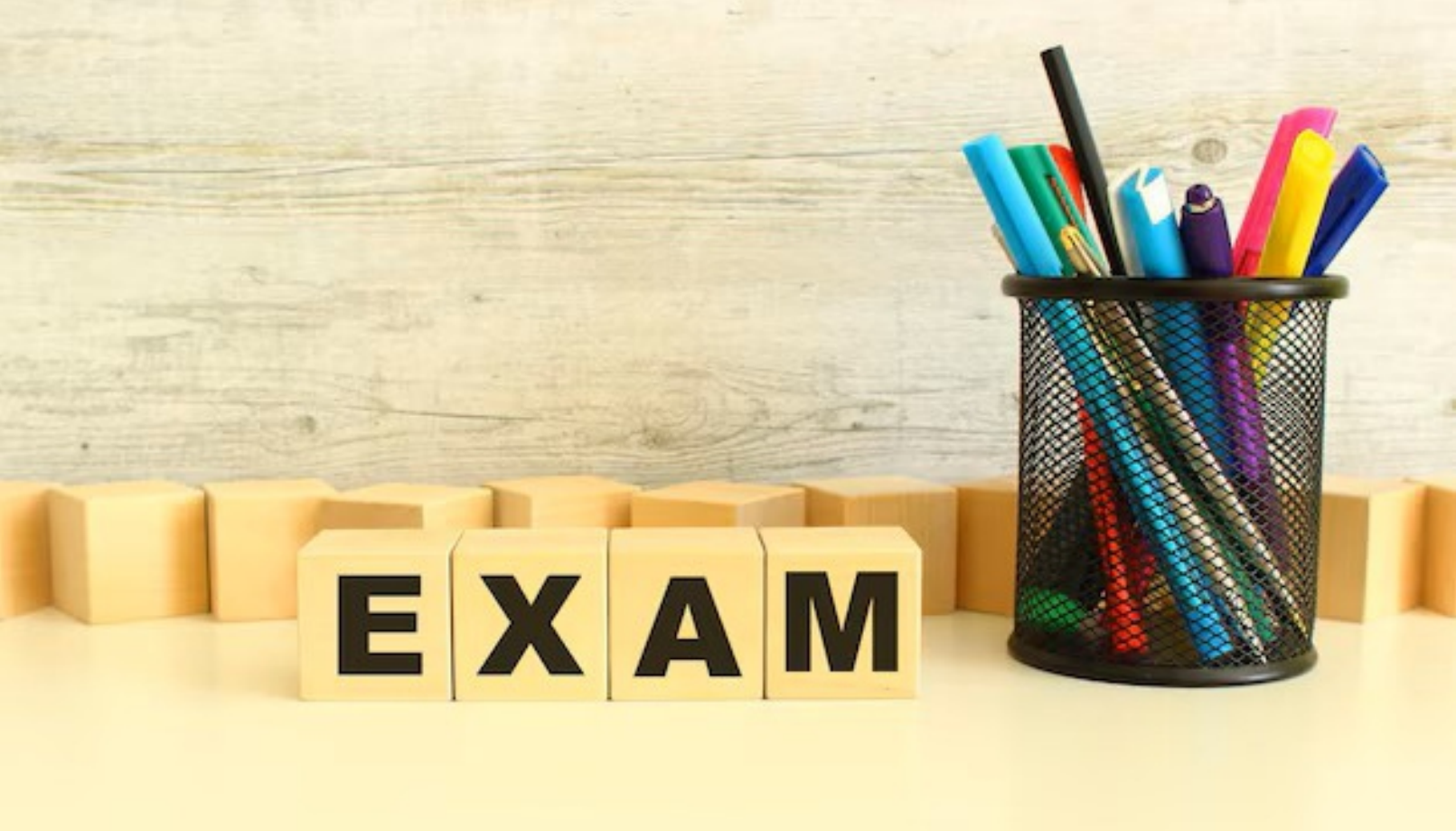


**NFC Institute of Engineering & Fertilizer
Research, Jaranwala Road, Faisalabad**
Ministry of Federal Education &
Professional Training
Government of Pakistan



TAQWA MASJID

NFC Institute of Engineering & Fertilizer Research, Faisalabad



EXAMINATION & EVALUATION



Engr. Ahtsham Razzaque
Controller
(Examination)



Mr. M. Idrees Baloch
Deputy Controller
(Examination)

1. Introduction

The following regulations govern the Semester System of teaching and examination for the Undergraduate degrees awarded by University of Engineering & Technology, Lahore and KFUEIT Rahim Yar Khan through the Institute of Engineering and Fertilizer Research, Faisalabad.

- a. The Undergraduate degrees offered at the Institute under the Semester System are:
 - B.Sc. Chemical Engineering
 - B.Sc. Electrical Engineering
 - B.Sc. Mechanical Engineering
 - B.Sc. Civil Engineering
 - B.Sc. Computer Science
 - Bachelor of Business Administration (BBA)
 - Bachelor of Business & Information Technology
 - BS Artificial Intelligence
 - BS Cyber Security
 - BS Data Science
 - BS Information Technology
 - BS Tourism & Hospitality Management
 - BS Biochemistry
 - BS International Relations
 - BS Environmental Science
- b. The medium of instruction and examinations shall be English for all subjects, except Islamic Studies and Pakistan Studies, for which the medium of instruction and examinations may be either Urdu or English.
- c. The term "Credit Hour" refers to a unit of academic credit during a semester. Each credit hour is related to one or more "Contact Hours per week" depending on the subject type and the semester in which it is offered, as defined in these regulations.
- d. The term "Pre-requisites" refers to subjects that must be successfully completed prior to registration in a subject requiring these prerequisites.
- e. The term "Co-requisite" refers to subjects that must be registered simultaneously if studied for the first time. During repetition, simultaneous registration of such subjects is not necessary.

2. Degree Duration

- a. The minimum duration of the undergraduate degree programs shall not be less than four academic years for all degree programs.
- b. The maximum duration of the degree program shall not be more than six academic years for the above-mentioned disciplines.

2.1. Extension beyond Maximum Duration

- a. The Vice Chancellor of UET, Lahore may grant extensions of up to a maximum of one year beyond the maximum duration for completing the requirements for the award of degree. Students requiring an extension may apply to the Vice Chancellor UET Lahore for this purpose through the Director IEFER.
- b. In such cases, the rules of UET Lahore for this requirement will be observed.

3. Student Status

Students shall be classified as:

- 3.1. On the basis of the number of credit hours registered in a semester, and
- 3.2. On the basis of credit hours completed.

3.1. Classification Based on Registered Credit Hours:

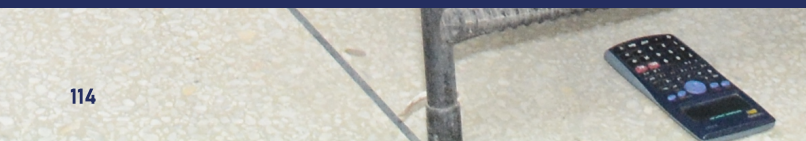
- (i) Students registering at least 12 credit hours during fall and spring semesters and 6 credit hours during summer semester within the minimum duration of their respective degree program shall be called "Regular".
- (ii) Students shall be classified as "Casual" if:
 - They register in less than 12 credit hours during fall and spring semesters, or
 - Register in less than 6 credit hours during summer semester, or
 - Register in subjects after completion of their minimum degree duration period.

3.2. Classification Based on Completed Credit Hours:

- (i) "First Year" students: Successfully completed up to 32 credit hours of the prescribed syllabus.
- (ii) "Second Year" students: Successfully completed more than 32 credit hours but up to 68 credit hours of the prescribed syllabus.
- (iii) "Third Year" students: Successfully completed more than 68 credit hours but up to 104 credit hours of the prescribed syllabus.
- (iv) "Fourth Year" students (only in the case of a five-year degree program): Successfully completed more than 104 credit hours but up to 136 credit hours of the prescribed syllabus.
- (v) "Final Year" students:
 - For a four-year degree program: Successfully completed more than 104 credit hours.
 - For a five-year degree program: Successfully completed more than 136 credit hours of the prescribed syllabus.



A Moment Clicked of Examination Hall



4. Credit Hours Requirements

The credit hours required for the award of degree may range from a minimum of 134 to a maximum of 140 for degree programs with a minimum duration of four academic years. These will include a minimum of 6 credit hours of "final year design project" or equivalent, spread over two semesters.

5. Semesters Nomenclature, Duration and Registration Matters

- Each academic year includes two regular semesters (Fall and Spring) and an optional Summer semester.
- Fall and Spring semesters span 16–18 weeks (with at least 15 study weeks). The Summer semester is 8 weeks long with double weekly contact hours.
- The Board of Studies will determine the maximum and minimum number of students per subject section.
- Students should consult tutors for registration guidance.
- Credit Hour Limits:
 - First & Second year: Up to 19 credit hours (Fall/Spring)
 - Third year and onward: Up to 22 credit hours (Fall/Spring)
 - Summer: Max 8 credit hours, with contact hours not exceeding 24 per week
- Prerequisites must be completed before registering in a subject.
- Registration will close once the maximum capacity of a section is reached.
- A section will be cancelled if below minimum enrollment; affected students may register for alternate subjects during the add/drop period.
- Summer subjects will be offered per departmental policy.

6. Curriculum and Classification of Subjects

Subjects are classified as:

- Type-A (Theory):** Based on lectures and home assignments.
- Type-B (Practical):** Involves experiments, labs, design work, drawings, and projects as per syllabus.
- Type-C (Comprehensive Projects):** Involves project design and development under supervision, conducted in labs/studios/workshops/industry over one or two semesters.

7. Evaluation and Contact Hours for Subject Types

Criteria	Type-A (Theory)	Type-B (Practical)	Type-C (Comprehensive Project)
Evaluation Components	- Mid-term Exam - Final Exam (20% from pre-mid syllabus) - Quizzes, Assignments, Presentations, etc.	- Each experiment, design, drawing, project, or assignment is an independent assessment	- Continuous Assessment (process) - Terminal Assessment (viva/jury)
Weight Distribution	- Mid-term: 30% - Final: 40% - Other: 30%	Cumulative performance in all assessments	- Continuous: 60% - Terminal: 40% External examiners involved
Contact Hours (Fall/Spring)	1 hour/week per credit hour	2–3 hours/week per credit hour	2–4 hours/week per credit hour
Contact Hours (Summer)	2 hours/week per credit hour	4–6 hours/week per credit hour	<i>Not specified</i>

8. Award of Letter Grades

a. The subject teacher, after interacting with and assessing the students over the semester, shall award letter grades. The Chairman of the concerned department shall be consulted while finalizing the grades.

- Type-A subjects: Letter grades shall be awarded on a Relative Scale.
- Type-B and Type-C subjects: Grades may be awarded on an Absolute Scale, if deemed appropriate by the subject teacher.

b. Following steps may be followed for awarding letter grades on a relative scale:

- A minimum marks threshold (linked to content) shall be established for awarding a passing grade. Students scoring below this threshold shall receive an "F" grade.
- An expected maximum marks threshold shall also be set. Students exceeding this threshold may be awarded an "A+" grade.
 - *Note:* Grade points for "A+" and "A" are the same. The "A+" is meant to recognize exceptional performance.
- Students scoring between the maximum and minimum thresholds will be listed in descending order of merit, and the average and standard deviation will be computed.

(iv). Passing letter grades will be awarded based on this distribution, from "A" (highest) to "D" (lowest).

(v). Students within half a standard deviation of the average marks may receive a "C+" or "B–" grade.

(vi). Other passing grades may be awarded:

- Based on narrow clusters (if student count is less than 100), or
- Based on the normal distribution curve (if student count is more than 100).

Letter Grades & Corresponding Grade Points:

Letter Grades	Grade Points	Letter Grades	Grade Points
A+	4.0	C-	1.7
A	4.0	D+	1.3
A-	3.7	D	1.0
B+	3.3	F	0
B	3.0	W	-
B-	2.7	WF	-
C+	2.3	I	-
C	2.0	IP	-

- (vii). It is not mandatory that every class must have all grades represented. For example:
 - A class may have no students failing (no "F" grade), or
 - No student may qualify for an "A" grade, based on instructor judgment.
 - Some intermediate grades may also remain unused.
- (viii). An upper limit may be placed on the percentage of students eligible for a certain passing grade, if necessary.
- c. The above table specifies the letter grades and their grade point equivalents.
- d. Subjects repeated to improve grades (except those with "W" or "WF") will appear on the transcript with a suffix "R".
- e. A subject teacher may assign an "F" grade if they confirm a student has cheated in mid-term or final exams.
 - However, the student must be given a chance to defend themselves before the grade is finalized.

8.1 Result Computation Method

The Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA) shall be computed using the following formulas:

- $GPA = \Sigma(GPx \times CHx) / \Sigma CHx$
(x = 1 to n, where n is the number of subjects in the semester)
- $CGPA = \Sigma(GPy \times CHy) / \Sigma CHy$
(y = 1 to m, where m is the total number of subjects across all semesters)

8.2 Authority to Compute Results

- Grade Points (GP) in each subject, GPA, and CGPA of each student shall be computed and notified by the Controller of Examinations at the end of each semester.

9. Award of "W", "WF", "I" and "IP" Grades

9.1. Withdrawal – "W" Grade

- A student may withdraw from a subject by submitting Form 1.
- Deadline: Up to the 6th study week during Fall/Spring semesters, and 3rd week during Summer.
- The subject will appear with a "W" grade in the transcript and will not be counted in GPA.
- If the subject is repeated later, it will not carry the "R" suffix.

9.2. Forced Withdrawal – "WF" Grade

- Awarded in cases of attendance shortage or disciplinary action.
- The "WF" grade will appear on the transcript but will not affect GPA.
- If the subject is repeated later, it will not carry the "R" suffix.
- Students who neither drop a subject nor appear in any assessment will receive an "F" grade, not "WF".

9.3. Incomplete – "I" Grade

- Awarded when a student fails to complete assessments due to illness or other acceptable reasons.
- Not eligible if attendance is less than 50%. The "I" grade appears temporarily in the transcript and is not treated as "F".
- The student must complete the remaining work in the following semester.
- If the work remains incomplete, the "I" grade will be converted to "F" by the Controller of Examinations.
- It is the student's responsibility to complete the work and satisfy the faculty member.

9.4. In Progress – "IP" Grade

- Assigned to Type-C subjects (thesis, projects, studio work) spread over multiple semesters. Appears in transcript, not treated as "F".
- If such subjects have different codes/names for each semester, the first portion may be graded as "IP" if final grading is deferred until completion of the second portion.
- "IP" grade will not affect GPA. However, when the subject is completed, its grade will be included in the semester GPA with total credit hours counted.

10. Repetition of Subjects

- a. Students are permitted to repeat subjects to improve their grades, provided it is within their maximum credit hour registration limit for the semester.
- b. For subjects that are a combination of Type-A (Theory) and Type-B (Practical), students are allowed to repeat either part separately.
- c. When a subject is repeated, the new grade earned shall replace the previous grade, regardless of whether it is higher or lower.

11. Academic Probation and Separation

- a. A student will be placed on Warning if their GPA falls below 2.0 in any semester but CGPA remains above 2.0.
- b. A student will be placed on Probation if their CGPA falls below 2.0 after any semester.
- c. A student will be separated from the University and IE&FR if they remain on Probation for two consecutive semesters.
- d. Separated students may apply to the Vice Chancellor, UET Lahore for reconsideration.

12. Award of Degree and Merit Position

- a. A student shall qualify for the award of an undergraduate degree if they:
 - Earn a minimum CGPA of 2.0, and
 - Fulfill the following conditions:
 - (i) Have no compulsory subject with a grade of "W", "WF", "I", or "F" during all semesters.
 - (ii) Have repeated elective subjects with "W", "WF", "I", or "F" grades, or completed alternate electives to meet the credit hour requirement.
 - (iii) Have completed the prescribed number of credit hours.
- b. A student shall qualify for a "Degree with Honors" if they:
 - (i) Have earned a CGPA of 3.70 or above out of 4.00.
 - (ii) Have not repeated any subject.
 - (iii) Have not withdrawn from any subject with a "W" or "WF" grade.
 - (iv) Have not earned an "F" grade in any core or elective subject during the program.

13. Dean's Honor Roll

At the end of each semester, a "Dean's Honor Roll" shall be published for students who:

- Earn a Semester GPA of 3.7 or above
- Have no "W", "WF", or "F" grades
- Are registered in at least 15 credit hours during that semester

Note: The Dean's Honor Roll does not apply to Summer semester results.



14. Grievance Committee and Grade Change Request

The examination regulations ensures the transparency by requiring teachers to:

- Share results of all assessment instruments, including the final exam, with students.
- Allow students sufficient time after finalization of the award list to report and correct any errors or omissions.

Therefore, the following aspects will not be reviewed or discussed under this regulation:

- (i) Marks awarded by the teacher in any assessment instrument
- (ii) Letter grade thresholds

15. Student Registration

- a. Regular and casual students may register for subjects being offered in a semester, within their maximum credit hour limit.
- b. Students may add or drop subjects:
 - Within the first two weeks of Fall and Spring semesters
 - Within the first week of the Summer semester
- c. A student fulfilling the requirements of an "I" (Incomplete) grade does not need to register again for that subject.
- d. Students choosing not to register in a semester must inform the department. Failure to register without prior intimation may lead to separation from the University.

16. Deferment of Studies (Freezing)

- a. Students enrolled in the first semester are not eligible for deferment.
- b. No relaxation in the maximum degree duration shall be granted for students who seek deferment.
- c. A student may defer studies for up to two consecutive regular semesters (Summer semester not included) due to medical reasons or other circumstances beyond their control.
 - The student must apply using Form-4, submitted to the Chairman of the department at least 15 days before the semester begins.
 - Approval must be obtained from the concerned Dean, and
 - CAC shall issue an official notification of deferment for the approved period.

17. Attendance Requirements

- a. Students must maintain at least 75% attendance in each subject during a semester.
 - If attendance falls below 75%, a "WF" (Forced Withdrawal) grade shall be awarded.
 - A relaxation of up to 10% may be granted by the Director, upon recommendation of the HOD.
 - For any relaxation exceeding 10%, the request shall be forwarded to the Director through the HOD for a final decision.
- b. Approved leaves (sanctioned by the HOD) will not count toward attendance.
- c. To be eligible for an "I" (Incomplete) grade, a student must have at least 50% attendance in the subject.
- d. Students not registering in a particular semester must inform the department in writing.

Note: Failure to do so may result in separation from the University.

18. Special Provisions

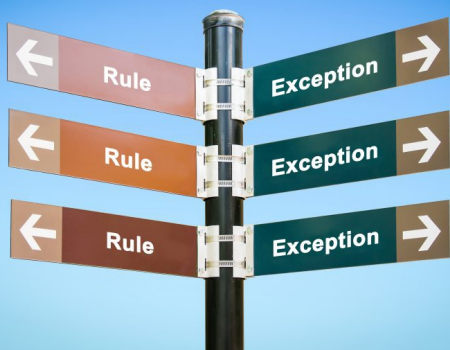
- a. In all cases where the regulations are silent, the decision of the Director shall be final.
- b. Interpretation of these rules and regulations by authorized officers of UET Lahore shall be considered final and binding.
- c. The UET Lahore authorities reserve the right to modify regulations, rules, fee structure, and courses of study at any time without prior notice.
- d. No student is allowed to maintain simultaneous enrollment in any other program at IE&FR or any other institution, local or foreign, unless officially permitted as an Exchange Student by competent authority.
- e. If a student enrolled at IE&FR is found to be a regular student at another university/institute (local or foreign), their admission at IE&FR shall be cancelled.
- f. Students are responsible for knowing and following all rules and regulations mentioned in the prospectus or notified subsequently.



These rules are only applicable for the degree Programs affiliated with:



UET
LAHORE





KHAWAJA FAREED
UEIT
RAHIM YAR KHAN

EXAMINATION REGULATIONS

SCAN HERE





RULES & REGULATIONS

Students Discipline

The students are expected to conduct themselves in a disciplined manner, and to acquire that nature and responsible outlook about life which is expected of them when they graduate into their professional careers. In this regard they are required to abide by a code of honor and rules of discipline, except from which are reproduced below. Any violation of the rules of discipline can render a student liable to punishment ranging from exclusion from a class or a fine to rustication or expulsion from the Institute.

Code of Ethics

Every student is expected to adhere to the following ethical principles:

- He must be loyal and faithful in his religious duties and respect the convictions of others regarding religion and customs.
- He must be loyal to his country and refrain from any action that may lower its honor or prestige.
- He must be truthful and honest in his dealings with all people.
- He must respect the elderly and be polite to all, especially to women, children, the weak, and the helpless.
- He must respect his teachers and others in positions of authority within the Institute.
- He must maintain cleanliness in body and mind, and promote clean speech, sportsmanship, and habits.
- He must be ready to help fellow beings, particularly those in distress.
- He must dedicate himself sincerely to his studies.
- He must observe thrift and protect public and private property.



**DISCIPLINE
IS THE SILENT
ARCHITECT
OF SUCCESS.**

Uniform

Students are required to wear the following uniform during the specified seasons:

Summer	Winter
For Male Students: - White Shirt - Gray Pant - Green Tie - Black Shoes	For Male Students: - White Shirt - Gray Pant - Green Tie - Dull Green Blazer or Pullover - Black Shoes
Female Students: - White Shalwar Kameez - Dull Green Dupatta - Black Shoes	Female Students: - White Shalwar Kameez - Dull Green Dupatta - Dull Green Blazer or Pullover - Black Shoes

Smoking

Smoking in the premises of the Institute including class room, laboratory, workshop, library, examination hall, convocation hall and during studio work or academic functions is not allowed. A fine of Rs. 500/- will be charged.

Functions/ Parties

Students are not allowed to organize or take part in any function within the Institute Campus or in a hall of residence, organize any club or society of students except in accordance with the prescribed rules and regulations.

Collection of Money

Collection of money from students or receiving donations or pecuniary assistance for or on behalf of the Institute from any organization is not allowed except with the written permission of the Director.

Student's Activities

Students are not allowed to stage, incite or participate in any walkout, strike or other form of agitation against the Institute or its teachers and officers.

Check & Balance

Every member of the teaching staff shall have the powers to check disorderly or improper conduct or any breach of the rules by students occurring in any part of the precincts of the Institute. Should such misconduct occur in room when the student is under the charge of demonstrator, he shall report the matter without delay to the Head of the Department.

Timings

Students must switch off room lights by 1:00 AM or face a Rs. 100 fine per violation. Male students cannot be out after 11:30 PM without logging emergency details at the gate. Hosting day scholars after 9:00 PM will lead to hostel allotment cancellation. If a day scholar is found in the hostel between 9:00 PM and 6:00 AM, they will be fined Rs. 500, and the host's allotment will be canceled.

Attendance in Classes

If a student does not attend classes for 6 (six) days continuously while staying in the hostel, his room allotment will be cancelled. Final year students will vacate hostel rooms within three days after their last paper / viva examination.

Dues

If hostel dues are not paid by 10th January of each year a fine @ Rs.50 per day shall be charged till 30th January after which his allotment shall be cancelled. The students will deposit their dues well in time to avoid any inconvenience.

In case of cancellation of allotment, a sum of Rs.1000/- will be charged as re-allotment fee. Amount of security will be remitted to the hostelite student through cheques at his home/service address after the deposit of clearance certificates in Accounts department.

Female Residents

Girls students will have to enter their names in the register placed at the gate whenever going out. They are not allowed to remain out or go out after sunset. Girls would only be allowed to meet or go out with the persons as allowed by their parents / guardians in writing.

STUDENTS ***ACCOMMODATION***

JINNAH HALL
IQBAL HALL
FATIMA HALL
QASIM HALL

IQBAL HALL

HOSTEL MANAGEMENT



Engr. Syed Shamim Raza
Senior Warden (Hostels)

Message To All IE&FR Hostel Residents

"Welcome to the NFC IE&FR Faisalabad! We are delighted to have you join our vibrant campus community.

As you begin this new chapter, we encourage you to make the most of your academic and residential life. The hostel is not just a place to stay, it's your home away from home. We are committed to provide you with a safe, disciplined, and comfortable environment that supports your growth and learning. Please familiarize yourself with the hostel rules and regulations to ensure a smooth and respectful existence with fellow residents. Our doors are always open should you need guidance or support.

Wishing you a rewarding and memorable journey ahead."



Engr. Atif Ali Khan
Hostel Warden (Boys)



Mr. Usman Ali Baig
Hostel Warden (Boys)



Mrs. Sadaf Batool
Hostel Warden (Girls)

Feel Yourself At Home



INTRODUCTION

The institute offers residential facilities for both male and female students. Hostels are equipped with amenities such as a dining hall (mess), prayer room, and laundry facilities. Clean drinking water is available through water coolers and filters placed at several points. A dedicated staff team ensures cleanliness, maintenance, and prompt resolution of complaints. This includes electricians, plumbers, carpenters, attendants, janitors, and gardening staff to maintain the surroundings. Meals are served in each hostel's mess. The quality is assessed on taste, quantity, ingredient quality, and affordability. The mess services comply with Punjab Food Authority standards and guidelines. Comprehensive details about hostel allotment, rules, and administrative structure are available in the prospectus, which can be downloaded from the university's official website during the allotment process.

The hostels are named:

Iqbal Hall (Boys Hostel)
Jinnah Hall (Boys Hostel)
Qasim Hall (Boys Hostel)
Liaquat Hall (Employees Residence)
Fatima Hall (Girls Hostel)

1. Hostel admission is granted by the Senior Warden, with fresh students selected on merit. Old students may be re-admitted only with formal approval, and applicants with chronic illnesses must submit medical recommendations.
2. Hostel dues are charged annually and are generally non-refundable once the facility is used; however, partial refunds may be considered if vacated early. Residents must clear dues regularly and vacate the room within a week after exams unless engaged in thesis work or ongoing classes.
3. Violations of hostel rules may lead to fines, suspension, or expulsion, especially in cases involving violence, theft, drugs, gambling, or weapons. Misconduct and use of intoxicants are strictly prohibited, and unawareness of rules is not a valid excuse.
4. Students must carry ID cards, avoid unauthorized gatherings, and respect hostel quiet hours. Hostels may be vacated during holidays or emergencies, and any misuse of facilities or forceful entry will result in fines and disciplinary action.

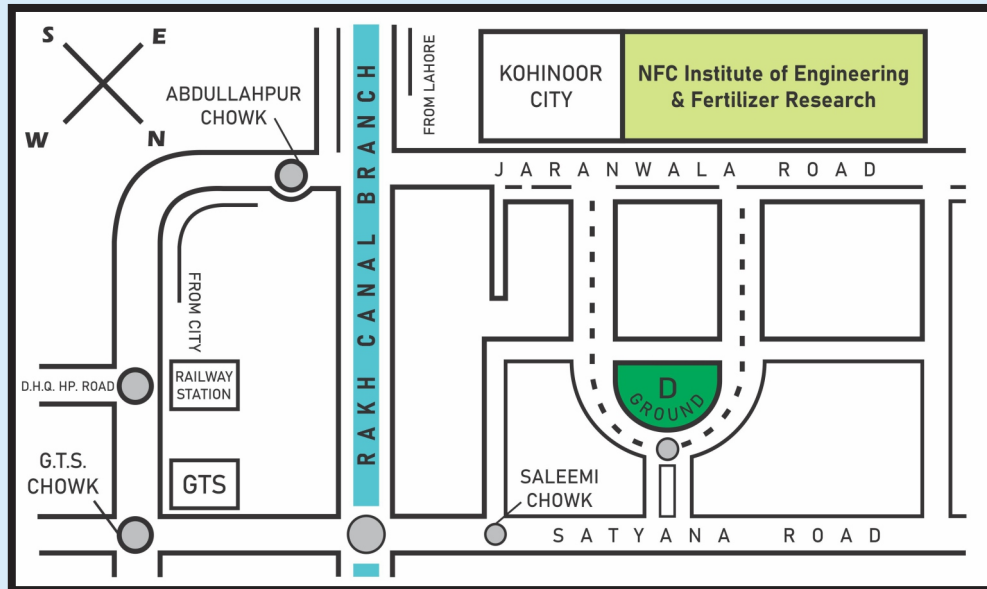


Special Rules & Regulations for Girls

1. Parents/Guardians must accompany their daughter to the Warden's Office at the time of hostel admission to provide a written list of relatives who are authorized to visit her in the hostel.
2. Only authorized guests may meet residents between 10:00 AM to 05:00 PM in the guest room of the Girls' Hostel, after proper identification and entry in the visitors' register placed in the Warden's Office. Guests are not allowed inside the residents' rooms under any circumstances.
3. Hostel residents must obtain written permission from the Warden for night stays outside the hostel and make an entry in the leave register during office hours. In case of unauthorized absence, the Warden shall inform the parents/guardians, and in the case of habitual violations, the matter will be referred to the management for appropriate action.
4. Ex-students or guests are not allowed to stay in the hostel. However, in exceptional cases, the mother or real sister of a resident may be allowed to stay for a maximum of two days after proper verification, free of charge.
5. The hostel gate will be closed at 08:30 PM for students and 10:30 PM for faculty/staff. No one will be allowed to enter the hostel after the designated closing time.

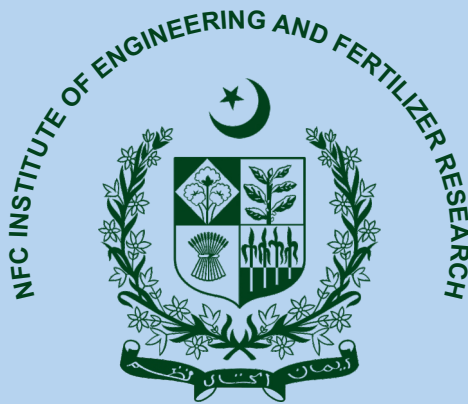
Note: In case of any violation of the above rules and regulations, disciplinary action will be taken against the involved resident(s).

LOCATION



Disclaimer:

The NFC Institute of Engineering & Fertilizer Research (Private) Limited (IE&FR) reserves the unilateral right to amend, modify, or revoke any information, statement, policy, or provision contained within this prospectus at any time, without prior notice. The Institute shall bear no liability or responsibility whatsoever for any consequences, whether direct or indirect, arising from such modifications, amendments, or cancellations. Furthermore, the procedures governing admissions, examination criteria, and institutional regulations are subject to revision at the discretion of the competent authority, and such revisions may be implemented either prior to or subsequent to a candidate's admission.



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