# KHWAJA FAREED UNIVERSITY OF ENGINEERING & INFORMATION TECHNOLOGY

# PROSPECTUS
## 2019-20

### FOR THOSE WHO WANT TO BECOME FUTURE LEADERS

بسم الله الرحمن الرحيم

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# Vision

To become a world-class University that contributes significantly to the development of regional economy and uplift of local community by becoming a power house of intellectual and human capital generation.

# Mission

1. To offer an educational experience wherein:

(a) The curriculum and its delivery conform to international standards
(b) The students are provided an environment for wholesome development of their personality and creative potential
(c) The graduates produced are most sought after by prospective employers

2. To conduct research to solve local and national problems requiring knowledge based solutions

# Goals & Objectives

1. Establish 30 world-class undergraduate degree programs in six domains of Sciences & Mathematics, Engineering, Information & Communication Technology, Life Sciences & Healthcare, Management, Social & Legal Sciences, Humanities & Arts.

2. Conduct research in inter-disciplinary areas of local and national need to produce intellectual capital (Knowledge, Solutions, Intellectual Property (IP)) and Human Capital (PhDs):

- Applied & Open Source Information Technology (Education, Health and Agriculture)
- Embedded Systems (Next Generation Smartphones, Tablets, Security Cameras, Home Automation Systems, Building Controls Systems, Factory & Production Line Automation for Agri-based Industries, Electric Vehicles Control Systems)
- Biotechnology (better crops and fruit varieties)
- Food Science & Technology
- Water Resource Engineering / Management
- Environmental Science & Engineering
- Renewable Energy (Biomass, Solar PV, Wind and others)
- Information Security (Information Assurance, Cyber Warfare, Digital Forensics)
- Materials Engineering (Solid Electrolytes, Organic Photovoltaics, Nano-Materials)
- Power Storage, Conversion & Management
- Heritage Studies
- Engineering Management, Healthcare Management and Supply Chain Management

# Core Values



Useful

Eco-friendly

Innovative

Faithful

Knowledge-able

**KFUEIT**

Tolerant

Leadership
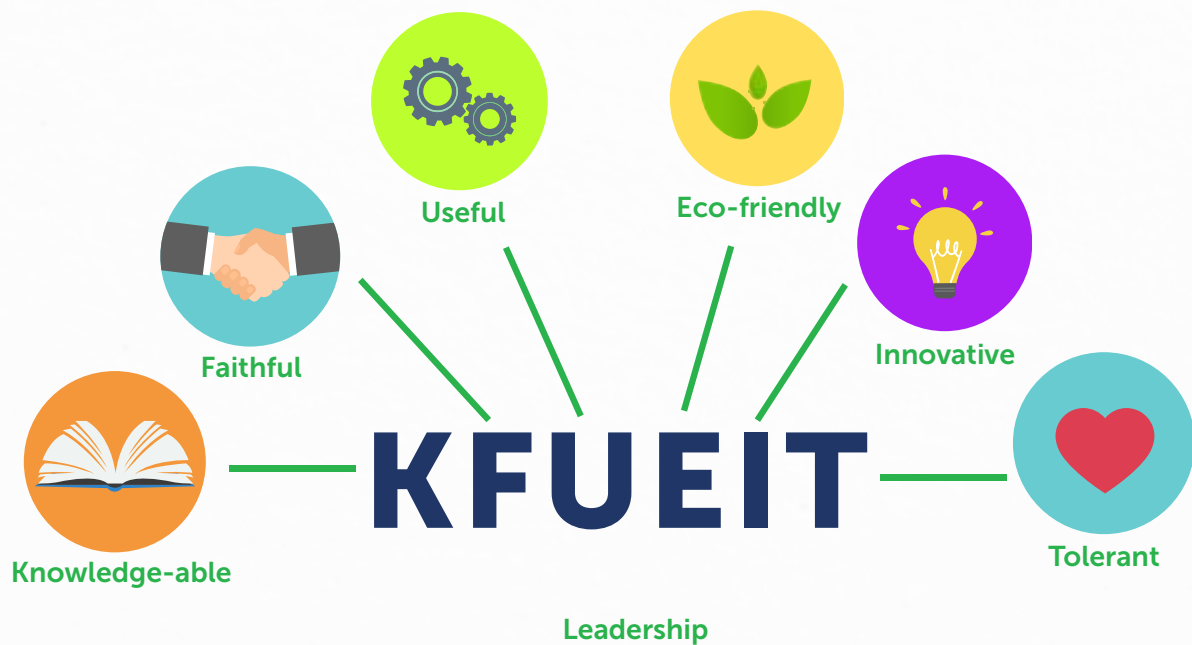
**Khwaja Fareed University of Engineering & Information Technology**
Rahim Yar Khan

# Chancellor's Message

All institutions of higher education have a responsibility to advance knowledge and understanding through education and research so as to contribute in the economic and cultural spheres of any society. The government wants the universities to focus on their role and enable people to develop their capabilities by realizing their potential both personality and at work.

The promotion of education, specially the higher education in southern Punjab, is amongst the top most priorities of the government. I believe that improvement in quality of teaching and research, a positive change can be brought in the prevailing socio-economic condition of this area.

Khwaja Fareed University of Engineering & information Technology is committed to provide its students a supportive learning environment. Additionally, the University recognizes that the students must be well prepared to become valuable members of society. In order to address these demands, the University must continuously upgrade itself, academically and administratively, so that it is in a position to attain the standards that will allow its students to excel in their future pursuits.

I wish Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan best of luck towards attainment of its academic goals.

**Chaudhry Mohammad Sarwar**
Governor Punjab

# Pro Chancellor's Message

The Government of Punjab under able leadership of the Chief Minister, Sardar Usman Buzdar is committed to catapult higher education to the international standards and to spread the reach of high quality higher education to every nook and corner of the Punjab. In this connection establishment of the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan is a flagship project of this government. The Government of Punjab has already invested nearly Rs. 4 Billion for the Phase-1 of the establishment of KFUEIT, RYK wherein core academic and supporting buildings and essential infrastructure has already been put in place.

I am pleased to note that as the after Phase-1, further plans are already in the pipeline for the Phase-2 of the project which will enhance this University by providing more land and more state of the art infrastructure and facilities. Phase-2 will be double in magnitude of its initial phase and will include provision for Faculty Development Program and Endowment Fund to ensure the long-term sustainability of the University. Government of the Punjab believes that this investment in our youth will pay dividends in the long run to the province and to the nation by producing next generation of leaders. Furthermore, I am satisfied to see that under provincial government's guidance KFUEIT is adopting the best practices in higher education and is striving to integrate with the community and regional economy. I urge the youth of the South Punjab Region to make full use of this University in fulfilling their educational and career aspirations and I assure them that they will find me responsive to their feedback and suggestions. My support and best wishes are with the students, faculty and staff of the University.

**Raja Yasir Humayun Sarfraz**
Minister for Higher Education Government of the Punjab

# Vice Chancellor's Message

I welcome you to explore and choose the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan for the fulfillment of your educational and career development goals. KFUEIT is the first public sector university located in the deep southern Punjab region and has been established under the vision of the Government of Punjab to bolster the educational opportunities for highly talented and hardworking youth of the region. Being the only public sector university in a 200 km radius, and situated at the confluence of the hitherto most deprived regions of the three provinces of Punjab, Sindh and Balochistan, the University is fully cognizant of its responsibilities towards the community and the region. Hence, under a massive development grant of nearly Rs. 6 Billion, in the first phase, by the Government of Punjab, KFUEIT is rapidly developing its physical infrastructure of modern buildings and state of the art teaching and laboratory facilities. Following the initial phase, a second phase of development has also been launched to add top off the line academic, residential and recreational facilities on the campus.

KFUEIT has a lofty vision to become a world-class university that contributes significantly to the development of regional economy and uplift of local community by becoming a power house of intellectual and human capital generation. To achieve this sublime vision the University is fully committed in its mission to offer an educational experience where the curriculum and its delivery conform to international standards, the students are provided an environment for wholesome development of their personality as well as creative potential, and the graduates produced are the most sought after by prospective employers. So far the response of the industry and community towards the quality of KFUEIT graduates has been very encouraging. KFUEIT is offering a broad spectrum of academic programs in all areas of knowledge. The variety and number of our academic program offerings are fully matched by the high quality of our teaching and learning environment.

KFUEIT is also committed to conduct applied research to solve local and national problems requiring knowledge based solutions. Under a well-considered plan, the high priority research areas for the University are identified to be Food, Environment, Energy, Water, Health, Information & Communication Technology and Manufacturing. KFUEIT is aware of the changes on the global level and the national need for transformation towards a knowledge economy, where all sectors of the economy will depend significantly on use of information and information processing tools to deliver products and services in a competitive and profitable manner. At KFUEIT, we have aligned our curriculum and all systems of teaching and research, as well as institutional operations, towards being an agent for this much needed transformation.

The set of core values which form the guiding principles permeating all our activities at KFUEIT, and are being inculcated in the students as well as being practiced by the University administration and faculty can be easily remembered through the University acronym KFUEIT. That is, we want our students, faculty and staff to be Knowledge-able, Faithful, Useful, Eco-friendly, Innovative and Tolerant.

I hope that after going through this prospectus and visiting the KFUEIT Campus or the Official KFUEIT website and Facebook pages you will be in the perfect position to choose KFUEIT as your university. I look forward to you becoming a part of the KFUEIT community where you will be welcomed by a highly qualified and caring faculty as well as a helpful University administration.

**Engr. Prof. Dr. Athar Mahboob, Tamgha-e-Imtiaz**
**Vice Chancellor**

# Senior Dean's Message



Khwaja Fareed University of Engineering and Information Technology is a wonderful initiative by Government of Punjab and in particular, the role played by then Chief Minister, regional politicians and business community for the establishment of this great institution. We hope that Inshallah this university will become a world class university with hard work and continuity of support from the present and future governments. There is no doubt that establishing this university is a blessing for the people of South of Punjab and it should be exploited to its full potential with continuity of support and use it as a hub to connect to the world for business and education purposes.

Our future lies in knowledge-based economy and these types of initiatives are the building blocks towards that vision. We should play our role in the world with positive attitude and make contributions for good of humanity. We cannot live in isolation and therefore need to adopt World Class practices in our day to day living, in our industry and businesses, otherwise we will be left behind even more than what we are now.

Our wide range of educational programs at undergraduate and graduate level including BS, MS/MPhil and PhD are of the highest standard and we have plans to benchmark our performance with the world class universities. Whatever gaps exist in our performance, we should have the willpower to achieve those world class targets which have been established by the International universities and institutions.

I would ask our young people who are intelligent and full of energy to set your sights high and show that you can fulfil your own, your parent's and your nation's dreams. You are the future of this nation and do not disappoint them.

KFUEIT team is anxious to take this university forward and I have already seen great results towards making it a world class university. As our great leader Quaid-e-Azam said "with faith, discipline and selfless devotion to duty, there is nothing worthwhile that you can not achieve". In a short period of four years since the establishment of this University, we have made great progress and achieved 2024 targets at the end of 2018. Now KFUEIT is offering 94 programs in Engineering, Management, Basic Sciences, Humanities, Social Sciences, Allied Heath Sciences, Computer Science and Information Technology. The student numbers Inshallah will increase from 5,000 to 10,000 in August 2019. This University is also striving towards self-sustainability business model by effective utilization of resources for delivery of teaching programs, Research and Innovation work and Entrepreneurship activities.

We are planning to engage with wider community by offering flexible, multi-disciplinary and e-learning programs, both for full time students and working professionals from industry and businesses.

I wish all our students best of luck and hope that whatever you do in life will be for good of humanity because we are part of the World in this global village where we should learn to live in peace and harmony with each other.

**Engr. Prof. Dr. Mohammad Munir Ahmad**
BSc Mech Eng (UET, Lahore), MSc, PhD (UK),
CEng, MIMechE, FIEI, Eur Ing ( EU-FEANI)

### Mian Muhammad Shafi
Member of Punjab Assembly (PP-258)

Mian Shafi Muhammad has a dynamic political background. He belongs to Tehsil Khanpur, District Rahim Yar Khan. He has served as Vice Chairman, District Council during 1990-93 and 1997-99. Besides his services as a politician since 2008, he is also a progressive agriculturist and a versatile businessman. He has the honour of successful completion of long Workshop on National Security held in the National Defence University in 2010. At present, he is representing ruling party PTI as Member Provincial Assembly of the Punjab from Constituency PP-258 (Rahim Yar Khan-III) in the last General Elections of 2018.

He believes that quality education is the basic right of every citizen of Pakistan. In this context, he is of the strong view that provision of quality higher education is the key tool to elevate the people of the deprived region of the South Punjab to an equal footing of other developed regions of the Punjab. In his point of view, establishment of Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan (KFUEIT, RYK) is a very positive initiative in the public interest, which would serve as a power house for human capital generation and economic growth in the region.

While becoming Member of Syndicate of KFUEIT, he is fully committed to support at his best to all the measures to strengthen the academic life of the University along with its infrastructure development. During his formal visit at KFUEIT, after becoming Member of its Syndicate, he showed ample satisfaction on the pace of progress and efforts made so far by the University Leadership in the overall academic and infrastructure development of the University in terms of student number, academic programs, faculty strength, advance lab equipment and other allied dynamics. He believes that in the forum like Syndicate, political will and participation plays a key role in making decisions in the best public interest.

### Chaudhry Masood Ahmad
Member of Punjab Assembly (PP-257)

Chaudhry Masood Ahmad is a senior cum seasoned politician, rendering welfare services to the people of District Rahim Yar Khan since decades. At present, he has been offering his political services as Member of the Provincial Assembly of Punjab, part of the ruling party since August 2018. He believes that Government of the Punjab is focusing on the development of education sector, specially the higher education and the promotion of education in the Southern Punjab, is amongst the top most priorities of Government of the Punjab. He is of the great vision that deprivation of the people of the Southern Punjab can only be compensated with the provision of quality higher education in the region.

In light of his lofty vision towards the promotion of higher education in the Southern Punjab, he is keenly interested to contribute at his best in the establishment and development of Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan. In this regard, Government of the Punjab graced him with the membership of the Syndicate of KFUEIT. During his formal visit at KFUEIT, as Member Syndicate, he shared his comments with the media personnel that he is very happy to see the progress and development in the University and is eager to play his role in resolving all the outstanding issues of the University pending with Government of Punjab including, but not limited to financial issues. He is committed to offer his unconditional support for the academic growth and future infrastructure development of the University while being a part of its Syndicate.

*Tree Plantation by Syndicate Members of University*

# RYK and KFUEIT – History and Culture

Rahim Yar Khan, a city situated extreme south of Southern Punjab, is a vibrant and progressive city. Previously known as Noshehra was named Rahim Yar Khan in 1809 by Nawab Muhammad Sadiq Khan after his first son. In 1930 the city was designated as a District Headquarter and in 1942 became an industrial zone and Cotton Centre with advent of several industrial units and factories all over the town. Two landmark factories of Abbasia Textile Mills and Sadiq Vegetable & Oil Mills (now Unilever) were established in 1950, which added more in the urbanization of the city. This urbanization continued since then and now the city is one of the modern district headquarters in Punjab with decent civic facilities and infrastructure.

Rahim Yar Khan is strategically located in an area, which is converging point of three provinces (Punjab, Sindh and Baluchistan) of Pakistan. This geographical location makes this city the centre of not only the health & education but for business, trade and agriculture of Southern Punjab, Northern Sindh and Eastern Baluchistan as well. Known as one of the largest producers of cotton and sugarcane, RYK has an Agri-based economy of 65% population. Leading industrial units of RYK include Unilever, Coca Cola Beverage, FFC, 7 Sugar Mills Plants, Ahmad Oriental Textile and Ahmad Fine Textile Mill with dozens of Marble, Cotton Ginning, Flour & Oil Mills and Poultry Feed units.

This part of the province has always been struggling for development and opportunities for higher studies. The parents were forced to look for bigger cities up north or extreme south of country in order to explore higher education options for their children. The closest locations on both sides of this city having a dedicated university, Bahawalpur and Sukkur, are at a distance of around 200 km each. In this scenario, students were bound to opt for incremental expenditures in bigger cities besides academic expenses while getting exposed to severe competition against limited seats in many institutions.

In these circumstances, the establishment of very first Engineering & Information Technology University in Rahim Yar Khan is surely nothing lesser than a blessing for Southern Punjab, Northern Sindh and North Eastern Baluchistan. Established in 2014 under Punjab Assembly Act XIV, the Khwaja Fareed University of Engineering & Information Technology (KFUEIT) Rahim Yar Khan, started its journey with merely 4 rooms, 5 faculty members and admission intake in 4 degree programs.

After the appointment of its very first Vice Chancellor in September 2015, KFUEIT embarked upon a tremendous growth track and started elevating the ladder every year. The vibrant leadership of the Vice Chancellor, Engr. Prof. Dr. Athar Mahboob (TI) along with his very young and energetic team left no stone unturned in achieving targets of decades in just few months not only in terms of physical infrastructure but in academic excellence as well. Despite lots of stumbling blocks and bottlenecks, this roller coaster journey of exponential growth did not slow down owing to untiring commitment and dedication of the Vice Chancellor and his young team.

Situated on Abu Dhabi Road Rahim Yar Khan, a beautiful and state of the art campus of KFUEIT is spread over 275 acres and is equipped with all modern facilities where more than 600 employees including 200 teaching faculty members are performing their duties in making this university a premium institution of the country in days to come. The fast-paced growth and such an increase in number of students is evident of the fact that this University is effectively serving the needs of the region and contributing towards the development of regional economy. As per the safest estimates, KFUEIT has been able to reverse the flight of capital of around 2 billion per annum from regional economy of this region, which was previously being spent in central and upper part of Pakistan.

Particularly for girls, this university is an even bigger blessing, because many of the degree programs are of great interest to female students matching their education aspirations and future endeavors. The year 2019 has also been scheduled to be yet another successful venture for KFUEIT. After the admissions of Fall 2019, KFUEIT will register its name in leading universities of country by growing to 19 departments, 94 degree programs, over 100 PhD qualified faculty members and crossing milestone of 10,000 students.

Where KFUEIT is aggressively on its way to become a premium institution of this country in minimum possible time at one end, the severe financial crisis that is hitting this university in last one year and adversely affecting its growth on another end. With the shortage and non-releases of necessary funds from government for university, the achievement of aggressive targets seems difficult to achieve. Against all the odds, the leadership of university aims the wholesome development of students besides academic excellence and has never compromised on extracurricular activities in doing so. KFUEIT keeps arranging and hosting dozens of extracurricular activities including sports gala, seminars, exhibitions, declamation contests, Na'at and Qir'at contests, Pakistan Day, Defence Day, Kashmir Day, Eid Milad un Nabi, Dramatic Performance, Students societies and many other events within and outside the campus to develop and motivate the students.

# KFUEIT – At a Time-Scale Glance

| Milestone | 2014 | 2017 | 2018 | 2019* | 2020** |
|---|---|---|---|---|---|
| Academic Programs | 4 | 14 | 41 | 94 | 120 |
| Total No. of Students | 200 | 2,000 | 4,800 | 10,000 | 15,000 |
| Total Female Students | 10 | 700 | 2,200 | 3,800 | 4,500 |
| Total No. of Faculty | 5 | 130 | 200 | 225 | 250 |
| No. of PhDs | 1 | 55 | 90 | 110 | 150 |
| Land (Area) | 218 | 275 | 275 | 275 | 450 |
| Built-up Space (Sq. ft.) | 0 | 150,000 | 500,000 | 1.0 mil | 1.5 mil |
| No. of Classrooms & Labs | 4 | 40 | 140 | 180 | 220 |
| Internet Bandwidth (Mbps) | 0 | 90 | 460 | 700 | 1,000 |
| Library Books | 0 | 16,000 | 30,000 | 100,000 | 150,000 |
| No. of Engineering Degree Programs | 2 | 4 | 14 | 28 | 35 |
| No. of CS&IT Degree Programs | 2 | 3 | 6 | 10 | 15 |

* Planned after Fall 2019 admissions   |   ** Projected numbers for next year end

KHWAJA FAREED
# UEIT
RAHIM YAR KHAN

# Why
# KFUEIT?

## A Premium Institution in Making:

- Visionary and Professional Leadership
- Strategic location at the confluence of three provinces, serving needs of significant population
- Exponential growth in past and aggressive plans for future
- State of the art infrastructure, ICT network, automation and facilities
- Latest laboratories with commercial testing facilities
- Prime focus on research and commercialization with 12 research centres
- Attracting competent and qualified faculty
- MoUs of mutual cooperation and development with International Universities / Institutions
- Offering outome based and futuristic programs with associated lab and research platforms
- Strong vigilance and feedback system for improvement
- Connected with contemporary World and latest research / happenings
- International seminars, conferences and engagements with eminent guest speakers
- Industrial collaboration and partnerships
- Professional work culture driven by young and energetic employees

## Career Oriented Education:

- Educational trips
- Internship and placements
- Guest speakers and seminars
- Job fairs and Mock interviews
- Entrepreneurship events
- Open House and Projects  Exhibitions

## Personal Development Opportunities:

- Being part of different student societies
- Skill development through volunteer work
- Teaching Assistance and Research Associates opportunities
- Event management

## Extracurricular Activities:

- Sports (Cricket, football, badminton, table tennis, volleyball, tug of war, chess and athletics)
- Students Societies
- Pakistan Day, Defence, Quaid Day, Iqbal Day
- Religious Events (Qir'at & Na'at Competitions, Eid Milad-un-Nabi)
- Seminars, Mushaira and Bait Baazi
- Declamation contests
- Body building competition, women pink day,
- Fun fairs, cultural days,
- Welcome & farewell parties

فاش فرید اے وعظ سُنا توں
عالِم جاہل شاہ گدا کُوں
جے کوئی چاہے فقر فنا کُوں
اپنے آپ کُوں گولے

**حضرت خواجہ غلام فریدؒ**



RAHIM YAR KHAN

SHEIKH ZAYED AIRPORT RAHIMYAR KHAN
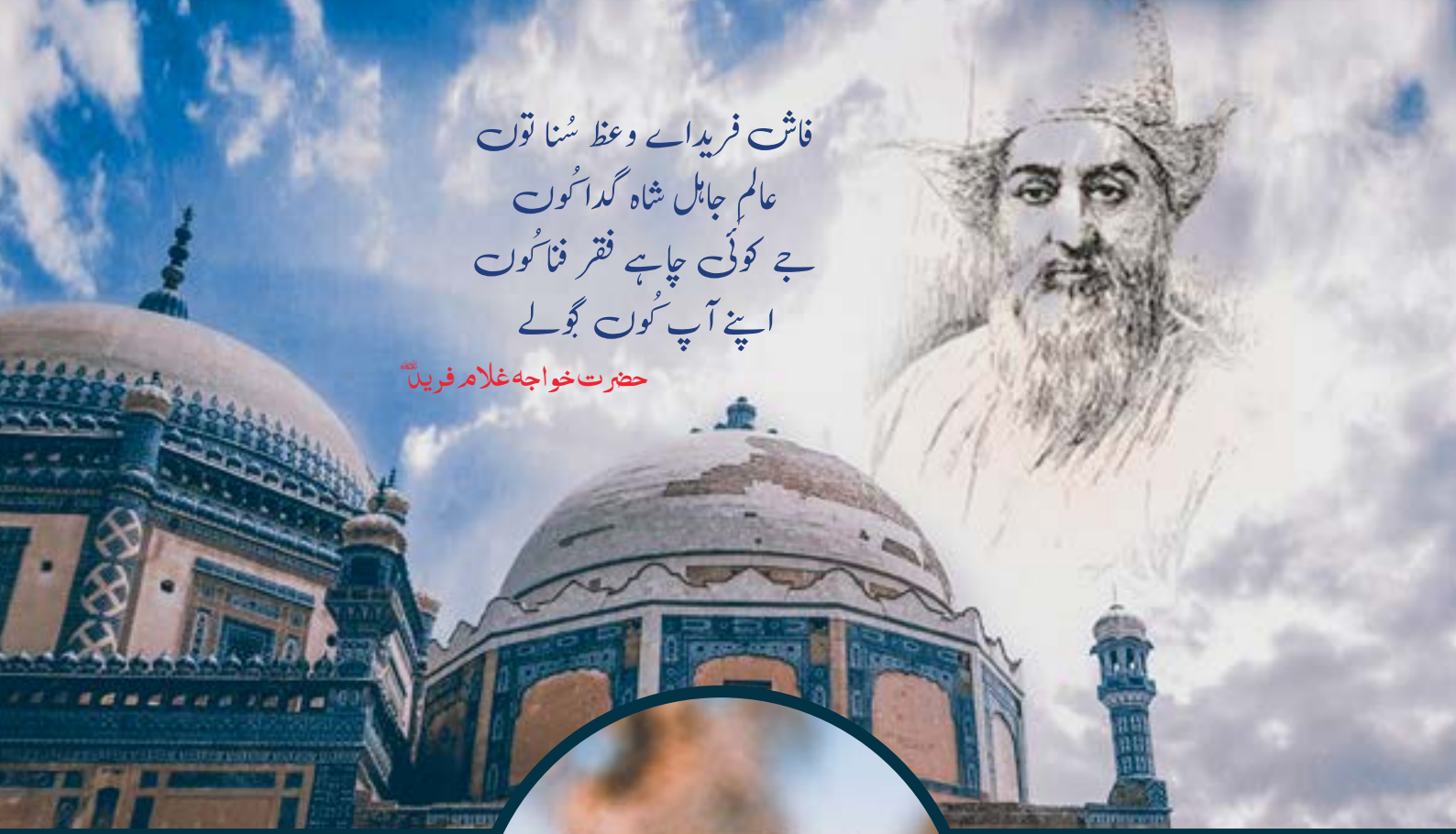
Photo Clicks By : **Usman Tariq**

# In and Around KFUEIT

## In Campus Salient Features:

- A scenic and modern campus spread over 275 acres
- Highly qualified faculty members with 100 Phds
- Latest ICT Infrastructure and automation
- Advance Research Labs with Commercial Testing services
- Active Research center of Computing, Engineering and Basic Sciences Departments
- Vigilant Security Department including Quick Response Force
- Active student societies, clubs and associations
- Career Counseling and Industrial Placement Center
- Numerous extracurricular and Sports opportunities
- Hi speed internet connectivity
- Latest technology multimedia enabled lecture theatres and classrooms
- Transportation Facilities
- Full-time access to digital library
- Hostel facilities
- Medical Center (dedicate male and female Medical Officers)
- Inhouse UFS Cafeteria

## Around Campus – Amenities and Places to Visit

- Nice places to visit in and around RYK city
- **Cholistan Desert, Bhong Mosque, Derawar Fort, Pattan Minara**

- Rahim Yar Khan: Decently developed city with all necessary education, health, hangout and shopping facilities
- Geographical hub of three provinces
- Landmark industries (Unilevers, Coca Cola, FFC, Fatima Fertilizers, Engro Fertilizer, Sugar Mills, Cotton & Oil Mills etc)
- Premium Education institutions (university, medical college, public and private schools & colleges)

## Transportation & Connectivity

- RYK has modern modes of transportation and logistics available. Travelers get multiple options including but not limited to international airport, quality bus travel (Daewoo, Faisal Mover, President Line etc), rail connectivity and many other touchpoints of goods movement. Daily flights are available for Karachi, Lahore and Islamabad besides dedicated stopover of all top class railway trains. The air linkage is very instrumental for the business, political and corporate activities for the people of this area. The strategic geographic location of city is all set to get benefit from CPEC motorway route touching city with two interchanges.

- University has its own fleet of transport commuting within RYK, Sadiqabad, Khanpur and Zahir Pir.

**DERAWAR FORT**

**CHOLISTAN DESERT**

# BHONG MOSQUE

# PATTAN MINARA

# KFUEIT
## International Linkages & Collaborations

### Introduction and Overview

In its effort to promote quality education, KFUEIT started collaborations with eminent universities of the region in 2018 both national and international. In this regard, MoUs have been signed with two universities of Malaysia and ICCBS, University of Karachi. These collaborations will open excellent academic and research opportunities for students and faculty members.



**University Utara**
**Malaysia**



**UTHM**
**Malaysia**



**ICCBS**
**University of Karachi**

# Cholistan
## Heritage Museum

**A Project to Discover the Glory of Desert and Hakra River Civilization**



Under the guidance and supervision of International Eminent Archaeologist, a museum named "Cholistan Heritage Museum" is being established at Khwaja Fareed University of Engineering & Information Technology (KFUEIT) Rahim Yar Khan. The museum carries significant importance for KFUEIT and Rahim Yar Khan, because the students of BS Heritage Studies will have hands-on opportunities to work on this project of discovering the glory of Cholistan Desert and Hakra River Civilization.

## Core Objectives

- Project and preserve history and cultural heritage
- Become a heritage research and training institution
- Establish Analytical Laboratories
- Create database of cultural heritage
- Establish an Information Wing on heritage
- Create Exploration and Excavation Wing
- Create Museum Educational Services
- Promote Tourism in Southern Punjab and beyond
- Study and Document desert and nomadic life

## Proposed Galleries of Museum:

- Prehistoric Culture and The Indus / Harappan Civilization
- Islamic and Medieval History and Arts
- Buddhist, Brahmanical and Jain History and Arts
- Sikh and the British History and Arts
- Cholistan and Rural Landscapes
- Folk Arts and Traditions
- Khwaja Ghulam Fareed Gallery of Religious and Spiritual Heritage
- (Arabic, Persian, Urdu, Sindhi, and Saraiki / Punjabi manuscripts)
- The Quaid-I-Azam Gallery of Pakistan Movement
- Friends of Museum Gallery
- Children's Gallery
- Reference Library of books, photo archives and videos

## Archaeological Field Research and Training Program

Titled as "A Multidisciplinary and Collaborative Project of Heritage Research and Capacity Building in Southern Punjab with Focus on Bahawalpur Region, 2019 – 2024", a programme of field research and training in various aspects of archaeology and heritage has already been approved by Government of Punjab. This field project is based at Khwaja Fareed University of Engineering & Information Technology (KFUEIT) with following team:

- **Engr. Prof. Dr. Athar Mahboob (TI)**      Vice Chancellor and Chief Coordinator
- **Dr. Khalil Ahmed**      Assistant Professor of Heritage Studies
- **Dr. Haroon Rasheed**      Assistant Professor/HoD, Civil Engineering

# KFUEIT
# and SCARP

## Joint Venture for Tree Plantation in Cholistan Desert

### Introduction

Salinity Control and Reclamation Project (SCARP) was launched by WAPDA with financial assistance of World Bank in 1981 due to rise of water table to 1-2 ft below ground level. Large area of District Rahim Yar Khan was turned into wasteland due to saline water. SCARP was launched to reclaim salinity affected lands and facilitate agriculture development by lowering ground water table. The project became operational under Punjab Irrigation Department in 1989 and its operational & maintenance responsibility was handed over to Pak Army. The pumped out brackish water is spread in desert ensuring max losses by evaporation. The project has so far reclaimed 1.34 Million Acre Ft (MAF) of land in District RYK.

### Background

Presence of excessive salts and sand content around SCARP Pondage makes it difficult to carry out any Plantation around SCARP lakes. Very High Temp in summers and very low (around 00c) in winters with pondage waters of over 20,000 Total Sissolved Solids also makes survivability of plants a challenge. Moreover, growth rates of any plants which survived is very very slow.

### Study

The Study was conducted by a team of Khawaja Fareed University of Engineering and Information Technology (KFUEIT) headed by Vice Chancellor Engr. Prof. Dr. Athar Mehboob (TI), Rana Mujeeb Arjumand and Head of Horticulture Department, Qazi Rizwan. Special procedure was adopted to carry out plantation to protect roots of plant from excessive salts attack.

### Pilot Project Plantation

2x Plots with capacity of 50x plants were selected around SCARP lakes at GWB and plants are placed at distance of 20 ft in shape of orchard and covered its sides with bush fence to guard against grazing animals. A special Nursery plastic tube was vertically erected and placed inside hole of 3' dia & 3' deep and filled with sweet soil. Plants were then placed in sweet soil and being given sweet water.

Khwaja Fareed University of Engineering & Information Technology (KFUEIT) has collaborated in this project by initiating a mega tree plantation. The Horticulture Department of KFUEIT has so far planted more than 200 trees in Cholistan desert. The plants planted in this pilot project include Sapodilla, Mulberry, Pilkhan, Arjun, Neem, King Ficus, Kachnar. Besides this, more than 100 plants of Mangroves have also been brought from Karachi and are planted in 3 different conditions:-
- Total Saline Water.
- Planted in Saline and mix with Sweet Water.
- Planted under shade to take care of extreme temps.

Results and outcome of growth are being maintained regularly for upscaling the project in future.

# Come and Visit Us

## Who to Contact?

### Admission related queries
## Admission Office

### Marketing, Press & PR
## Department of Marketing & Communications

### Student Affairs
## Directorate of Students Affairs

### General queries
## Office of the Registrar

## Campus Visit

We welcome the delegates and visitors to come and get briefed about KFUEIT along with a Campus Tour. In this regard, a prior approval and scheduling from the concerned departments will be required subject to availability of slots and academic activities.

Please contact our Marketing & Communication Department for any such visit plan:

Call: **+92 (68) 5882411**          OR          Email: **pro@kfueit.edu.pk**

**Infrastructure & Development**

**Section**

**2**

# Infrastructure & Development

# PLANNING & DEVELOPMENT AT KFUEIT

## Introduction

The development of Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan started in 2014 when the Government of Punjab provided 220 Acres of land for its campus on Abu Dhabi Road, Rahim Yar Khan about 5 km outside the city limit. Thereafter, through the involvement of the University of Engineering & Technology, Lahore under the dynamic leadership of its then Vice Chancellor, Lt. Gen. (Retd.) Akram Khan, a PC-1 of Rs. 3,847 Million was prepared and subsequently approved by the Planning & Development Board, Punjab for the Establishment of Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan. M/S NESPAK, the world-renowned National Engineering Services of Pakistan, were engaged as Consultants for Engineering Design and Resident Engineering Supervision for Campus Construction. Significant progress on campus development started after the first duly appointed Vice Chancellor of the University, Engr. Prof. Dr. Athar Mahboob, Tamgha-e-Imtiaz joined on 2 September 2015. Dr. Athar Mahboob formed a core team and started started fast track execution of the project by shifting classes and administration to University's own campus on Abu Dhabi Road in few renovated buildings. After due process of following PPRA regulations several contracts for construction of buildings and infrastructure development were awarded by April 2016. Subsequently, remainder of the works were awarded by December 2017.



| S. No. | Title | Submitted To |
|--------|-------|--------------|
| 1 | Establishment of KFUEIT, Rahim Yar Khan (RYK) Phase-1 (Revision) | Higher Education Department (HED), Government of the Punjab |
| 2 | Establishment of KFUEIT, RYK Phase-2 | HED, Government of the Punjab |
| 3 | Long Term Sustainability Project for KFUEIT | HED, Government of the Punjab |
| 4 | Provision of Necessary Infrastructure and Supporting Facilities for High Quality Education at KFUEIT, RYK | Higher Education Commission (HEC) |
| 5 | Establishment of Centre for Research and Innovation in Food, Energy, Environment, Material and Forensic Science | HEC |

During the initial phase of the University (2015-18), Project Department / Project Management Unit was established at KFUEIT to undertake fast track development of physical infrastructure of the University under the PC1 for Establishment of Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan. At present a number of buildings and physical infrastructure projects stand completed due to the herculean efforts made by team members of the Project Department and the Campus Construction Committee members. The tremendous growth in student numbers and variety and large number of academic programs being offered at the University, within a short span of three years, is a testament to the sincere and untiring efforts made by the team members of the Project Department and Campus Construction Committee members. With a view to further streamline the process of physical development of the University, and as already envisaged earlier, Planning & Development Department was activated at the University in October 2018.

In this section information is provided about the various development plans and PC-1's prepared by the University to realize its vision and objectives, as per its Act and to contribute to regional and national economy in a significant manner. The purpose of these plans is to create physical infrastructure of the University consisting of, but not limited to, Buildings and Classroom Facilities, Teaching and Research Laboratories, Academic Departmental Offices, Library Facilities & Campus Study Spaces, Recreation / Athletic Spaces, Food Service Areas, Plant Maintenance, Administrative Offices, Central Services, Health Service Facilities, Common Use & Student Activity Spaces, Assembly and Exhibition Facilities, Residential Spaces, etc. Furthermore, these plans also document the requirements of transport, laboratory equipment, teaching aids, furniture, books and other specialized equipment for the University campus development. Lastly, the current Master Plan on 275 Acres and a proposed one on approximately 600 Acres are provided in this section.

## Establishment of KFUEIT RYK, Phase-1

Khwaja Fareed University of Engineering & Information Technology was established in 2014 under The Punjab Assembly passed Act (Act XVI of 2014) for KFUEIT on 29th May 2014. In the beginning, classes of BS Electrical Engineering, BS Mechanical Engineering, BS Computer Science and BS Information Technology were started in Government College of Technology, Rahim Yar Khan. It moved to its own campus in January 2016.

Initial PC-1 Phase-1 of worth PKR 3,847 Million was prepared and submitted by UET Lahore in April 2014 to Higher Education Department. It mainly included purchase of land, physical infrastructure development such as construction of 6x academic buildings, hostels for students and faculty, common facilities, residences, external development, horticulture and procurement of lab equipment, books, furniture and transport facilities.



Due to some important factors such as increase in the cost of development and quantities, revised rates of bi-annuals, budget constraints, increase in material cost, a revision of Phase-1 was submitted in April 2019 against PKR. 6,108.31 Million, which is under revision phase.

## 1.1 Physical Development Plan & Progress Summary of Phase-1

Following is the current progress and future plan summary for Phase-1 which shows the status of the physical infrastructure and supporting facilities:

| S. No. | Description | Physical Progress (in % age) | Status / Plan |
|---|---|---|---|
| 1 | Land | 100 | Completed |
| 2 | Academic Buildings | | |
| | a. Construction Work of Department of Electrical Engineering | 100 | Completed |
| | b. Construction Work of Department of Mechanical Engineering | 100 | Completed |
| | c. Construction Work of Department of Information Technology & Computer Science | 85 | *Dec. 2019 |
| | d. Construction Work of Department of Computer Engineering & ICT | 100 | *Dec. 2019 |
| | e. Construction Work of Department of Civil Engineering | 100 | Completed |
| | f. Construction Work of Department of Basic Sciences, Humanities and Business Management | 85 | *Dec. 2019 |
| 3 | Hostels | | |
| | a. Hostel for 150 students | 25 | June 2020 |
| | b. Faculty Hostel | 75 | *Dec. 2019 |
| 4 | Building of Common Facilities | | |
| | a. Construction Work of Library | 25 | *June 2020 |
| | b. Construction Work of Admin Block + Two Rooms one each for Tube well and Electric substation. | 25 | *June 2020 |
| 5 | Residential Buildings | 75 | *Dec. 2019 |
| 6 | External Development etc. | | |
| | a. Infrastructure Development (Main Boulevard Road) | 100 | Completed |
| | b. Infrastructure Development (Water Supply, Sewerage, Roads) | 80 | *Dec. 2019 |
| | c. Boundary Wall | 100 | Completed |
| | d. Four Gates and Pillars etc. | 100 | Completed |
| | e. Overhead reservoir 75,000 Gallon @ 150M/Gallon | 80 | *Dec. 2019 |
| | f. Tubewell of 01 Cusec | 100 | Completed |
| | g. WAPDA Connections & Security Charges | 45 | *Dec. 2019 |
| 7 | Horticulture / Tree plantation | 100 | Completed |
| 8 | Lab Equipment | 100 | Completed |
| 9 | Books | 100 | Completed |
| 10 | Furniture | 100 | Completed |
| 11 | Transport | 100 | Completed |
| 12 | Contingencies | 100 | Completed |

* All dates provided are relative to funds availability, if funds will be released in June 2019

*"In an effective classroom, students should not only know what they are doing, they should also know why and how "*

*-Harry Wong*

## 1.2    Buildings, Covered Area and Cost Summary as per Revised PC-1 Phase-1

The details of physical infrastructure along with covered area and cost are as follow:

| S. No. | Description | Total Covered Area (in sq. ft.) | Revised Cost (in PKR Million) |
|---|---|---|---|
| 1. | Land | - | 266.78 |
| 2. | Academic Buildings | | 1,442.196 |
| | a. Department of Electrical Engineering | 66,648 | 243.871 |
| | b. Department of Mechanical Engineering | 72,584 | 248.202 |
| | c. Department of Information Technology & Computer Science | 59,944 | 237.056 |
| | d. Department of Computer Engineering & ICT | 66,342 | 232.160 |
| | e. Department of Civil Engineering | 73,332 | 256.824 |
| | f. Department of Basic Sciences, Humanities & Business Management | 66,264 | 224.083 |
| 3. | Hostels | | 316.476 |
| | a. Hostel for 150 Students | 57,186 | 199.807 |
| | b. Faculty Hostel (07 Sets) | 35,840 | 116.669 |
| 4. | Building of Common Facilities | | 410.979 |
| | a. Main Library | 79,382 | 235.789 |
| | b. Construction Work of Admin Block + Two Rooms | 43,674 | 175.190 |
| 5. | Residential Buildings | | 223.292 |
| 6. | External Development etc. | | 647.58 |
| | a. Infrastructure Development | | 441.96 |
| | b. Boundary Wall | | 79.66 |
| | c. Four Gates and Pillars etc | | 1.687 |
| | d. Overhead Reservoir 50,000 Gallon @ 150/M Gallon | | 20.42 |
| | e. Tubewell of 01 Cusec | | 4.34 |
| | f. Sui Gas Connection & Security Charges | | 42.521 |
| | g. WAPDA Connections & Security Charges | | 56.989 |
| 7. | Mega Project Allowance @ 4.167 % | | 85.273 |
| 8. | Horticulture / Tree Plantation | | 70.74 |
| 9. | Consultancy Services @ 5% | | 147.78 |
| 10. | Lab Equipment | | 1,040.85 |
| 11. | Books | | 30.21 |
| 12. | Furniture | | 87.32 |
| 13. | Transport | | 92.65 |
| 14. | Contingencies | | 308.27 |
| 15. | Recurring Expenditure for FY 2014 – 15 to 2018 – 19 | | 938.00 |
| **Total** | | | **6,108.310** |

*"A man who wants to lead orchestra must turn his back on the crowd"*

*-Max Lucado*

## 2.    Establishment of KFUEIT RYK, Phase-2

As KFUEIT is a multi-billion project, therefore it is divided into phases. The new infrastructure requirements that are included in Phase-2 were either not included, or left over in Phase-1 and not sufficient with the increase in number of students.

Phase-2 was submitted against PKR 2,000 Million in May 2019. Funds amounting Rs. 370 Million has been allocated in the ADP 2019-20, by the Government of the Punjab, against estimated cost of Rs. 2,000 Million for Phase-2 to provide additional facilities. Whereas remaining amount PKR 1,630 Million has been projected in 2020-21 and 2021-22, respectively.

Likewise Phase-1, Phase-2 will mainly include physical infrastructure development. A summary of Phase-2 is as follow:

| S. No. | Title | Description | |
|--------|-------|-------------|---|
| 1 | Hostels | | 4x Hostel for Student |
| 2 | Supporting  Buildings | a) | Mosque |
| | | b) | Transport Yard |
| | | c) | Medical Center |
| 3 | New Boundary Wall | | 5,800Rft |
| 4 | Infrastructural Works | a) | High Voltage Distribution Network within Campus |
| | | b) | Water Filtration Plant |
| | | c) | Horticulture |
| | | d) | Waste Disposal Station |
| 5 | Revenue Items | a) | Information Technology Infrastructure |
| | | b) | Transport |
| | | c) | Library Books |
| | | d) | Furniture |

## 3.    Long Term Sustainability Project for KFUEIT, RYK

Long Term Sustainability (LTS) for KFUEIT has following two parts

| S. No. | Title | Total Cost (in PKR Million) |
|--------|-------|-----------------------------|
| 1 | Faculty Development Programme | 6,090 |
| 2 | Endowment Fund | 2,000 |
| **Total  Cost of the Project** | | **8,090** |

### i.    Faculty Development Programme (FDP):

FDP will produce 250 - 350 PhD qualified individuals in the next 5 years with the use of 50 international scholars in order to fulfil the high quality faculty requirements of KFUEIT and other educational, research and development organisations in the Punjab as well as throughout Pakistan.

### ii.    Endowment Fund:

Public sector institutions like KFUEIT requires financial assistance to sustain its operations. Most of the public sector universities are highly dependent on the annual grant provided by the Higher Education Commission of Pakistan. Keeping in view, KFUEIT prepared a well thought out Business Plan under Endowment Fund seeded by a grant of PKR 2,000 Million from the Government of Punjab.

This project was submitted in March 2019. LTS funding if implemented faithfully, will ensure the long term sustainability of KFUEIT and will enhance entrepreneurship opportunities, more industrial collaborations and contribution in filing patents etc.

## 4. Provision of Necessary Infrastructure and Supporting Facilities for High Quality Education at KFUEIT, Rahim Yar Khan

The PC-1 for Provision of Necessary Infrastructure was submitted to HEC in August 2018. The objective of the proposed PC-1 is to strengthen KFUEIT, RYK by providing additional required physical infrastructure and facilities essential for higher education which were left out during Phase-1 due to limited funds.

These requirements include infrastructure consisting of high-voltage electrification work, 2.5 MW On-grid Solar Power System, IT networking within campus and 200 computers for labs.

Laboratory equipment for new disciplines such as Chemical Engineering, Agricultural Engineering and Food Science & Technology are required to provide the essential missing facilities and to accommodate the foreseen growth in students, faculty and other staff numbers.

| S. No. | Description | Total Cost (in PKR Million) |
|---|---|---|
| 1 | Infrastructure Works<br>High-Voltage Electrification | 1,209.78 |
| 2 | 2.5 MW On-grid Photo-Voltaic Solar Power Solution<br>Miscellaneous Items | |

## 5. Establishment of Center for Research & Innovation in Food, Energy, Environment, Material and Forensic Science

Research and Innovation are among the main drivers of higher education development that leads to economic growth. Research and Innovation Centre is the appetite and desire of the students to innovate and to do something entirely new.

PC-1 for the Establishment of Centre for Research and Innovation was submitted to HEC in March 2019 against PKR 2,323 Million for their necessary actions. Summary for the proposed PC-1 is as follow:

| S. No. | Title | Total Cost (in PKR Million) |
|---|---|---|
| 1 | Construction Work of Innovation Centre | |
| 2 | 2.5 MW Solar Power Plant | |
| 3 | Installation of Anaerobic Digester | |
| 4 | Revenue Items | |
| | (a) Library Books | |
| | (b) Lab Equipments | 2,323.09 |
| | Bio-Chemistry Labs | |
| | Bio-Technology Labs | |
| | Food Science & Technology Lab | |
| | Forensic Labs | |

## Land and Master Plan Layout

KFUEIT is located in South-East of Rahim Yar Khan city, approximately 15 km away from city centre whereas approx. 23 km from main National Highway N5.

At present, KFUEIT has 274 acres of land but it aims to acquire adjacent area of 311 acres of additional land in near future. KFUEIT plan to acquire additional land is to minimise security risk, as current land area is irregular in shape which increases security and surveillance cost. Moreover, the additional land adjacent to KFUEIT campus is an agricultural land and value of the land is affordable which will certainly increase with the passage of time. Additional land will be utilised for further expansion of academic buildings, hostels for faculty and students, residences along with admin block, student center, grand mosque, central library, auditorium, botanical garden, solar power plant, grid station, agricultural research farm, technology park, waste treatment facility (anaerobic digester), dairy research farm, museum for heritage, indoor sports complex, gym and other developmental projects.

## LEGEND:-
### (PROPOSED BY NESPAK)

1. VC's OFFICE / ADMIN BLOCK
2. STUDENT CENTER
3. DEPARTMENT OF CIVIL ENGINEERING
4. DEPARTMENT OF INFORMATION TECHNOLOGY & COMPUTER SCIENCES
5. DEPARTMENT OF COMPUTER ENGINEERING & ICT
6. DEPARTMENT OF MECHANICAL ENGINEERING
7. DEPARTMENT OF ELECTRICAL ENGINEERING
8. DEPARTMENT OF BASIC SCIENCES & HUMANITIES
9. GRAND MASJID
10. CENTRAL LIBRARY
11. AUDITORIUM
12. CHEMICAL ENGINEERING DEPT. (FUTURE EXTENSION)
13. AGRICULTURE ENGINEERING DEPT. (FUTURE EXTENSION)
14. GIRLS HOSTEL
15. BOYS HOSTEL
18. SEWERAGE DISPOSAL STATION
19. OVERHEAD WATER TANK & PUMP ROOM
20. BOTANICAL GARDEN
21. WASTE DISPOSAL FACILITY

## LEGEND: (COLOR VARIANTS)

1. PHASE-II PROPOSED
2. FUTURE EXTENSIONS
3. NEWLY CONSTRUCTED
4. EXISTING STRUCTURE

## SPORTS COMPLEX

A. CRICKET STADIUM
B. FOOTBALL GROUND
C. HOCKEY GROUND
D. RACE TRACK
E. TENNIS COURTS
F. SQUASH COURT
G. VOLLEY BALL
H. SWIMMING POOLS
I. BASKET BALL
J. MARKET
K. INDOOR GAMES
L. GYMNASIUM
M. PARKING
N. GRID STATION

## LEGEND:
### (OLD AGRICULTURE COMPLEX INCLUDING LATER CONSTRUCTED BUILDINGS BY KFUEIT)

A. TRANSPORT DEPARTMENT/SHED
B. ADMIN BLOCK
C. OFFICE OF THE VICE CHANCELLOR
D. MESS BUILDING
E. THREE CLASSROOM BLOCK
F. TWO CLASSROOM BLOCK
G. PANEL ROOM
H. R.O PLANT
I. GREEN HOUSE
J. PROJECT DEPARTMENT
K. MASJID
L. CONTRACTOR'S BLOCK
M. SECURITY BACK OFFICE
N. SECURITY GUARD ROOM (VILLAGE SIDE)
O. LABORATORIES BLOCK
P. MEDICAL CENTER
Q. PROCUREMENT / ADMISSION OFFICE
R. SOLAR POWERED WATER TREATMENT PLANT

NOTES:-
1. ALL DIMENSIONS ARE IN FEET, OTHERWISE SPECIFIED.
2. LOCATION OF BUILDINGS ARE APPROXIMATE, FOR PRESENTATION ONLY.



| TITLE: MASTER PLAN 274 ACRES EXISTING, PHASE-II PROPOSED AND FUTURE EXTENSION DETAILS | | | KHWAJA FAREED UNIVERSITY OF ENGINEERING & INFORMATION TECHNOLOGY RAHIM YAR KHAN |
|---|---|---|---|
| DRAWN BY | SARFRAZ ALI MUGHAL | CHECKED BY | PROJECT DIRECTOR |
| DATE | 10-06-2019 | APPROVED BY | WORTHY VICE CHANCELLOR |
| SCALE | NTS | REVISION | — |

DRAWING NO. — SHEET # 01 of 01 SIZE A1

**LEGEND:**

1. VC's OFFICE / ADMIN BLOCK
2. STUDENT CENTER
3. DEPARTMENT OF CIVIL ENGINEERING
4. DEPARTMENT OF INFORMATION TECHNOLOGY & COMPUTER SCIENCE
5. DEPARTMENT OF COMPUTER ENGINEERING & ICT
6. DEPARTMENT OF MECHANICAL ENGINEERING
7. DEPARTMENT OF ELECTRICAL ENGINEERING
8. DEPARTMENT OF BASIC SCIENCES & HUMANITIES
9. GRAND MASJID
10. CENTRAL LIBRARY
11. AUDITORIUM
12. ACADEMIC BLOCKS (FUTURE EXTENSION 09 Nos.)
13. GIRLS HOSTELS 10 Nos. (APPROX CAPACITY 4000 STUDENTS)
14. BOYS HOSTELS 24 Nos. (APPROX CAPACITY 9600 STUDENTS)
15. OVERHEAD WATER TANK (CAPACITY 75,000 GAL) & PUMP ROOM
16. SEWERAGE DISPOSAL STATION
17. UNDERGROUND WATER TANK
18. BOTANICAL GARDEN
19. SOLAR POWER PARK
20. GRID STATION
21. AGRICULTURE RESEARCH FARM
22. WASTE TREATMENT PLANT/BIO GAS PLANT
23. DAIRY RESEARCH FARM
24. MUSEUM OF HERITAGE, SCIENCE AND TECHNOLOGY
25. TRANSPORT DEPARTMENT
26. TECHNOLOGY PARK
27. GUEST CAR PARKING (FUTURE)
28. WATER FILTRATION PLANT+O.H WATER TANK (CAPACITY 100,000 GAL)
29. INDOOR GAMES BUILDING FOR GIRLS
30. SPORTS COMPLEX FOR GIRLS (BASKET BALL, TENNIS COURTS, VOLLEY BALL, SWIMMING POOL)

**SPORTS COMPLEX BOYS:**

A. CRICKET STADIUM
B. FOOTBALL GROUND
C. HOCKEY GROUND
D. ATHLETICS TRACK
E. TENNIS COURTS
F. SQUASH COURTS
G. VOLLEY BALL
H. SWIMMING POOLS
I. BASKET BALL
J. MARKET
K. INDOOR GAMES
L. GYMNASIUM
M. PARKING
N. MASJID
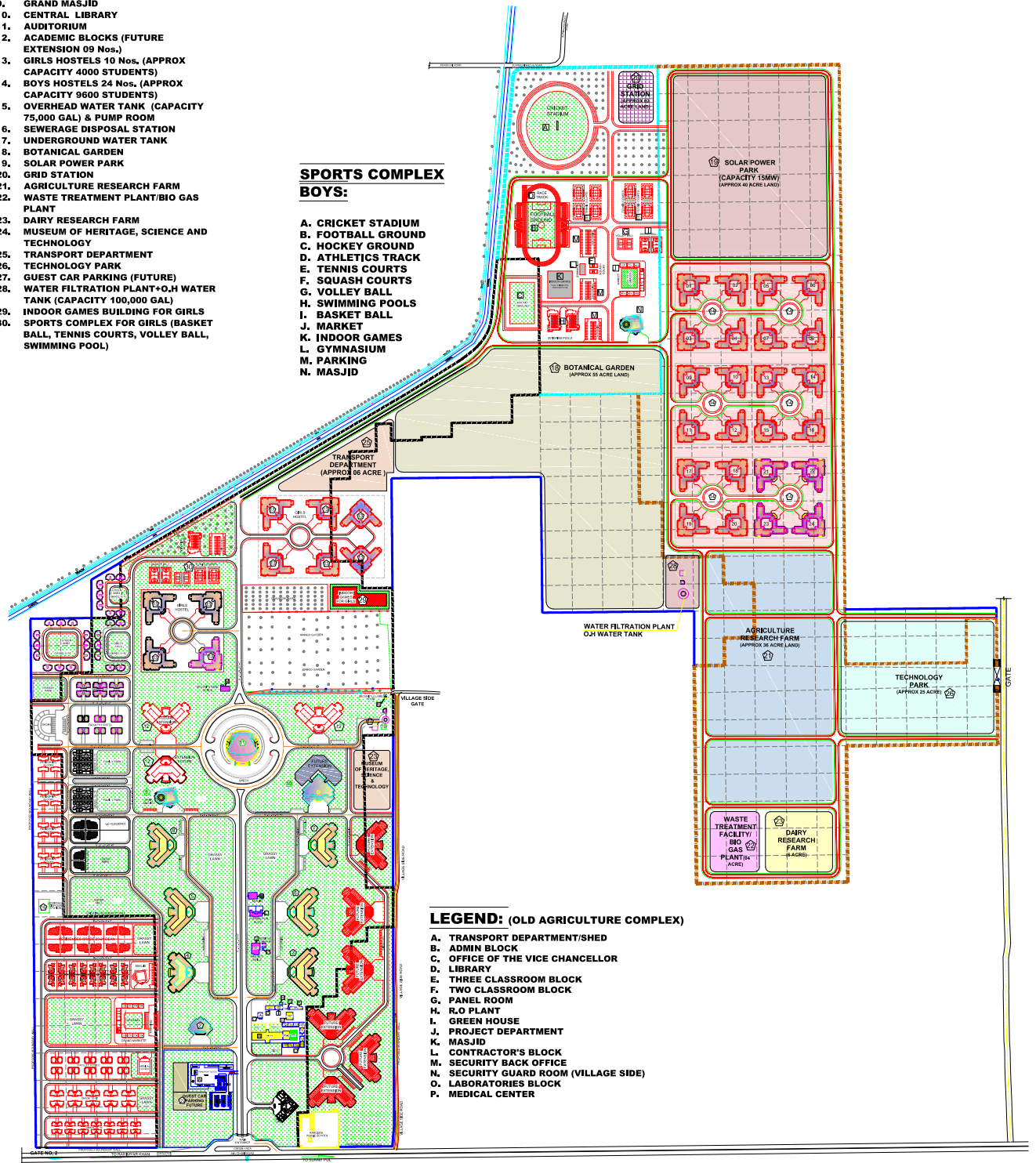
**LEGEND:** (OLD AGRICULTURE COMPLEX)

A. TRANSPORT DEPARTMENT/SHED
B. ADMIN BLOCK
C. OFFICE OF THE VICE CHANCELLOR
D. LIBRARY
E. THREE CLASSROOM BLOCK
F. TWO CLASSROOM BLOCK
G. PANEL ROOM
H. R.O PLANT
I. GREEN HOUSE
J. PROJECT DEPARTMENT
K. MASJID
L. CONTRACTOR'S BLOCK
M. SECURITY BACK OFFICE
N. SECURITY GUARD ROOM (VILLAGE SIDE)
O. LABORATORIES BLOCK
P. MEDICAL CENTER

SOLAR POWER PARK (CAPACITY 15MW) (APPROX 40 ACRE LAND)

GRID STATION (APPROX 02 ACRE LAND)

BOTANICAL GARDEN (APPROX 55 ACRE LAND)

TRANSPORT DEPARTMENT (APPROX 06 ACRE)

WATER FILTRATION PLANT O.H WATER TANK

AGRICULTURE RESEARCH FARM (APPROX 36 ACRE LAND)

TECHNOLOGY PARK (APPROX 25 ACRE)

WASTE TREATMENT FACILITY/ BIO GAS PLANT (04 ACRE)

DAIRY RESEARCH FARM (4 ACRE)

VILLAGE SIDE GATE

GATE

NOTES:-
1. ALL DIMENSIONS ARE IN FEET, OTHERWISE SPECIFIED.
2. LOCATION OF BUILDINGS ARE APPROXIMATE. FOR PRESENTATION ONLY.

| TITLE: | **MASTER PLAN 586 ACRES** EXISTING AND PROPOSED | | KHWAJA FAREED UNIVERSITY OF ENGINEERING & INFORMATION TECHNOLOGY RAHIM YAR KHAN | |
|---|---|---|---|---|
| DRAWN BY | SARFRAZ ALI MUGHAL | CHECKED BY | PROJECT DIRECTOR | |
| DATE | 10-06-2019 | APPROVED BY | WORTHY VICE CHANCELLOR | DRAWING NO. M-- |
| SCALE | NTS | REVISION | -- | SHEET # 01 of 01 | SIZE A1 |

# Information & Communication Technology (ICT)

## Introduction

From its very inception, Khwaja Fareed University of Engineering & Information Technology (KFUEIT) is Convinced that, if it wants to achieve its lofty objectives, it would require very strong Information & Communication Technology (ICT) infrastructure. Provision of state-of-the-art ICT facilities to its faculty, students & administrative staff are the cornerstone for development of Khwaja Fareed University of Engineering & Information Technology. With this in view, we at KFUEIT have perfected an ICT infrastructure design, through which we have implemented all sorts of information systems with ZERO cost for the software component, by leveraging open source technologies. For the hardware and networking components we have implemented solutions with long life and low cost. Additionally, with a minimum number of supporting staff, the deployed IT infrastructure gives KFUEIT, a leading edge over all other universities in the region.

The Campus incorporates cutting-edge ICT technologies to provide triple play services (data, voice and video) to the whole campus. This includes University Data Center, Campus-wide Fiber Optical Network and Wi-Fi mesh for high-speed data connectivity, video conferencing, IP-telephony, IP Fax facility, Smart class rooms and various other interactive features for entire campus. Solutions that we have made operational at KFUEIT for the academia include the technologies of learning management, university management, project management, communication and collaboration, virtual private network, thin client computing and multimedia services. At KFUEIT, our focus is to facilitate the adoption of open source software and technologies, in order to strengthen the technological base of the country and, at the same time, use the less money, thus saved for development of physical infrastructure.

## KFUEIT Data Center

University mini datacenter is developed in accordance to common standards including fire detection, alarm & suppression system, redundant AC units, precision UPS & power system, CCTV and access control system for remote monitoring. KFUEIT data center is acting as hub for dissemination of LAN, Internet, IP-telephony, IP-Fax and Web Services, Server Farm which includes LMS, MIS, ERP, Firewalls, Wireless LAN Controller, Directory servers, Proxy, Email, Web, Network Management System, Backup and many more). More hardware has been added in data center in 2019 including additional racks for housing additional servers and large LCD for network monitoring.

*"The growth and development of people is the highest calling of leadership"*

*-Harvey Firestone*

# KFUEIT Private Cloud

ICT infrastructure has been developed, based on the cloud computing paradigm. Keeping in view the security of information and requirements of a teaching and research university, both private as well as public clouds are leveraged. The private cloud consists of KFUEIT's own data center and a well designed high performance campus network.
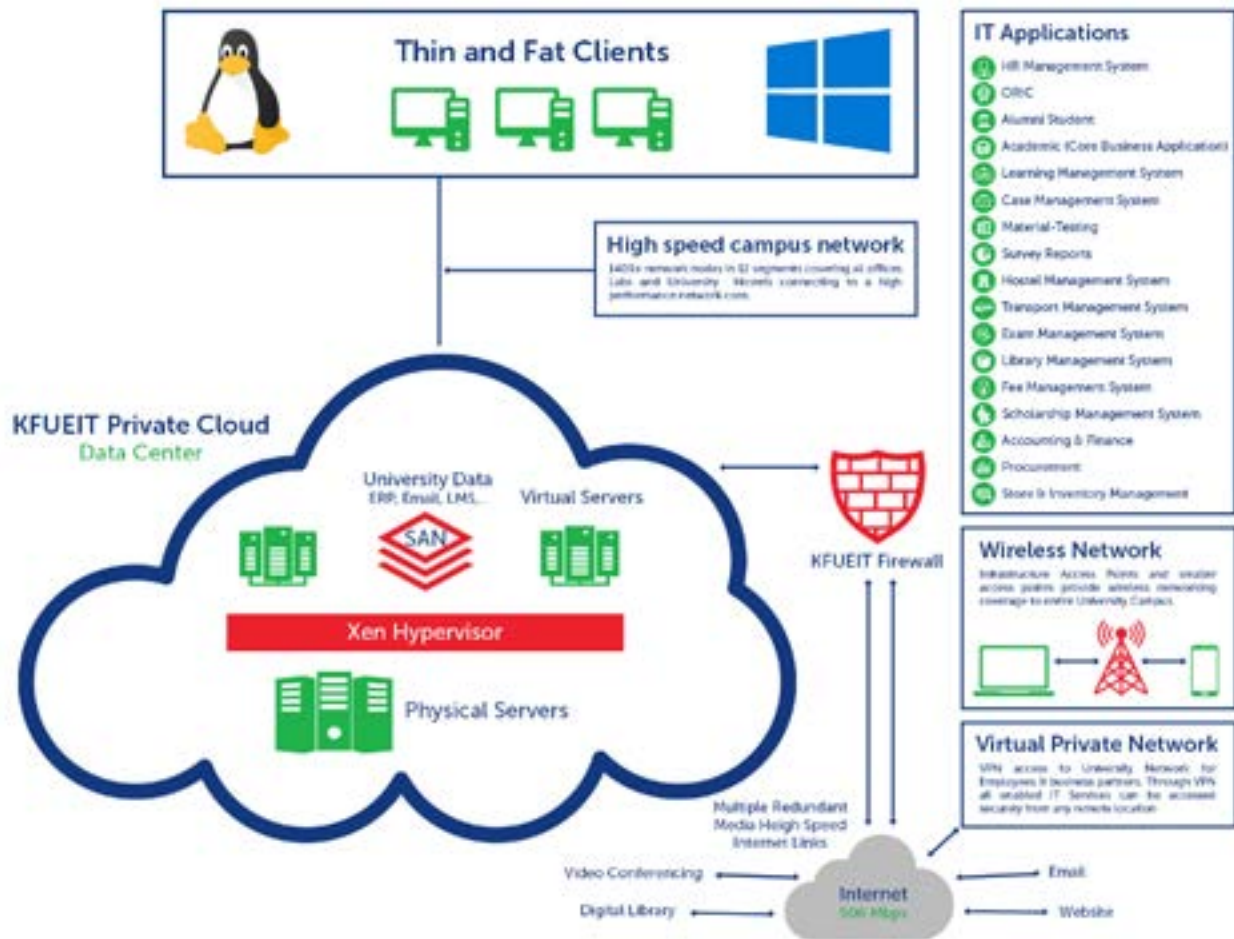


*"What you do has far greater impact than what you say"*

*-Stephen Covey*

# KFUEIT Campus Network Infrastructure

Campus Network consist of collapsed core architecture which includes security, distribution and access layers. The network backbone comprises of primary & backup fiber optic links to network & communication rooms of each academic building. This is a hub-and-spoke architecture using routing and switching. High end switching fabric core and distribution switches, firewalls with high transmission rate ranging from 10 to 40 Gbps are commissioned. Gigabit Access Network has also been commissioned to ensure high-speed computing at user level. Access switches of high switching capacity are installed to handle data and multimedia traffic, efficiently. Redundant fiber optic links from each access switch to primary & secondary distribution switches are available for reliable layer-3 connectivity to each LAN user. It is important to mention here that device and link redundancy has been maintained at every level to ensure un-interrupted ICT services to users.. Switch to user connectivity is provided through top-of-the-line Gigabit Unshielded Twisted Pair (UTP) copper cabling. In order to monitor and manage the whole network, proprietary Network Management Systems (NMS) are being used. Since KFUEIT hostels are currently located at city area , in order to facilitate the intranet and internet services at hostel point to point wireless links are commissioned at all boys and girls hostel.
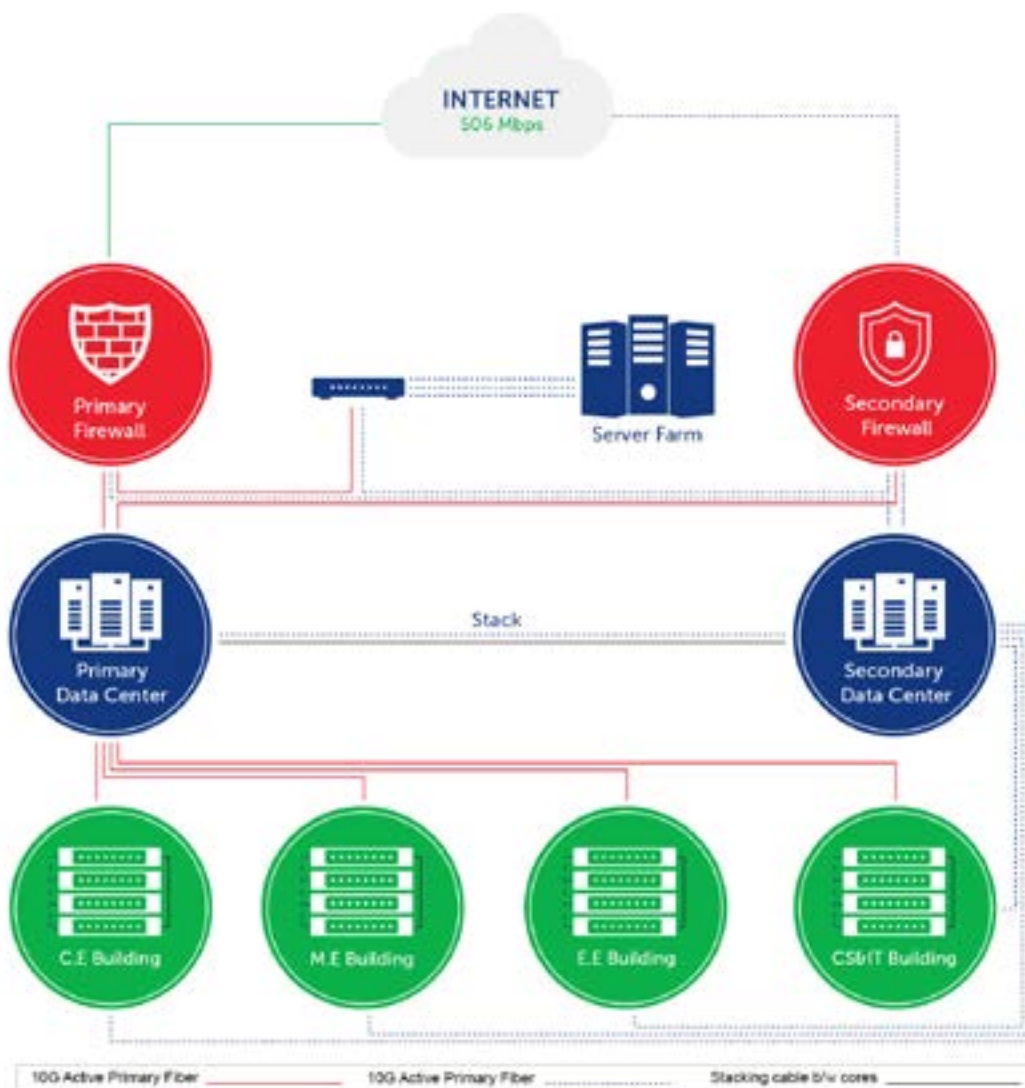
## KFUEIT Smart Campus Technology

Taking advantage of technological advancements, University has implemented Wi-Fi mesh network throughout the campus. Wireless indoor and outdoor Access Points (APs) have been installed to give internet/network access to students, faculty and staff. Internet access has also been provided at all hostels through this network. It employs latest wireless protocol 802.11n with each AP providing a bandwidth up to 300 Mbps to the users. A total number of 70 APs are installed all around the campus and hostels.

## High Speed Internet

High speed internet is available, round the clock, at campus and hostels for all the students, faculty and staff of University. Since KFUEIT ICT department was established in 2016 and it was their key preference to ensure the provision of high speed internet and IT facilities to the university users. Year wise students and internet bandwidth statistics are shown below.
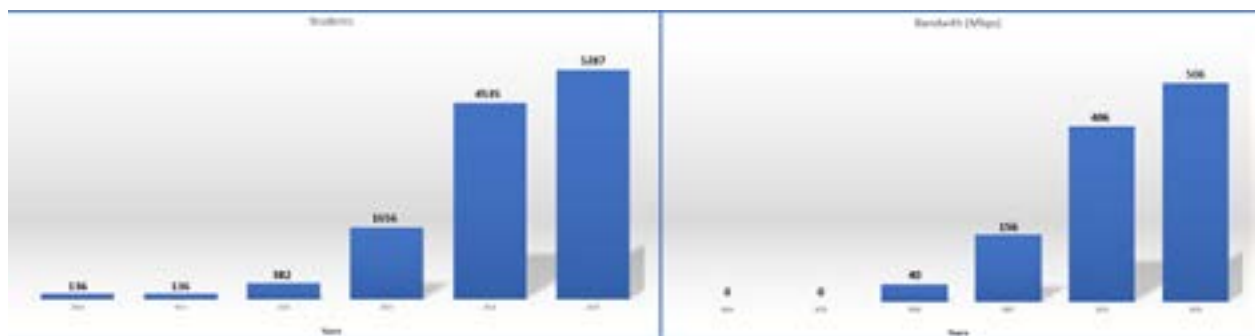


## IP Telephony & Fax

An integrated, modular, state-of-the-art communication server that supports advanced IP business-class Telephony System are operational at KFUEIT. Voice over IP (VoIP) system is based on Asterisk PABX Enterprise solution providing voice and data over a single network. The system is highly reliable having features such as voice mail and supports IP and PC soft phones, automatic call distribution, call-routing software, call-forwarding, automatic transfer of incoming calls, automated attendant, voice activated management of incoming calls, voice guides for external callers etc. It gives a unified view of the network as well as the necessary functions and features for centralized management, bulk operations, simplicity, and scalability. A total of 200 users were provided telephone facility till 2018. KFUEIT have also implemented cutting edge technology by providing IP Fax facility at the campus. Web Explorer can be used for composing and viewing fax messages which travel on network and are sent and received through IP Fax Server installed at data center.

## Class Room Technology

Our classrooms, seminar halls and conference rooms are equipped with most modern technology for effective working. These devices include electronic rostrums and multimedia projectors. The electronic rostrums provide lecturer/presenter one touch control over IT/multimedia facilities (multi-media projector, projection screen, computer, LAN/Internet, audio equipment etc) available in classrooms, lecture halls, seminar halls, conference rooms etc.

*"Never give an order that can't be obeyed"*

*-General Douglas MacArthur*

# KFUEIT Management System

KFUEIT management system enables students to access all of their applications at a single point of location. Following IT services are accessible at MY KFUEIT through single sign on

- **Home**
  - News Feed
  - Plan of Study
  - Current Enrolments
  - Transcript
  - Roll Number slip
  - Surveys
  - Semester fee voucher
  - ID Card fee voucher
- **HR Management System**
- **LMS (Learning Management System)**
- **Exam Management System**
- **Scholarship Management System**
- **Timetable Management System**

- **Library Management Systems**
- **Transport Management Systems**
- **Hostel Management System**
- **Store and Inventory Management**
- **Accounting & Finance System**
- **Feedback Survey Reports**
- **Case Management System**
- **Webmail**
- **ORIC**
- **Software Downloads**
- **Manuals**
- **Open Courseware**
- **Contact Directory**
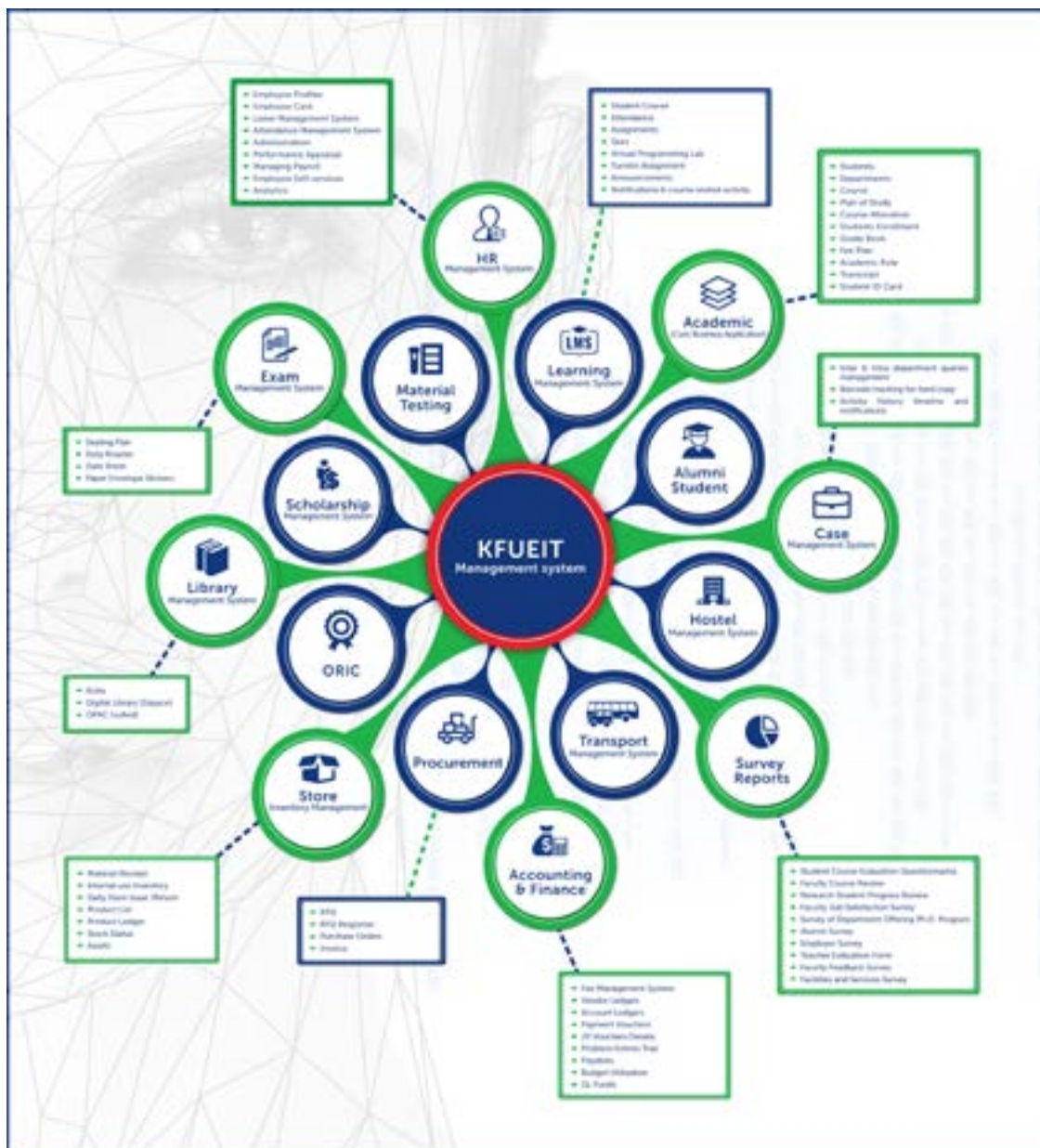
## Learning Management System (LMS)

LMS provides the facility for students and teachers to manage their academic records of each semester with following components

- Student course
- Attendance
- Assignments
- Quiz
- Virtual Programming Lab
- Turnitin Assignment
- Announcements
- Notifications and course related activity or resource

## KFUEIT E-Portal

Online application software has many benefits over traditional paper-based application system. In traditional paper-based process thousands of applicants need to queue up for collecting their application forms and then need to come again for submitting their application forms to the relevant departments. This was a tedious process for both applicants and the departments of the University. ICT Department has developed in-house an application system at the University i.e. KFUEIT E-Portal which has successfully been implemented and practiced at the University since 2016. KFUEIT E-Portal facilitates the new applicants to use online system for their all kind of online application procedures like if applicant wants to apply for Admission, Tests, Short courses and Careers he/she can simply do it from a single web platform. He/She just needs to sign up to E-Portal and will ready to go for applying according to his/her requirement. Once the user gets sign-up at E-Portal, the same information will be entertained throughout the whole process of applicant's application process. This also help the departmnts
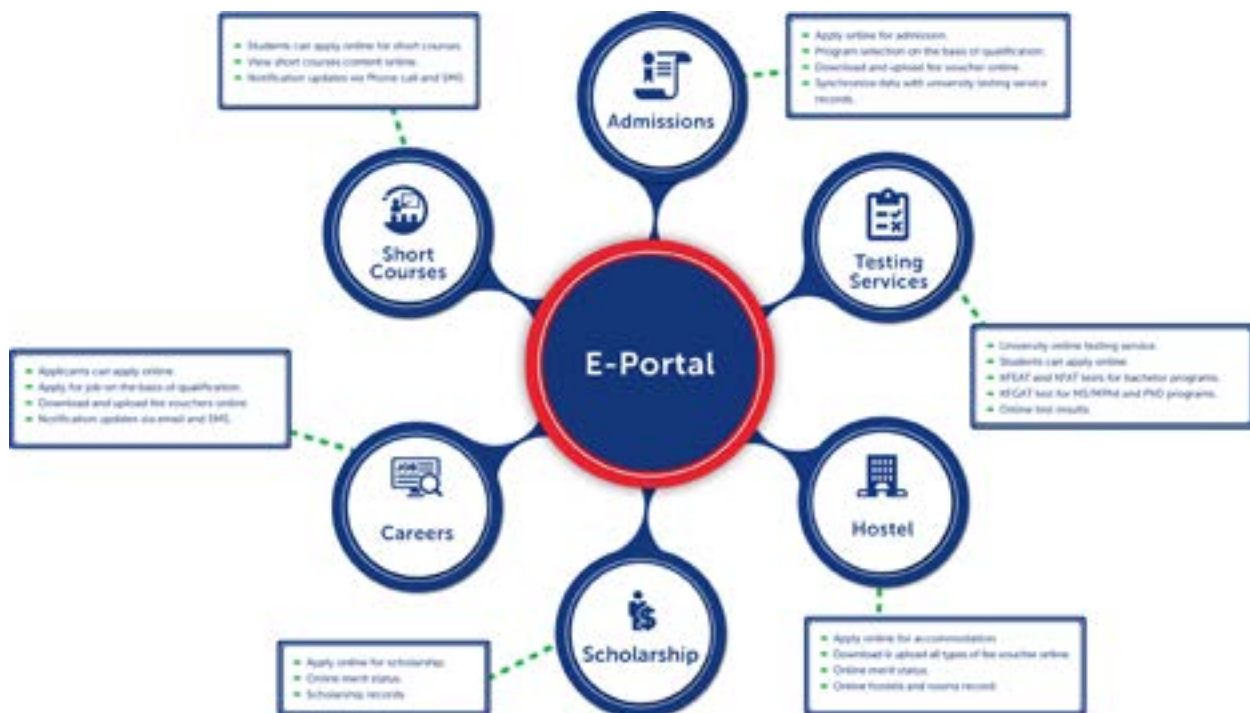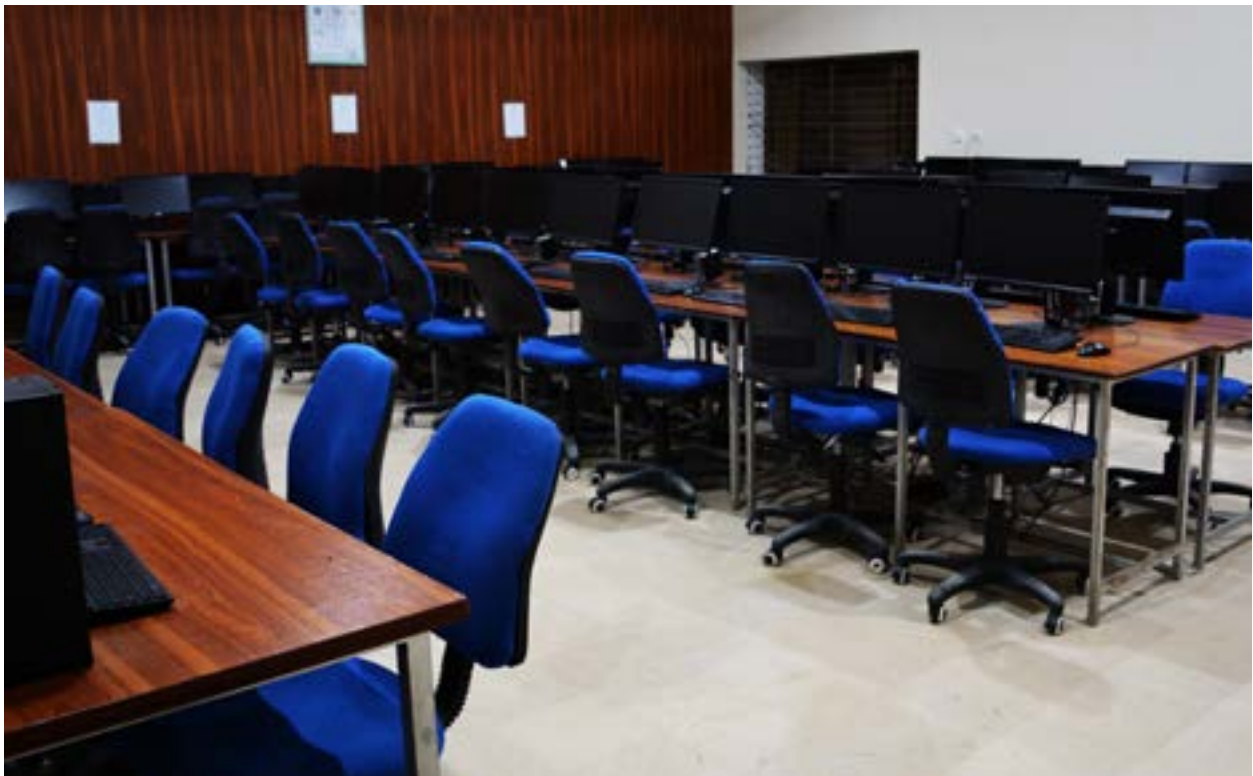
# KFUEIT Time Table Management System

At the start of every semester, one of the foremost responsibilities of university time table department is to create a timetable for the teachers and students. As simple as this task sounds, in actuality, it can be a complex challenge to manage the availibility of teachers, infrastructure and facilities according to the needs of the studetnts. It is obvious that manual time table management can be a frustrating and highly time-consuming task at University scale like KFUEIT where we have to manage the thousands of students, hundreds of teachers with the best utilization of limited resources like classrooms and labs. KFUEIT time table management system is state of the art application and it generates class wise, teacher wise and room wise
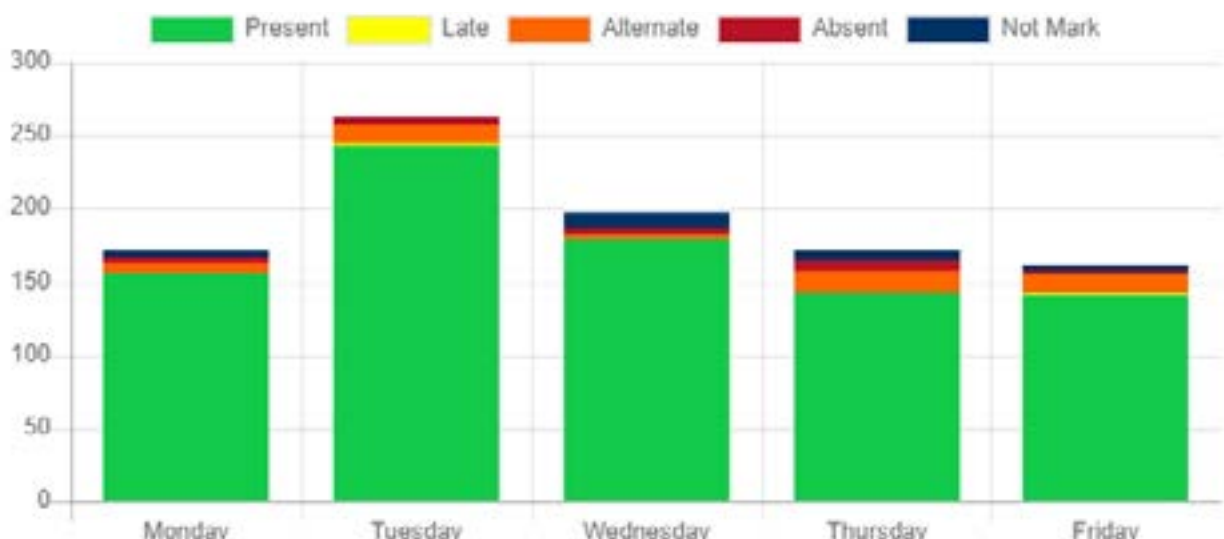


Lectures Attendance By Day (Last 5 Days)

# KFUEIT Visitor Management System

In many universities, visitors are still registered using a handwritten paper log. While this method is perceived as easy but slow, it provides virtually no security and leaves visitor information available for anyone to see. KFUEIT ICT department developed an automated visitor management system which is integrated with University other core applications like CBA and MIS. Automated visitor management systems lend a more professional appearance to check in systems, enhance security and meet compliance mandates for the collection and auditing of visitor data.

# KFUEIT Feedback Survey System

The feedback students provide about teaching on their end-of-semester course evaluations can be valuable in helping you improve and refine your teaching.  Soliciting mid-semester student feedback has the additional benefit of allowing you to hear your students' concerns while there is still time in the semester to make appropriate changes. At KFUEIT we have implemented online student feedback survey system which is conducted twice in a semester before midterm and final term exams.

KFUEIT Survey system facilitates role-based access to its users where students feedback surveys about the teachers are kept confidential during the semester and are disclosed only with Quality Enhancement Cell management. Feedback survey system is very flexible and it allows role base users access to the system. KFUEIT Quality Enhancement Cell department initiate and conducts the online surveys from the student and employees. As shown below the

# A Glimpse of IT Facilities Available at KFUEIT

KFUEIT ICT facilities are being continuously upgraded to keep them in sync with fast paced advance in computing technologies. The KFUEIT believes that a modern IT environment for students, faculty and administration is absolutely essential for providing quality education. To achieve this objective, the recently commissioned state-of-the-art ICT infrastructure will allow easy accessibility to students, faculty, administration, as well as parents and alumni, enabling them to interact with one another. The KFUEIT ICT department provides computing facilities to staff, faculty, and students. It also develops plans with objectives and actions that help achieve a highly competitive and technology-intensive environment for the Institute. Few of the major IT services provisioned at the campus are as follows:

- University Mini data center.
- Campus Networking and IT Infrastructure with 1400+ wired nodes.
- High-speed inter campus connectivity over fiber optics cable with transmission rate up to 10Gbps.
- WiFi facility all over campus and in hostels with 70+ wireless access points.
- Point to Point Radio links between Main Campus and hostels sites located outside in city area.
- High speed Internet links of 506Mbps CIR bandwidth available at KFUEIT through multiple fiber and radio links.
- HEC Pakistan Educational Research Network Link Connectivity.
- HEC Digital Library Access
- 2 PRI lines with 30 phone lines available at each PRI.
- 400+ Computers for Students
- All labs connected via high-speed LAN.
- Video conferencing system.
- Online admissions.
- Online Job Portal
- HR Management System
- LMS (Learning Management System)
- Exam Management System
- Scholarship Management System
- Timetable Management System
- Library Management Systems
- Store and Inventory Management
- Accounting & Finance System
- Lectures Attendance System
- Visitor Management System
- Case Management System
- ORIC
- Open Courseware
- Hostel
- Online Testing System
- Transport Management Systems Management System
- Online surveys for end-semester students feedback
- Turnitin Access for Faculty and Student
- E-rostrums and multimedia projectors for classrooms, labs and seminar halls
- University website, Facebook page and LinkedIn page.
- Video Surveillance System (NVR Based 100+ IP cameras)
- VPN for secure data access from remote locations.
- Directory Services.
- Round the clock e-mail systems available for faculty, staff and students
- IP Telephony and IP Based Fax System.
- Firewall for data protection.
- Biometric based attendance system.
- Campus ID Card Printing.
- Linux based systems with windows operating system.
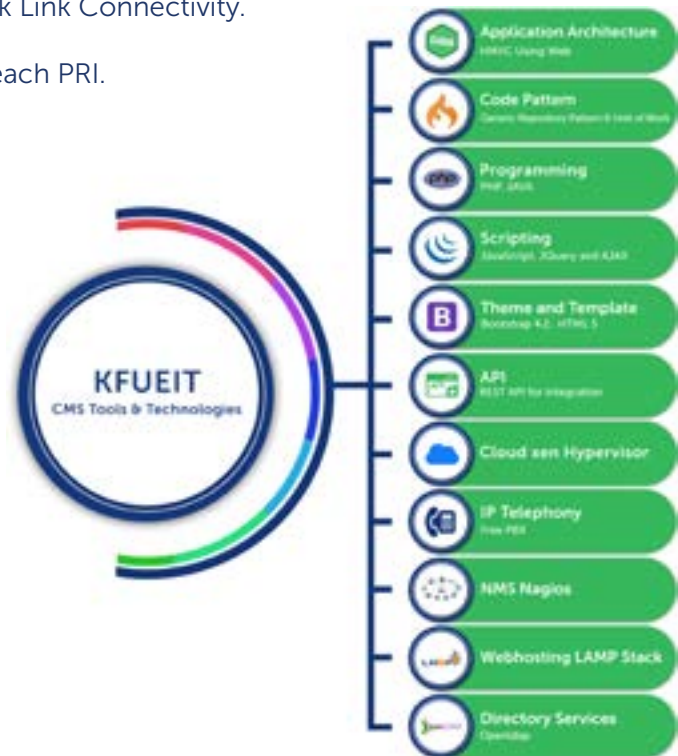
# TREE PLANTATION & BOTANICAL GARDEN

Horticulture department of the university has been developing a botanical garden for recreational and research purposes.

A botanical garden is a garden dedicated to the collection, cultivation, preservation and display a wide range of plants labelled with their botanical names. It may contain specialist plant collections such as cacti and other succulent plants, herb gardens, plants from particular parts of the world, and so on; there may be greenhouses, shadehouses, again with special collections such as tropical plants, alpine plants, or other exotic plants. Visitor services at a botanical garden might include tours, educational displays, art exhibitions, open-air theatrical and musical performances, and other entertainment.

Botanical gardens are often run by universities or other scientific research organizations, and often have associated herbaria and research programmes in plant taxonomy or some other aspect of botanical science. In principle, their role is to maintain documented collections of living plants for the purposes of scientific research, conservation, display, and education, although this will depend on the resources available and the special interests pursued at each particular garden.

Over the years, botanical gardens, as cultural and scientific organisations, have responded to the interests of botany and horticulture. Nowadays, most botanical gardens display a mix of the themes mentioned and more; having a strong connection with the general public, there is the opportunity to provide visitors with information relating to the environmental issues, especially those relating to plant conservation and sustainability.

The history of botanical gardens is closely linked to the history of botany itself. The botanical gardens of the 16th and 17th centuries were medicinal gardens, but the idea of a botanical garden changed to encompass displays of the beautiful, strange, new and sometimes economically important plant trophies being returned from the European colonies and other distant lands. Later, in the 18th century, they became more educational in function, demonstrating the latest plant classification systems devised by botanists working in the associated herbaria as they tried to order these new treasures. Then, in the 19th and 20th centuries, the trend was towards a combination of specialist and eclectic collections demonstrating many aspects of both horticulture and botany.

Moreover, an ultra high density mango orchard has also been developed in the university. A new technology in the world of mango in which almost 1100 plants have been planted in one acre for research and revenue purposes.

This certificate is awarded to

# Khwaja Fareed University of Engineering And Information Technology

as The 548th World's Most Sustainable University

Jakarta, 19 Desember 2018

Prof. Dr. Ir. Muhammad Anis, M.Met
Rector Universitas Indonesia

Prof. Riri Fitri Sari, M.M., M.Sc
Chairperson of UI GreenMetric

World University Rankings

# Academics
## Section

**3**

# Academics

# Academic Calendar Fall 2019

| Events | Date/Day | Remarks |
|---|---|---|
| Registration of Courses for New Students | Aug 19 – Aug 26, 2019 | (without late fee) |
| Fall Semester 2019 begins | August 19, 2019 | Commencement of classes |
| Last Date for withdrawal from a Course without fee penalty | August 26, 2019 | Last Day |
| Youm e Ashura* | Sept 09 – Sept 10, 2019 | Holidays (Tentative) |
| Eid Milad-un-Nabi (12 Rabi-ul-Awal)** | November 9, 2019 | Holiday (Tentative) |
| Allama Iqbal Day | November 9, 2019 | Holiday |
| Mid-Term Examinations | Oct 15 – Oct 22, 2019 | |
| Semester Teaching ends | December 18, 2019 | |
| Final Examination | Dec 13 – Dec 20, 2019 | |
| Quaid-e-Azam Day | December 25, 2019 | Holiday |
| Winter Break | Dec 23 – Jan 10, 2020 | For students only |
| Spring Semester 2020 starts | January 13, 2020 | |

* Subject to the appearance of Moon of 1st day of Moharram
**Subject to appearance of Moon of 1st day of Rabi-ul-Awal

# Academic Calendar Spring 2019

| Events | Date/Day | Remarks |
|---|---|---|
| Registration of Courses for New Students | March 11 – 18, 2019 | (without late fee) |
| Spring Semester 2019 begins | March 11, 2019 | Commencement of classes |
| Last Date for withdrawal from a course without fee penalty | March 18, 2019 | Last Day |
| Pakistan Day | March 23, 2019 | Holiday |
| Labor Day | May 01, 2019 | Holiday |
| Mid-Term Examinations | May 07 – 14, 2019 | |
| Eid-Ul-Fitr* | June 4 - June 6, 2019 | Holidays (Tentative) |
| Semester Teaching ends | July 12, 2019 | |
| Final Examination | July 15 – July 21, 2019 | |
| Semester Break | July 22 – Aug 18, 2019 | For students only |
| Eid-Ul-Azha** | Aug 11 – Aug 13, 2019 | Holidays (Tentative) |
| Independence Day | August 14, 2019 | Holiday |
| Fall Semester 2019 starts | August 19, 2019 | |

*Subject to the appearance of Moon of 1st day of Shawal
** Subject to the appearance of Moon of 1st day of Zilhaj

# Academic Calendar Spring 2020

| Events | Date/Day | Remarks |
|---|---|---|
| Registration of Courses for New Students | Jan 13- Jan 20, 2020 | (without late fee) |
| Spring Semester 2020 begins | January 13, 2020 | Commencement of classes |
| Last Date for withdrawal from a course without fee penalty | January 20, 2020 | Last Day |
| Kashmir Day | February 5, 2020 | Holiday |
| Mid-Term Examinations | March 10- March 17, 2020 | |
| Pakistan Day | March 23, 2020 | Holiday |
| Labour Day | May 1, 2020 | Holiday |
| Semester Teaching Ends | May 13, 2020 | |
| Final Examination | May 14- May 21, 2020 | |
| Eid-ul-Fitr* | May 23- May 25, 2020 | Holidays (Tentative) |
| Semester Break | May 22- May 27, 2020 | For students only |
| Summer Semester 2020 Starts | May 28, 2020 | |

* Subject to the appearance of Moon of 1st day of Shawal

# Office of Research, Innovation & Commercialization (ORIC)

## Engr. Dr. Muhammad Saif Ur Rehman

**Director ORIC**
Call: +92 (68) 5882434
Email: saif@kfueit.edu.pk

KFUEIT leadership has a clear R&D vision about the future of university. We are determined to make KFUEIT national technology leader by creating an integrated R&D ecosystem. This ecosystem will connect our researchers (faculty and students) with external as well as internal stakeholders. In order to achieve this ambition, KFUEIT has created the Office of Research, Innovation & Commercialization (ORIC) at KFUEIT in 2016. ORIC has developed its TALL vision "Establish a proactive R&D ecosystem based on Training; Awareness; Linkage and Launching approach to make KFUEIT the national technology leader". This TALL vision will have a three stage ORIC development framework so that KFUEIT may create a socio-economic impact. We will reach our R&D goals through achieving ORIC vision by motivating, facilitating and guiding our faculty members to comply with their individual and organizational R&D goals.

To maximize the impact of R&D, ORIC carries out a set of activities that serve as inputs to the university departments and the academic community. ORIC has taken several initiatives in order to establish an active KFUEIT R&D ecosystem. ORIC is actively involved in:

- Promoting research ecosystem at KFUEIT
- Collaborating with other national and international research organizations
- Creating and nurturing innovative ideas
- Communicating research, networking, fellowship and award opportunities to the faculty and students
- Designing KFUEIT Strategic R&D Plan and core research areas
- Creating a database for potential funding agencies
- Promoting KFUEIT-industry linkage
- Organizing national, and international events (conferences / seminars / workshops / symposiums)

# ORIC TALL

"Establish a proactive
R&D ecosystem based on

*"Never give up
Today is hard,
tomorrow is worse,
but the day after tomorrow
will be sunshine"*
-Jack MA

**ORIC**

4 **LAUNCHING**

3 **LINKAGE**

2 **AWARENESS**

1 **TRAINING**

# RESEARCH | INNOVATION | COMMERCIALIZATION

**KHWAJA FAREED UEIT**
RAHIM YAR KHAN
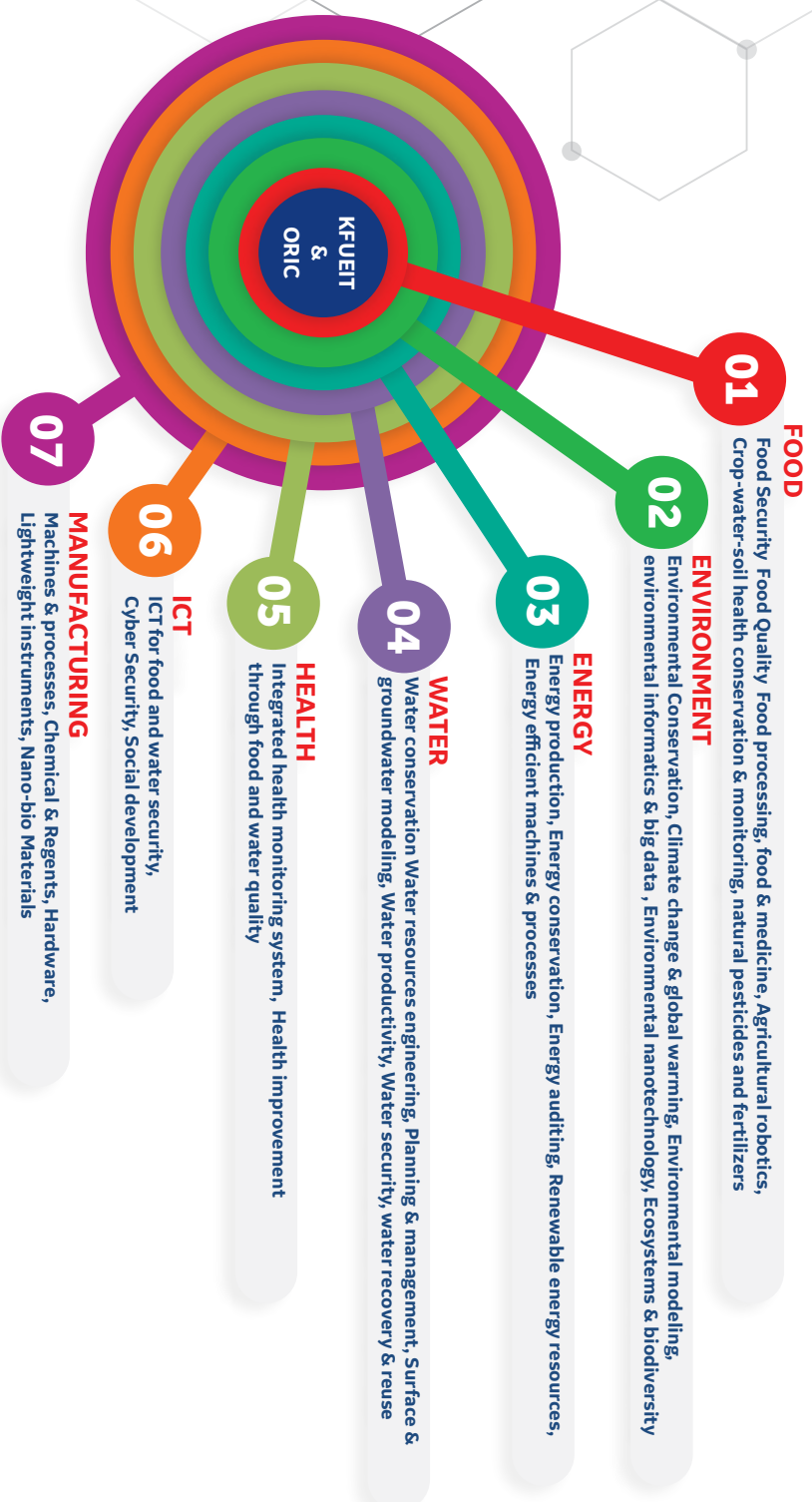
**ACHIEVE ORIC VISION BY MOTIVATING, FACILITATING AND GUIDING FACULTY MEMBERS TO COMPLY WITH THEIR INDIVIDUAL AND ORGANIZATIONAL R&D GOALS**

**KFUEIT & ORIC**

**01**
**FOOD**
Food Security, Food Quality, Food processing, food & medicine, Agricultural robotics, Crop-water-soil health conservation & monitoring, natural pesticides and fertilizers

**02**
**ENVIRONMENT**
Environmental Conservation, Climate change & global warming, Environmental modeling, environmental informatics & big data, Environmental nanotechnology, Ecosystems & biodiversity

**03**
**ENERGY**
Energy production, Energy conservation, Energy auditing, Renewable energy resources, Energy efficient machines & processes

**04**
**WATER**
Water conservation Water resources engineering, Planning & management, Surface & groundwater modeling, Water productivity, Water security, water recovery & reuse

**05**
**HEALTH**
Integrated health monitoring system, Health improvement through food and water quality

**06**
**ICT**
ICT for food and water security, Cyber Security, Social development

**07**
**MANUFACTURING**
Machines & processes, Chemical & Regents, Hardware, Lightweight instruments, Nano-bio Materials

**Faculty of Engineering**

# Department of
# Agricultural Engineering

## Introduction and Overview

Pakistan's economy is primarily agrarian based as agriculture sector is contributing about 21% to its GDP, employing 45% of its work force, and providing livelihood to more than 67% of its population, which is residing mostly in the rural areas. The contribution of this sector in economy is heavily dependent on adequate supply of irrigation water, state of the art modern as well as low cost farm equipment and structures and safe environment. At the same time, it is also needed to provide alternative energy sources and post-harvest food preservation technologies to ensure food security as post-harvest losses in fruits and vegetables could reduce production as much as 25-40%.



Keeping these issues in view, the Department of Agricultural Engineering at Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan has been established. The Department is proud of its infrastructure, highly accomplished and talented academia and well equipped laboratories for a comprehensive training in water, mechanization, environmental and computer modelling aspects of agriculture. Department also aims to be a hub in faculty professionalism and entrepreneurial development in agricultural engineering. The Department has opened its doors to the public to boost its professional and industrial dialogue through university industry linkage, outreach programs, internship for students and MOUs with public/private sectors.

## Programs being offered

| BS Agricultural Engineering | MS Agricultural Engineering |
|---|---|
| BS Agriculture<br>(Agronomy, Agricultural Extension, Agricultural Economics, Entomology, Horticulture) | MS Water Resources Management*<br>* Subject to approval / NOC from HEC / Competent Authority / Accreditation Body |

## Vision

The vision of agricultural engineering department is to become a estigious Seminary of Learning and Innovation Global excellence in training, research and innovation in water and environment management, farm mechanization, agro-processing, renewable energy and crop-soil-water productivity

To promote sustainable agricultural development and preserving the ecosystems through optimal use of indigenous resources for precision agriculture, consequently achieving sustainable development of Rural Areas in close collaboration with farming community.

To produce highly skilled professionals by imparting professional education, training and skills at undergraduate and graduate level in the field of Agricultural Engineering with special focus on resolving issues faced by the farming community.



## Mission

The mission of Agriculture Engineering Department is:

- State of the Art Training: To promote student's learning in Agricultural engineering and related disciplines to achieve excellence in Agriculture sector.
- Services and Entrepreneurship: To serve the nation by providing trained engineers to plan and execute the public and private sector projects pertaining to food security and natural resources management through engineering & technology principles.
- Discovery and Innovation: To bring indigenous and global professionals together who can exploit local wisdom and novel solutions for mitigation of regional and global challenges of climate change, water use efficiency and food security.

## Key Facts

- Agricultural engineering is the area of engineering concerned with the improvement and advancements in the water management, bringing innovation in the mechanization and ensuring the food security through precision agriculture.
- The use of modern tools like Global Positioning System and satellite Derived Remote Sensing and GIS, GPS operated farm machinery revolutionize the agriculture and brought the prosperity in the farming community.
- The professionals (teachers/researchers) aimed to excel imparting education and training pertaining to water resources management and utilizing the water resources of the country in an efficient manner.
- Department plans to impart professional education, training and produce skilled manpower at graduate and postgraduate level in the field of Agricultural Engineering with special focus on resolving issues faced by the farming community.
- The department has foreign qualified Faculty members and sate of the art laboratories in the field of Agricultural Engineering.
- The department has on campus Water and Agricultural Mechanization Research Station (WAMRS).

# Scheme of Study

## BS Agricultural Engineering

4 Years (8 Semesters) Program

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-1101 | Metallurgy & Workshop Practices | 2 | 0 |
|  | AGEN-1201 | Metallurgy & Workshop Practices Lab | 0 | 1 |
| 2 | AGEN-1103 | Engineering Drawing & Graphics | 1 | 0 |
|  | AGEN-1203 | Engineering Drawing & Graphics Lab | 0 | 1 |
| 3 | AGRI-1101 | Basic Agriculture | 2 | 0 |
|  | AGRI-1201 | Basic Agriculture Lab | 0 | 1 |
| 4 | MATH-1101 | Calculus | 3 | 0 |
| 5 | ENGL-1118 | Functional English | 3 | 0 |
| 6 | ISLS-1112 | Islamic Studies/Ethics | 2 | 0 |
| **Semester Credit Hours** | | | **13** | **3** |
| | | | **16** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-1104 | Engineering Mechanics | 2 | 0 |
|  | AGEN-1204 | Engineering Mechanics Lab | 0 | 1 |
| 2 | AGEN-1106 | Computer Aided Design | 1 | 0 |
|  | AGEN-1206 | Computer Aided Design Lab | 0 | 1 |
| 3 | AGEN-1102 | Fluid Mechanics | 2 | 0 |
|  | AGEN-1202 | Fluid Mechanics Lab | 0 | 1 |
| 4 | ENGL-1119 | Communication Skills | 3 | 0 |
| 5 | MATH-1102 | Linear Algebra | 3 | 0 |
| 6 | PHYS-1123 | Engineering Physics | 2 | 0 |
|  | PHYS-1223 | Engineering Physics Lab | 0 | 1 |
| **Semester Credit Hours** | | | **13** | **4** |
| | | | **17** | |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-2101 | Engineering Thermodynamics | 2 | 0 |
|  | AGEN-2201 | Engineering Thermodynamics Lab | 0 | 1 |
| 2 | AGEN-2103 | Engineering Hydrology and Climate Change | 2 | 0 |
|  | AGEN-2203 | Engineering Hydrology and Climate Change Lab | 0 | 1 |
| 3 | AGEN-2105 | Surveying | 1 | 0 |
|  | AGEN-2205 | Surveying Lab | 0 | 1 |
| 4 | AGEN-2107 | Hydraulic Machinery & Pipe Flow | 2 | 0 |
|  | AGEN-2207 | Hydraulic Machinery & Pipe Flow Lab | 0 | 1 |
| 5 | CPEN-1110 | Introduction to Computing | 2 | 0 |
|  | CPEN-1210 | Introduction to Computing Lab | 0 | 1 |
| 6 | MATH-2107 | Engineering Numerical Analysis | 2 | 0 |
|  | MATH-2207 | Engineering Numerical Analysis Lab | 0 | 1 |
| **Semester Credit Hours** | | | **11** | **6** |
| | | | **17** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-2102 | Mechanics of Materials | 2 | 0 |
|  | AGEN-2202 | Mechanics of Materials Lab | 0 | 1 |
| 2 | AGEN-2104 | Levelling | 1 | 0 |
|  | AGEN-2204 | Levelling Lab | 0 | 1 |
| 3 | AGEN-2106 | Soil Mechanics | 2 | 0 |
|  | AGEN-2206 | Soil Mechanics Lab | 0 | 1 |
| 4 | AGEN-2108 | I.C. Engine | 2 | 0 |
|  | AGEN-2208 | I.C. Engine Lab | 0 | 1 |
| 5 | AGRI-1102 | Soil Science | 1 | 0 |
|  | AGRI-1202 | Soil Science Lab | 0 | 1 |
| 6 | STAT-2104 | Probability and Statistics | 3 | 0 |
| 7 | PAKS-1113 | Pakistan Studies | 2 | 0 |
| **Semester Credit Hours** | | | **11** | **6** |
| | | | **17** | |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-3101 | Open Channel Hydraulics | 2 | 0 |
|  | AGEN-3201 | Open Channel Hydraulics Lab | 0 | 1 |
| 2 | AGEN-3103 | Remote Sensing and GIS | 2 | 0 |
|  | AGEN-3203 | Remote Sensing and GIS Lab | 0 | 1 |
| 3 | AGEN-3105 | Fundamentals of Environmental Engineering | 2 | 0 |
|  | AGEN-3205 | Fundamentals of Environmental Engineering Lab | 0 | 1 |
| 4 | AGEN-3107 | Machine Design | 2 | 0 |
|  | AGEN-3207 | Machine Design Lab | 0 | 1 |
| 5 | AGEN-XXXX/ AGEN-XXXX | AGEN Elective-I | 2 | 0 |
|  |  |  | 0 | 1 |
| 6 | SSCI-2111 | Professional Ethics | 2 | 0 |
| 7 | SSCI-1111 | Sociology for Engineers | 2 | 0 |
| **Semester Credit Hours** | | | **14** | **5** |
| | | | **19** | |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-3102 | Farm and Earth Moving Machinery | 2 | 0 |
|  | AGEN-3202 | Farm and Earth Moving Machinery Lab | 0 | 1 |
| 2 | AGEN-3104 | Irrigation Engineering | 2 | 0 |
|  | AGEN-3204 | Irrigation Engineering Lab | 0 | 1 |
| 3 | AGEN-3106 | Soil and Water Conservation Engineering | 2 | 0 |
|  | AGEN-3206 | Soil and Water Conservation Engineering Lab | 0 | 1 |
| 4 | AGEN-3108 | Farm Structures and Materials | 2 | 0 |
|  | AGEN-3208 | Farm Structures and Materials Lab |  | 1 |
| 5 | AGEN-XXXX/ AGEN-XXXX | AGEN Elective-II | 0 | 3 |
| 6 | HLTH-1113 | Basic Health Awareness | 2 | 0 |
| **Semester Credit Hours** | | | **10** | **7** |
| | | | **17** | |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-4101 | Engineering Principles of Precision Farming | 2 | 0 |
|  | AGEN-4201 | Engineering Principles of Precision Farming Lab | 0 | 1 |
| 2 | AGEN-4105 | Agricultural Process Engineering | 2 | 0 |
|  | AGEN-4205 | Agricultural Process Engineering Lab | 0 | 1 |
| 3 | AGEN-4103 | Manufacturing and Reverse Engineering | 2 | 0 |
|  | AGEN-4203 | Manufacturing and Reverse Engineering Lab | 0 | 1 |
| 4 | AGEN-4107 | Principles of Energy Engineering | 3 | 0 |
| 5 | AGEN-4109 | Project & Report-I | 0 | 3 |
| 6 | AGEN-XXXX/ AGEN-XXXX | AGEN Elective-III | 3 | 0 |
| 7 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 |
| **Semester Credit Hours** | | | **14** | **6** |
| | | | **20** | |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|---|---|---|---|---|
| 1 | AGEN-4102 | Drainage Engineering | 2 | 0 |
|  | AGEN-4202 | Drainage Engineering Lab | 0 | 1 |
| 2 | AGEN-4104 | Pumps and Tube wells | 2 | 0 |
|  | AGEN-4204 | Pumps and Tube wells Lab | 0 | 1 |
| 3 | AGEN-4106 | Project & Report II | 0 | 3 |
| 5 | AGEN-XXXX/ AGEN-XXXX | AGEN Elective-IV | 3 | 0 |
| 6 | MSCI-2111 | Engineering Economics and Management | 3 | 0 |
| **Semester Credit Hours** | | | **13** | **3** |
| | | | **16** | |

# List of Elective Courses

## Elective - I

| S. No. | Course Code | Course Title | Credit Hours Theory | Lab |
|---|---|---|---|---|
| 1 | AGEN-3109 | Boiler Engineering & Power Plants | 2 | 0 |
|  | AGEN-3209 | Boiler Engineering & Power Plants Lab | 0 | 1 |
| 2 | AGEN-3111 | Water Management Engineering | 2 | 0 |
|  | AGEN-3211 | Water Management Engineering Lab | 0 | 1 |
| 3 | AGEN-3113 | Farm Irrigation Systems | 2 | 0 |
|  | AGEN-3213 | Farm Irrigation Systems Lab | 0 | 1 |
| 4 | AGEN-3115 | Quantity Survey and Cost Estimation | 2 | 0 |
|  | AGEN-3215 | Quantity Survey and Cost Estimation Lab | 0 | 1 |
| 5 | AGEN-3117 | Environmental Management System in Industry | 3 | 0 |

## Elective - II

| S. No. | Course Code | Course Title | Credit Hours Theory | Lab |
|---|---|---|---|---|
| 1 | AGEN-3110 | Instrumentation & Measurements | 2 | 0 |
|  | AGEN-3210 | Instrumentation & Measurements Lab | 0 | 1 |
| 2 | AGEN-3112 | Energy Resources and Management | 2 | 0 |
|  | AGEN-3212 | Energy Resources and Management Lab | 0 | 1 |
| 3 | AGEN-3114 | Ground Water Hydrology | 2 | 0 |
|  | AGEN-3214 | Ground Water Hydrology Lab | 0 | 1 |
| 4 | AGEN-3116 | Water Supply and Sewerage | 2 | 0 |
|  | AGEN-3216 | Water Supply and Sewerage | 0 | 1 |
| 5 | AGEN-3118 | Meteorology and Climate Change | 2 | 0 |

## Elective - III

| S. No. | Course Code | Course Title | Credit Hours Theory | Lab |
|---|---|---|---|---|
| 1 | AGEN-4111 | Post-Harvest Engineering | 2 | 0 |
|  | AGEN-4211 | Post-Harvest Engineering Lab | 0 | 1 |
| 2 | AGEN-4113 | Water Quality Management | 2 | 0 |
|  | AGEN-4213 | Water Quality Management Lab | 0 | 1 |
| 3 | AGEN-4115 | Irrigation Water Management Techniques | 2 | 0 |
|  | AGEN-4215 | Irrigation Water Management Techniques Lab | 0 | 1 |
| 4 | AGEN-4117 | Environmental Impact Assessment | 3 | 0 |
| 5 | AGEN-4119 | Renewable Energy and Environment | 2 | 0 |
|  | AGEN-4219 | Renewable Energy and Environment Lab | 0 | 1 |

## Elective - IV

| S. No. | Course Code | Course Title | Credit Hours Theory | Lab |
|---|---|---|---|---|
| 1 | AGEN-4108 | Industrial Engineering and Management | 2 | 0 |
|  | AGEN-4208 | Industrial Engineering and Management Lab | 0 | 1 |
| 2 | AGEN-4110 | Design of Agricultural Machinery | 2 | 0 |
|  | AGEN-4210 | Design of Agricultural Machinery Lab | 0 | 1 |
| 3 | AGEN-4112 | Project Planning and Management | 2 | 0 |
| 4 | AGEN-4114 | High Efficiency Irrigation System | 2 | 0 |
|  | AGEN-4214 | High Efficiency Irrigation System Lab | 0 | 1 |
| 5 | AGEN-4116 | Air and Noise Pollution Control | 2 | 0 |
|  | AGEN-4216 | Air and Noise Pollution Control Lab | 0 | 1 |
| 6 | AGEN-4118 | Solid waste Management | 3 | 0 |



*Lab Equipments (Department of Agriculture)*

# BS Agriculture

4 Years (8 Semesters)     Majors (Agronomy, Agricultural Extension, Agricultural Economics, Entomology, Horticulture)

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRI-1101 | Basic Agriculture | 2 | 0 |
| | AGRI-1201 | Basic Agriculture Lab | 0 | 1 |
| 2 | AGRI-1103 | Introduction to Soil Science-I | 2 | 0 |
| | AGRI-1203 | Introduction to Soil Science-I Lab | 0 | 1 |
| 3 | AGRI-1105 | Introduction to Animal Husbandry | 2 | 0 |
| | AGRI-1205 | Introduction to Animal Husbandry Lab | 0 | 1 |
| 4 | FDST-1101 | Introduction to Food Science and Technology | 2 | 0 |
| | FDST-1201 | Introduction to Food Science and Technology Lab | 0 | 1 |
| 5 | ENGL-1118 | Functional English | 3 | 0 |
| 6 | ISLS-1112/ ETIC-1112 | Islamic Studies/Ethics | 2 | 0 |
| 7 | BIO-1101/ BIO-1201 | Biology (for Pre-Engineering Students) Mathematics (for Pre-Medical Students) | 2 0 | 0 1 |
| Semester Credit Hours | | | 15 | 5 |
| | | | 20 | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRI-1102 | General Crop Production | 2 | 0 |
| | AGRI-1202 | General Crop Production Lab | 0 | 1 |
| 2 | AGRI-1104 | Introduction to Agricultural Economics | 3 | 0 |
| 3 | AGRI-1106 | Introduction to Agricultural Extension and Rural Development | 3 | 0 |
| 4 | AGRI-1108 | Introduction to Soil Science-II | 2 | 0 |
| | AGRI-1208 | Introduction to Soil Science-II Lab | 0 | 1 |
| 5 | AGRI-1110 | Introduction to Forest and Watershed Management | 2 | 0 |
| | AGRI-1210 | Introduction to Forest and Watershed Management Lab | 0 | 1 |
| 6 | PAKS-1113 | Pakistan Studies | 2 | 0 |
| 7 | STAT-2104 | Probability and Statistics | 3 | 0 |
| Semester Credit Hours | | | 17 | 3 |
| | | | 20 | |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRI-2101 | Introductory Genetics | 2 | 0 |
| | AGRI-2201 | Introductory Genetics Lab | 0 | 1 |
| 2 | AGRI-2103 | Introductory Entomology | 2 | 0 |
| | AGRI-2203 | Introductory Entomology Lab | 0 | 1 |
| 3 | AGRI-2105 | Introduction to Plant Pathogens | 2 | 0 |
| | AGRI-2205 | Introduction to Plant Pathogens Lab | 0 | 1 |
| 4 | AGRI-2107 | Introductory Horticulture | 2 | 0 |
| | AGRI-2207 | Introductory Horticulture Lab | 0 | 1 |
| 5 | AGRI-2107 | Introduction to Rangelands and Wildlife Management | 2 | 0 |
| | AGRI-2207 | Introduction to Rangelands and Wildlife Management | 0 | 1 |
| 6 | AGRI-2109 | Agribusiness, Marketing and Trade | 3 | 0 |
| 7 | CPEN-1114 | Introduction to Computing | 2 | 0 |
| | CPEN-1214 | Introduction to Computing Lab | 0 | 1 |
| Semester Credit Hours | | | 15 | 6 |
| | | | 21 | |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRI-2102 | Introductory Plant Breeding | 2 | 0 |
| | AGRI-2202 | Introductory Plant Breeding Lab | 0 | 1 |
| 2 | AGRI-2104 | Applied Entomology | 2 | 0 |
| | AGRI-2204 | Applied Entomology Lab | 0 | 1 |
| 3 | AGRI-2106 | Introductory Plant Pathology | 2 | 0 |
| | AGRI-2206 | Introductory Plant Pathology lab | 0 | 1 |
| 4 | AGRI-2208 | Horticultural Crop Production | 2 | 0 |
| | AGRI-2208 | Horticultural Crop Production Lab | 0 | 1 |
| 5 | AGRI-2110 | Introduction to Communication in Agricultural Extension | 2 | 0 |
| | AGRI-2210 | Introduction to Communication in Agricultural Extension Lab | 0 | 1 |
| 6 | HLTH-1113 | Basic Health Awareness | 2 | 0 |
| Semester Credit Hours | | | 12 | 5 |
| | | | 17 | |

## Semester 5   (Agronomy Major)

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRN-3101 | Biological Nitrogen Fixation | 2 | 0 |
| | AGRN-3201 | Biological Nitrogen Fixation     Lab | 0 | 1 |
| 2 | AGRN-3103 | Plant Nutrients and Growth Regulators | 2 | 0 |
| | AGRN-3203 | Plant Nutrients and Growth Regulators Lab | 0 | 1 |
| 3 | AGRN-3105 | Farm Record and Management | 2 | 0 |
| | AGRN-3205 | Farm Record and Management Lab | 0 | 1 |
| 4 | AGRN-3107 | Seed Production Technology | 2 | 0 |
| | AGRN-3207 | Seed Production Technology Lab | 0 | 1 |
| 5 | AGRN-3109 | Forage and Fodder Production | 2 | 0 |
| | AGRN-3209 | Forage and Fodder Production Lab | 0 | 1 |
| 6 | AGRN-3111 | AGRO-Technology of Major Crops | 2 | 0 |
| | AGRN-3211 | AGRO-Technology of Major Crops (Lab) | 0 | 1 |
| Semester Credit Hours | | | 12 | 6 |
| | | | 18 | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRN-3102 | Principles of Weed Science | 2 | 0 |
| | AGRN-3202 | Principles of Weed Science Lab | 0 | 1 |
| 2 | AGRN-3104 | Crop Management under Stressful Environments | 2 | 0 |
| | AGRN-3204 | Crop Management under Stressful Environments Lab | 0 | 1 |
| 3 | AGRN-3106 | Conservation Agronomy | 2 | 0 |
| | AGRN-3206 | Conservation Agronomy Lab | 0 | 1 |
| 4 | AGRN-3108 | introduction to Crop Modelling | 2 | 0 |
| | AGRN-3208 | introduction to Crop Modeliing Lab | 0 | 1 |
| 5 | AGRN-3110 | Environment and Crop Production | 2 | 0 |
| | AGRN-3210 | Environment and Crop Production Lab | 0 | 1 |
| 6 | AGEN-3121 | Farm Mechanization | 2 | 0 |
| | AGEN-3221 | Farm Mechanization Lab | 0 | 1 |
| Semester Credit Hours | | | 12 | 6 |
| | | | 18 | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRN-4101 | Principles of Weed Science | 2 | 0 |
| | AGRN-4201 | Principles of Weed Science Lab | 0 | 1 |
| 2 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 |
| 3 | AGRN-4103 | Conservation Agronomy | 2 | 0 |
| | AGRN-4203 | Conservation Agronomy Lab | 0 | 1 |
| 4 | AGRN-4105 | Introduction to Crop Modelling | 2 | 0 |
| | AGRN-4205 | introduction to Crop Modeliing Lab | 0 | 1 |
| 5 | AGRN-4107 | Environment and Crop Production | 2 | 0 |
| | AGRN-4207 | Environment and Crop Production Lab | 0 | 1 |
| 6 | AGEN-4122 | irrigation and Drainage Practices | 2 | 0 |
| | AGEN-4222 | irrigation and Drainage Practices Lab | 0 | 1 |
| Semester Credit Hours | | | 12 | 5 |
| | | | 17 | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGRN-4102 | Organic Farming | 3 | 0 |
| 2 | AGRN-4104 | Plant and soil Analysis | 2 | 0 |
| | AGRN-4204 | Plant and soil Analysis Lab | 0 | 1 |
| 3 | AGRN-4106 | Crop Management under Stressful Environments | 2 | 0 |
| | AGRN-4206 | Crop Management under Stressful Environments Lab | 0 | 1 |
| 4 | AGRN-4108 | Research and Scientific Writing | 2 | 0 |
| | AGRN-4208 | Research and Scientific Writing Lb | 0 | 1 |
| 5 | AGRN-4110 | Research Project / internship | 0 | 4 |
| Semester Credit Hours | | | 9 | 7 |
| | | | 16 | |

## Semester 5  (Agriculture Economics Major)

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGEC-3101 | Microeconomics-I | 3 | |
| 2 | AGEC-3103 | Macroeconomics-I | 3 | |
| 3 | AGEC-3105 | Mathematics for Economics | 3 | |
| 4 | AGEC-3107 | Statistical Methods for Economics | 2 | |
| | AGEC-3207 | Statistical Methods for Economics Lab | 0 | |
| 5 | AGEC-3109 | Food and Agricultural Marketing | 3 | |
| 6 | AGEC-3111 | Economics of Agro based Industries | 3 | |
| **Semester Credit Hours** | | | **17** | **1** |
| | | | **18** | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGEC-3102 | Microeconomics-II | 3 | 0 |
| 2 | AGEC-3104 | Macroeconomics-II | 3 | 0 |
| 3 | AGEC-3106 | Development Economics | 3 | 0 |
| 4 | AGEC-3108 | Mathematical Economics | 3 | 0 |
| 5 | AGEC-3110 | Agribusiness Management | 3 | 0 |
| 6 | AGEC-3112 | Economics of Livestock Production | 3 | 0 |
| 7 | AGEN-3121 | Farm Mechanization | 2 | 0 |
| | AGEN-3221 | Farm Mechanization Lab | 0 | 1 |
| **Semester Credit Hours** | | | **20** | **1** |
| | | | **21** | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGEC-4101 | Econometrics-I | 2 | 0 |
| | AGEC-4201 | Econometrics-I Lab | 0 | 1 |
| 2 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 |
| 3 | AGEC-4103 | Agricultural Finance | 3 | 0 |
| 4 | AGEC-4105 | Agricultural Production Economics | 3 | 0 |
| 5 | AGEC-4107 | Research Methods in Social Science | 2 | 0 |
| | AGEC-4207 | Research Methods in Social Science Lab | 0 | 1 |
| 6 | AGEC-4109 | International Economics | 3 | 0 |
| 7 | AGEN-4122 | Irrigation and Drainage Practices | 2 | 0 |
| | AGEN-4222 | Irrigation and Drainage Practices Lab | 0 | 1 |
| **Semester Credit Hours** | | | **17** | **3** |
| | | | **20** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGEC-4102 | Natural Resource Economics | 3 | 0 |
| 2 | AGEC-4202 | Econometrics-II | 2 | 0 |
| | AGEC-4104 | Econometrics-II Lab | 0 | 1 |
| 3 | AGEC-4106 | Agricultural Issues and Policies of Pakistan | 3 | 0 |
| 4 | AGEC-4108 | Internship/Projects | 0 | 4 |
| **Semester Credit Hours** | | | **8** | **5** |
| | | | **13** | |

## Semester 5  (Horticulture Major)

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | HORTI-3101 | Principles of Fruit Production | 3 | 0 |
| | HORTI-3201 | Principles of Fruit Production Lab | 0 | 1 |
| 2 | HORTI-3103 | Principles of Vegetable Production | 2 | 0 |
| | HORTI-3203 | Principles of Vegetable Production Lab | 0 | 1 |
| 3 | HORTI-3105 | Principle of Ornamental crop Production | 2 | 0 |
| | HORTI-3205 | Principle of Ornamental crop Production Lab | 0 | 1 |
| 4 | HORTI-3107 | Propagation and Nursery Management | 2 | 0 |
| | HORTI-3207 | Propagation and Nursery Management Lab | 0 | 1 |
| 5 | HORTI-3109 | In Vitro Propagation | 1 | 0 |
| 6 | HORTI-3111 | In Vitro Propagation Lab | 0 | 1 |
| **Semester Credit Hours** | | | **10** | **5** |
| | | | **15** | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | HORTI-3102 | Tropical and Sub-Tropical Fruits | 2 | 0 |
| | HORTI-3202 | Tropical and Sub-Tropical Fruits Lab | 0 | 1 |
| 2 | HORTI-3104 | Summer Vegetables | 2 | 0 |
| | HORTI-3204 | Summer Vegetables Lab | 0 | 1 |
| 3 | HORTI-3106 | Landscape Horticulture | 2 | 0 |
| | HORTI-3206 | Landscape Horticulture Lab | 0 | 1 |
| 4 | HORTI-3108 | Medicinal and Aromatic Plants | 2 | 0 |
| | HORTI-3208 | Medicinal and Aromatic Plants Lab | 0 | 1 |
| 5 | HORTI-3110 | Post-Harvest Horticulture | 2 | 0 |
| | HORTI-3210 | Post-Harvest Horticulture Lab | 0 | 1 |
| 6 | AGEN-3121 | Farm Mechanization | 2 | 0 |
| | AGEN-3221 | Farm Mechanization Lab | 0 | 1 |
| **Semester Credit Hours** | | | **12** | **6** |
| | | | **18** | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | HORTI-4101 | Research Methods in Horticulture | 2 | 0 |
| | HORTI-4201 | Research Methods in Horticulture Lab | 0 | 1 |
| 2 | HORTI-4103 | Temperate Fruit | 2 | 0 |
| | HORTI-4203 | Temperate Fruit Lab | 0 | 1 |
| 3 | HORTI-4105 | Winter Vegetables | 2 | 0 |
| | HORTI-4205 | Winter Vegetables Lab | 0 | 1 |
| 4 | HORTI-4107 | Commercial Flower Production | 2 | 0 |
| | HORTI-4207 | Commercial Flower Production Lab | 0 | 1 |
| 5 | HORTI-4109 | Constitution and Legal System of Pakistan | 2 | |
| 6 | AGEN-4122 | Irrigation and Drainage Practices | 2 | 0 |
| | AGEN-4222 | Irrigation and Drainage Practices Lab | 0 | 1 |
| **Semester Credit Hours** | | | **12** | **5** |
| | | | **17** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | HORTI-4102 | Vegetable and Flower Seed Production | 2 | 0 |
| | HORTI-4202 | Vegetable and Flower Seed Production Lab | 0 | 1 |
| 2 | HORTI-4104 | Project Planning and Scientific Writing | 1 | 0 |
| | HORTI-4204 | Project Planning and Scientific Writing Lab | 0 | 1 |
| 3 | HORTI-4106 | Protected Horticulture | 2 | 0 |
| | HORTI-4206 | Protected Horticulture Lab | 0 | 1 |
| 4 | HORTI-4108 | Indoor Plant Culture and Interioscaping | 2 | 0 |
| | HORTI-4208 | Indoor Plant Culture and Interioscaping Lab | 0 | 1 |
| 5 | HORTI-4110 | Business Management in Horticulture | 3 | 0 |
| 6 | HORTI-4112 | Breeding of Horticultural Crops | 2 | 0 |
| | HORTI-4212 | Breeding of Horticultural Crops Lab | 0 | 1 |
| 7 | HORTI-4114 | Research Project / Internship | 0 | 4 |
| **Semester Credit Hours** | | | **12** | **9** |
| | | | **21** | |

*"The true sign of intelligence is not knowledge but imagination"*

*-Albert Einstein*

## Semester 5   (Agriculture Extension Major)

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGET-3101 | Extension Program Development | 2 | 0 |
| | AGET-3201 | Extension Program Development Lab | 0 | 1 |
| 2 | AGET-3103 | History and Philosophy of Agricultural Extension education | 3 | 0 |
| 3 | AGET-3105 | Rural Development Program in Pakistan | 3 | 0 |
| | AGET-3205 | Rural Development Program in Pakistan Lab | 0 | 1 |
| 4 | AGET-3107 | Rural Youth in Agricultural Development | 2 | 0 |
| | AGET-3207 | Rural Youth in Agricultural Development Lab | 0 | 1 |
| **Semester Credit Hours** | | | **10** | **3** |
| | | | **13** | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGET-3102 | Agricultural Extension Methods | 2 | 0 |
| | AGET-3202 | Agricultural Extension Methods Lab | 0 | 1 |
| 2 | AGET-3104 | Computer Application in Agricultural Extension | 1 | 0 |
| | AGET-3204 | Computer Application in Agricultural Extension Lab | 0 | 2 |
| 3 | AGET-3106 | Psychology for Adult Learning | 3 | 0 |
| | AGET-3108 | Human Resource Management | 2 | 0 |
| 4 | AGET-3208 | Human Resource Management Lab | 0 | 1 |
| 5 | AGET-3110 | Introduction to Gender Studies | 3 | 0 |
| 6 | AGEN-3121 | Farm Mechanization | 2 | 0 |
| 7 | AGEN-3221 | Farm Mechanization Lab | 0 | 1 |
| **Semester Credit Hours** | | | **13** | **5** |
| | | | **18** | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 |
| 2 | AGET-4101 | Interviewing Skills | 2 | 0 |
| | AGET-4201 | Interviewing Skills Lab | 0 | 1 |
| 3 | AGET-4103 | Emerging Issues in Agricultural and Technology Transfer | 3 | 0 |
| | AGET-4203 | Emerging Issues in Agricultural and Technology Transfer | 0 | 1 |
| 4 | AGET-4105 | Fundamentals of Agricultural Journalism | 2 | 0 |
| | AGET-4205 | Fundamentals of Agricultural Journalism Lab | 0 | 1 |
| 5 | AGET-4107 | Preparation of Research Projects and Scientific Writing | 2 | 0 |
| | AGET-4207 | Preparation of Research Projects and Scientific Writing Lab | 0 | 1 |
| 6 | AGEN-4122 | Irrigation and Drainage Practices | 2 | 0 |
| | AGEN-4222 | Irrigation and Drainage Practices Lab | 0 | 1 |
| **Semester Credit Hours** | | | **13** | **5** |
| | | | **18** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGET-4102 | Introduction to Research Methods | 3 | 0 |
| | AGET-4202 | Introduction to Research Methods Lab | 0 | 1 |
| 2 | AGET-4104 | Introduction to Program Evaluation | 3 | 0 |
| | AGET-4204 | Introduction to Program Evaluation Lab | 0 | 1 |
| 3 | AGET-4106 | Rural Development Through Agricultural Extension | 3 | 0 |
| 4 | AGET-4108 | Sustainable Agricultural and Rural Development | 3 | 0 |
| 5 | AGET-4110 | Internship/Projects | 0 | 4 |
| **Semester Credit Hours** | | | **12** | **6** |
| | | | **18** | |

## Semester 5   (Entomology Major)

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | ENTO-3101 | Insect Morphology | 2 | 0 |
| | ENTO-3201 | Insect Morphology Lab | 0 | 1 |
| 2 | ENTO-3103 | Principles of Insect Taxonomy | 2 | 0 |
| | ENTO-3203 | Principles of Insect Taxonomy Lab | 0 | 1 |
| 3 | ENTO-3105 | Insect Ecology | 2 | 0 |
| | ENTO-3205 | Insect Ecology Lab | 0 | 1 |
| 4 | ENTO-3107 | Insect Pest of Household, Man and Animals | 2 | 0 |
| | ENTO-3207 | Insect Pest of Household, Man and Animals Lab | 0 | 1 |
| 5 | ENTO-3109 | Insect Behaviour | 2 | 0 |
| | ENTO-3209 | Insect Behaviour (Lab) | 0 | 1 |
| **Semester Credit Hours** | | | **10** | **5** |
| | | | **15** | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | ENTO-3102 | Insect Physiology | 2 | 0 |
| | ENTO-3202 | Insect Physiology Lab | 0 | 1 |
| 2 | ENTO-3104 | Insect Classification and Biodiversity | 2 | 0 |
| | ENTO-3204 | Insect Classification and Biodiversity Lab | 0 | 1 |
| 3 | ENTO-3106 | Agricultural Pest and Their Management | 3 | 0 |
| | ENTO-3206 | Agricultural Pest and Their Management Lab | 0 | 1 |
| 4 | ENTO-3108 | Stored Product Pest and Their Management | 2 | 0 |
| | ENTO-3208 | Stored Product Pest and Their Management Lab | 0 | 1 |
| 5 | ENTO-3110 | Beneficial Insects | 2 | 0 |
| | ENTO-3210 | Beneficial Insects Lab | 0 | 1 |
| 6 | AGEN-3121 | Farm Mechanization | 2 | 0 |
| | AGEN-3221 | Farm Mechanization Lab | 0 | 1 |
| **Semester Credit Hours** | | | **13** | **6** |
| | | | **19** | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | ENTO-4101 | Integrated Pest Management | 3 | 0 |
| | ENTO-4201 | Integrated Pest Management Lab | 0 | 1 |
| 2 | ENTO-4103 | Plant Resistance to Insect Pests | 2 | 0 |
| | ENTO-4203 | Plant Resistance to Insect Pests Lab | 0 | 1 |
| 3 | ENTO-4105 | Insecticides and their Application | 2 | 0 |
| | ENTO-4205 | Insecticides and their Application Lab | 0 | 1 |
| 4 | ENTO-4107 | Range and Forest Entomology | 2 | 0 |
| | ENTO-4207 | Range and Forest Entomology Lab | 0 | 1 |
| 5 | AGEN-4122 | Irrigation and Drainage Practices | 0 | 0 |
| | AGEN-4222 | Irrigation and Drainage Practices Lab | 2 | 1 |
| 6 | SSCI-3120 | Constitution and Legal System of Pakistan | 0 | 0 |
| **Semester Credit Hours** | | | **11** | **5** |
| | | | **16** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | ENTO-4102 | Biological Control of Insect Pests | 2 | 0 |
| | ENTO-4202 | Biological Control of Insect Pests Lab | 0 | 1 |
| 2 | ENTO-4104 | Apiculture | 2 | 0 |
| | ENTO-4204 | Apiculture Lab | 0 | 1 |
| | ENTO-4105 | Agricultural and Environmental Pollution | 2 | 0 |
| | ENTO-4206 | Agricultural and Environmental Pollution Lab | 0 | 1 |
| 3 | ENTO-4108 | Scientific Writing and Presentation | 2 | 0 |
| | ENTO-4208 | Scientific Writing and Presentation Lab | 0 | 1 |
| 4 | ENTO-4110 | Research Project / Internship | 0 | 4 |
| **Semester Credit Hours** | | | **8** | **8** |
| | | | **16** | |

*"The best way to predict the future is to invent it"*

*- Alan Kay*

# MS Agricultural Engineering

2 Years (4 Semesters)

## List of Core Courses

| S. No. | Course Code | Course Name | Credit Hrs. 3 | |
| --- | --- | --- | --- | --- |
| | | | Theory | Lab |
| 1 | AGEN-6101 | Advanced Agricultural Mechanization | 3 | 0 |
| 2 | AGEN-6102 | Renewable Energy Engineering | 2 | 0 |
| | AGEN-6202 | Renewable Energy Engineering Lab | 0 | 1 |
| 3 | AGEN-6103 | Machine and Environment | 3 | 0 |
| 4 | AGEN-6104 | Hazardous Waste Management | 2 | 0 |
| | AGEN-6204 | Hazardous Waste Management Lab | 0 | 1 |
| 5 | AGEN-6105 | Irrigation Systems Management | 2 | 0 |
| | AGEN-6205 | Irrigation Systems Management Lab | 0 | 1 |
| 6 | AGEN-6106 | Water Resources Planning & Management | 2 | 0 |
| | AGEN-6206 | Water Resources Planning & Management Lab | 0 | 1 |
| 7 | AGEN-6107 | Research Methodology | 3 | 0 |

## List of Elective Courses

**Irrigation and Drainage**

| S. No. | Course Code | Course Name | Credit Hrs. 3 | |
| --- | --- | --- | --- | --- |
| | | | Theory | Lab |
| 1 | AGEN-6108 | Groundwater Modelling | 2 | 0 |
| | AGEN-6208 | Groundwater Modelling Lab | 0 | 1 |
| 2 | AGEN-6109 | Advanced Open Channel Hydraulics | 3 | 0 |
| 3 | AGEN-6110 | Applied Engineering Hydrology | 2 | 0 |
| | AGEN-6210 | Applied Engineering Hydrology Lab | 0 | 1 |
| 4 | AGEN-6111 | Planning and Design of Drainage Projects | 3 | 0 |
| 5 | AGEN-6112 | Irrigation Engineering and Practices | 2 | 0 |
| | AGEN-6212 | Irrigation Engineering and Practices Lab | 0 | 1 |
| 6 | AGEN-6113 | Design of Hydraulic Structures | 2 | 0 |
| | AGEN-6213 | Design of Hydraulic Structures Lab | 0 | 1 |
| 7 | AGEN-6114 | Soil Erosion and Watershed Management | 2 | 0 |
| | AGEN-6214 | Soil Erosion and Watershed Management Lab | 0 | 1 |
| 8 | AGEN-6115 | Climate Change and Hydrological Modelling | 2 | 0 |
| | AGEN-6215 | Climate Change and Hydrological Modelling Lab | 0 | 1 |

**Farm Machinery and Energy**

| S. No. | Course Code | Course Name | Theory | Lab |
| --- | --- | --- | --- | --- |
| 10 | AGEN-6116 | Harvesting Machinery | 2 | 0 |
| | AGEN-6216 | Harvesting Machinery Lab | 0 | 1 |
| 11 | AGEN-6117 | Tillage and Traction Dynamics | 2 | 0 |
| | AGEN-6217 | Tillage and Traction Dynamics Lab | 0 | 1 |
| 12 | AGEN-6118 | Theory of Manufacturing Processes | 2 | 0 |
| | AGEN-6218 | Theory of Manufacturing Processes Lab | 0 | 1 |
| 13 | AGEN-6119 | Evaporative Cooling Engineering | 2 | 0 |
| | AGEN-6219 | Evaporative Cooling Engineering Lab | 0 | 1 |
| 14 | AGEN-6120 | Agricultural Storage Engineering | 2 | 0 |
| | AGEN-6220 | Agricultural Storage Engineering Lab | 0 | 1 |
| 15 | AGEN-6121 | Product Design and Development | 3 | 0 |
| 16 | AGEN-6122 | Precision Agriculture | 2 | 0 |
| | AGEN-6222 | Precision Agriculture Lab | 0 | 1 |

**Structures and Environmental Engineering**

| S. No. | Course Code | Course Name | Theory | Lab |
| --- | --- | --- | --- | --- |
| 17 | AGEN-6123 | Water Supply and Sewerage | 3 | 0 |
| 18 | AGEN-6124 | Farm Waste Disposal Systems | 3 | 0 |
| 19 | AGEN-6125 | Advance Wastewater Engineering | 2 | 0 |
| | AGEN-6225 | Advance Wastewater Engineering Lab | 0 | 1 |
| 20 | AGEN-6126 | Advance Water Pollution Control | 2 | 0 |
| | AGEN-6226 | Advance Water Pollution Control Lab | 0 | 1 |
| 21 | AGEN-6127 | Air and Noise Pollution Control | 3 | 0 |
| 22 | AGEN-6128 | Land Surveying | 2 | 0 |
| | AGEN-6228 | Land Surveying Lab | 0 | 1 |
| 23 | AGEN-6129 | Energy and Environment | 3 | 0 |
| 24 | AGEN-6130 | Environmental Control in Farm Structures and Landscaping | 3 | 0 |

# MS Water Resources Management

2 Years (4 Semesters)

## List of Core Courses

| S. No. | Course Code | Course Name | Credit Hrs. 3 | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGEN-6105 | Irrigation Systems Management | 2 | 0 |
| | AGEN-6205 | Irrigation Systems Management Lab | 0 | 1 |
| 2 | AGEN-6106 | Water Resources Planning and Management | 2 | 0 |
| | AGEN-6206 | Water Resources Planning and Management Lab | 1 | 0 |
| 3 | AGEN-6131 | Remote Sensing and GIS Applications in Water Resources | 2 | 0 |
| | AGEN-6231 | Remote Sensing and GIS Applications in Water Resources Lab | 0 | 1 |
| 4 | AGEN-6132 | Spate Irrigation Practices and Management | 3 | 0 |
| 5 | AGEN-6122 | Precision Agriculture | 2 | 0 |
| | AGEN-6222 | Precision Agriculture Lab | 0 | 1 |
| 6 | AGEN-6133 | Pressurized Irrigation Systems | 3 | 0 |
| 7 | AGEN-6107 | Research Methodology | 3 | 0 |

## List of Elective Courses

| S. No. | Course Code | Course Name | Credit Hrs. 3 | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | AGEN-6108 | Groundwater Modelling | 2 | 0 |
| | AGEN-6208 | Groundwater Modelling Lab | 0 | 1 |
| 2 | AGEN-6109 | Advanced Open Channel Hydraulics | 3 | 0 |
| 3 | AGEN-6110 | Applied Engineering Hydrology | 2 | 0 |
| | AGEN-6210 | Applied Engineering Hydrology Lab | 0 | 1 |
| 4 | AGEN-6111 | Planning and Design of Drainage Projects | 3 | 0 |
| 5 | AGEN-6114 | Soil Erosion and Watershed Management | 2 | 0 |
| | AGEN-6214 | Soil Erosion and Watershed Management Lab | 0 | 1 |
| 6 | AGEN-6115 | Climate Change and Hydrological Modelling | 2 | 0 |
| | AGEN-6215 | Climate Change and Hydrological Modelling Lab | 0 | 1 |
| 8 | AGEN-6125 | Advance Wastewater Engineering | 2 | 0 |
| | AGEN-6225 | Advance Wastewater Engineering Lab | 0 | 1 |
| 9 | AGEN-6126 | Advance Water Pollution Control | 2 | 0 |
| | AGEN-6226 | Advance Water Pollution Control Lab | 0 | 1 |
| 10 | AGEN-6134 | Hydro-Climatology | 3 | 0 |
| 11 | AGEN-6135 | Land Water Management | 3 | 0 |
| 12 | AGEN-6136 | Environmental Impact Assessment | 3 | 0 |
| 13 | AGEN-6137 | Arid Zone Hydrology | 3 | 0 |
| 14 | AGEN-6138 | Agro-Meteorology | 3 | 0 |
| 15 | AGEN-6139 | Climate Change Impact Assessment | 3 | 0 |
| 16 | AGEN-6140 | Climate Change and Water Resources | 2 | 0 |
| | AGEN-6240 | Climate Change and Water Resources Lab | 0 | 1 |
| 17 | AGEN-6141 | Atmospheric Science | 3 | 0 |
| 18 | AGEN-6142 | Groundwater Hydrology and Exploration | 3 | 0 |
| 19 | AGEN-6143 | Water Quality Modelling and Management | 3 | 0 |
| 20 | AGEN-6144 | Hydrometeorology | 3 | 0 |







*Lab Equipments (Department of Agriculture Engineering)*

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*Department of Agriculture Engineering with Senior Dean of all Faculty & External Delegations*

## Department of
# Chemical Engineering

## Introduction and Overview

The application of Natural Sciences to develop technologies and find solutions has led to the development of Chemical Engineering profession as an ever growing discipline. Chemical Engineering applies the core scientific disciplines of chemistry, physics, mathematics, and biology to transform various raw materials or chemicals into more useful and valuable forms by using processes that involve chemical change. Chemical Engineers design new and effective ways to manufacture chemicals by working in close collaboration with chemists to pioneer the development of high-tech materials for specialized applications. The technological advancements in the field of Chemical Engineering are used as a fundamental indicator to estimate the industrial development of a particular region. KFUEIT has taken a bold initiative for the advancement of scientific knowledge by prioritizing the needs of regional industries. In light of this initiative, The department of Chemical Engineering was established in Spring 2018. This was followed by the establishment of various laboratories and hiring highly qualified faculty members, lending to launch of BS Chemical Engineering program in Fall 2019, After Pakistan Engineering Council (PEC) granted its approval to start the BS Chemical Engineering program.

## Vision & Mission

To become regional, national and international recognized organization for research and development in Chemical Engineering, Environmental Sciences, and Environmental Engineering for addressing the industrial and scientific challenges of the contemporary world by providing qualified manpower with strong interdisciplinary academic foundations needed to develop useful products and services for the society.

Therefore, the department of Chemical Engineering will provide high quality education and training to enable its graduates to accept the challenging leadership positions within the industry, academia, and regulatory bodies.

## Programs being offered

BS Chemical Engineering

BS Environmental Science

BS Environmental Engineering *

MS Environmental Science

MS Chemical Engineering

MS Environmental Engineering *

PhD Environmental Science *

* Subject to approval / NOC from HEC / Competent Authority / Accreditation Body

*"Knowledge is that which benefits not that  which is memorized"*

*-Imam Al-Shafi'i (RA)*



## Key Facts:

- Foreign qualified, experience and motivated teaching faculty
- 3 PhD and 2 Master's Degree qualified Members
- PEC and HEC approved Programs
- Engineering and Graphics Lab
- Applied Chemistry Lab
- Workshop Practices Lab
- Fluid Mechanics Lab
- Chemical Process Technology Lab
- Particulate Technology Lab
- Chemical Engineering Thermodynamics Lab
- Chemical Reaction Engineering Lab
- Separation Processes Lab
- Heat Transfer Lab
- Fuels and Energy Lab
- Instrumentation and Process Control Lab
- Process Design and Simulation Lab



*Students performing experiments*



*Students performing experiments*



*View of Seperation Processes Lab*

# Scheme of Study

## BS Chemical Engineering

4 Years (8 Semesters) Program

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | ISLS-1112 | Islamic Studies | 2 | - |
| | ENGL-1118 | Functional English | 3 | - |
| | MATH-1101 | Calculus-I | 3 | - |
| | CPEN-1110 | Introduction to Computing | 3 | - |
| | CPEN-1201 | Introduction to Computing Lab | - | 1 |
| | CHEM-1101 | Applied Chemistry-I | 3 | - |
| | CHEM-1201 | Applied Chemistry-I Lab | - | 1 |
| | CHEN-1102 | Chemical Process Principles-I | 3 | - |
| **Semester Credit Hours** | | | **17** | **2** |
| | | | **19** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | PAKS-1113 | Pakistan Studies | 2 | - |
| | ENGL-1119 | Communications Skills | 3 | - |
| | MATH-1102 | Calculus-II | 3 | - |
| | CHEM-1102 | Applied Chemistry-II | 3 | - |
| | CHEM-1202 | Applied Chemistry-II Lab | - | 1 |
| | CHEN-1104 | Particulate Technology | 3 | - |
| | CHEN-1204 | Particulate Technology Lab | - | 1 |
| | MEEN-1201 | Engineering Drawing & Graphics Lab | - | 1 |
| **Semester Credit Hours** | | | **14** | **3** |
| | | | **17** | |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | MATH-2102 | Linear Algebra | 3 | - |
| | PHYS-1123 | Engineering Physics | 2 | - |
| | PHYS-1223 | Engineering Physics Lab | - | 1 |
| | CHEN-2102 | Chemical Engineering Thermodynamics-I | 3 | - |
| | CHEN-2111 | Chemical Process Principles-II | 3 | - |
| | CHEN-2112 | Chemical Process Technology | 2 | - |
| | CHEN-2212 | Chemical Process Technology Lab | - | 1 |
| | MEEN-1212 | Workshop Practices Lab | - | 1 |
| **Semester Credit Hours** | | | **13** | **3** |
| | | | **16** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | MATH-2122 | Differential Equations | 3 | - |
| | CHEN-2113 | Chemical Engineering Thermodynamics-II | 3 | - |
| | CHEN-2213 | Chemical Engineering Thermodynamics Lab | - | 1 |
| | CHEN-2103 | Fluid Mechanics-I | 3 | - |
| | CHEN-2203 | Fluid Mechanics-I Lab | - | 1 |
| | CHEN-2114 | Fuels and Energy | 3 | - |
| | CHEN-2214 | Fuels and Energy Lab | - | 1 |
| | MSCI-2112 | Engineering Economics | 2 | - |
| **Semester Credit Hours** | | | **14** | **3** |
| | | | **17** | |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | MEEN-3134 | Numerical Methods for Engineers | 3 | - |
| | MEEN-3234 | Numerical Methods for Engineers Lab | - | 1 |
| | MEEN-1104 | Engineering Materials | 2 | - |
| | CHEN-3111 | Fluid Mechanics-II | 2 | - |
| | CHEN-3104 | Heat Transfer Operations | 3 | - |
| | CHEN-3204 | Heat Transfer Operations Lab | - | 1 |
| | CHEN-3105 | Mass Transfer Operations | 3 | - |
| | CHEN-3205 | Mass Transfer Operations Lab | - | 1 |
| **Semester Credit Hours** | | | **13** | **3** |
| | | | **16** | |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | CHEN-3102 | Chemical Reaction Engineering | 3 | - |
| | CHEN-3202 | Chemical Reaction Engineering Lab | - | 1 |
| | CHEN-3106 | Instrumentation and Process Control | 3 | - |
| | CHEN-3206 | Instrumentation and Process Control Lab | - | 1 |
| | CHEN-3108 | Process Design & Simulation | 2 | - |
| | CHEN-3208 | Process Design & Simulation Lab | - | 1 |
| | CHEN-3112 | Environmental Engineering | 2 | - |
| | CHEN-3212 | Environmental Engineering Lab | - | 1 |
| | MSCI-3111 | Entrepreneurship | 3 | - |
| **Semester Credit Hours** | | | **13** | **4** |
| | | | **17** | |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | HLTH-1113 | Basic Health Awareness | 2 | - |
| | CHEN-4101 | Separation Processes | 3 | - |
| | CHEN-4103 | Chemical Plant Design | 3 | - |
| | CHEN-4107 | Transport Phenomena | 3 | - |
| | CHEN-4301 | Design Project - Part A | 3 | - |
| | CHEN-41XX | Elective*-I | 3 | - |
| **Semester Credit Hours** | | | **17** | **-** |
| | | | **17** | |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours Theory | Credit Hours Lab |
|--------|-------------|--------------|---------------------|------------------|
| | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | - |
| | CHEN-4106 | Maintenance & Utility Engineering | 2 | - |
| | CHEN-41XX | Elective*-II | 3 | - |
| | CHEN-4301 | Design Project - Part B | 3 | - |
| | CHEN-4102 | Industrial Management | 2 | - |
| | CHEN-4201 | Separation Processes-II Lab | - | 1 |
| | CHEN-4108 | Process Safety Management | 2 | - |
| **Semester Credit Hours** | | | **14** | **1** |
| | | | **15** | |

| **Total Credit Hours** | **134** |
|-------------------------|---------|

## List of Elective Courses

| S. No. | Course Code | Course Name | Credit Hrs. 3 Theory | Credit Hrs. 3 Lab |
|--------|-------------|-------------|----------------------|-------------------|
| | CHEN-4130 | Novel Separation Processes | | |
| | CHEN-4131 | Polymer Engineering | | |
| | CHEN-4132 | Computational Fluid Dynamics (CFD) | | |
| | CHEN-4133 | Molecular Modelling | | |
| | CHEN-4134 | Gas Processing | | |

| S. No. | Course Code | Course Name | Credit Hrs. 3 Theory | Credit Hrs. 3 Lab |
|--------|-------------|-------------|----------------------|-------------------|
| | CHEN-4135 | Renewable Energy Resources | | |
| | CHEN-4136 | Petrochemicals | | |
| | CHEN-4137 | Industrial Energy Systems | | |
| | CHEN-4138 | Petroleum Refinery Engineering | | |
| | CHEN-4139 | Industrial Waste Management | | |

# BS Environmental Science

4 Years (8 Semesters) Program

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | ENSC-1101 | Introduction to Environmental Science | 3 | - |
| | BIOL-1181 | Applied Biology | 3 | - |
| | CHEM-1120 | Applied Chemistry | 3 | - |
| | CHEM-1220 | Applied Chemistry Lab | - | 1 |
| | MATH-1120 | Applied Mathematics | 3 | - |
| | ENGL-1118 | Functional English | 3 | - |
| | PAKS-1113 | Pakistan Studies | 2 | - |
| Semester Credit Hours | | | 16 | 1 |
| | | | 17 | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | ENSC-1103 | Introduction to Earth Sciences | 3 | - |
| | PHYS-1121 | Applied Physics | 3 | 1 |
| | PHYS-1221 | | | |
| | STAT-1100 | Statistical Theory | 2 | - |
| | SSCI-1111 | Introduction to Sociology | 3 | - |
| | ENGL-1119 | Communication Skills | 3 | - |
| | ISLS-1112 | Islamic Studies/Ethics* | 2 | - |
| Semester Credit Hours | | | 16 | 1 |
| | | | 17 | |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | CPEN-1110 | Introduction to Computing | 3 | - |
| | CPEN-1210 | Introduction to Computing Lab | 1 | - |
| | CHEM-4181 | Environmental Chemistry | 2 | - |
| | ENSC-2101 | Environmental Microbiology | 3 | - |
| | ECON-2118 | Applied Economics | 3 | - |
| | ENGL-2111 | Technical Writing and Presentation Skills | 3 | - |
| Semester Credit Hours | | | 14 | 1 |
| | | | 15 | |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | ENSC-2102 | Applied Ecology | 3 | - |
| | ENSC-2103 | Environmental Toxicology | 2 | - |
| | ENSC-2203 | Environmental Toxicology Lab | - | 1 |
| | ENSC-2104 | Environmental Pollution | 3 | - |
| | ENSC-2105 | Biodiversity and Conservation | 3 | - |
| | SSCI-4101 | Principles of Psychology | 3 | - |
| Semester Credit Hours | | | 14 | 1 |
| | | | 15 | |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | ENSC-3101 | Air and Noise Pollution | 3 | - |
| | ENSC-3102 | Environmental Engineering | 2 | - |
| | ENSC-3202 | Environmental Engineering Lab | - | 1 |
| | ENSC-3103 | Environmental Monitoring | 2 | - |
| | ENSC-3203 | Environmental Monitoring Lab | - | 1 |
| | MSCI-2110 | Project Management | 3 | - |
| | PAKS-2222 | International Relations | 3 | - |
| Semester Credit Hours | | | 13 | 2 |
| | | | 15 | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | ENSC-3104 | Environmental Economics | 3 | - |
| | ENSC-3105 | Environmental Biotechnology | 3 | - |
| | ENSC-3106 | Environmental Policy and Law | 3 | - |
| | ENSC-3107 | Natural Resources and Management | 3 | - |
| | ENSC-XXXX | Elective – I | 3 | - |
| Semester Credit Hours | | | 15 | - |
| | | | 15 | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | ENSC-4101 | Global Warming and Climate Change | 3 | - |
| | ENSC-4102 | Renewable Energy and Environment | 3 | - |
| | ENSC-4103 | Environmental Impact Assessment | 2 | - |
| | ENSC-4203 | Environmental Impact Assessment Lab | - | 1 |
| | ENSC-4104 | Wastewater Treatment and Management | 3 | - |
| | ENSC-4105 | Solid Waste Management | 3 | - |
| | HLTH-1113 | Basic Health Awareness | 2 | - |
| Semester Credit Hours | | | 16 | 1 |
| | | | 17 | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | |
|---|---|---|---|---|
| | | | Theory | Lab |
| | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | - |
| | ENSC-4106 | Occupational Safety and Health | 3 | - |
| | ENSC-4107 | Environmental Management Systems | 3 | - |
| | ENSC-4301 | Final Year Project | 6 | - |
| Semester Credit Hours | | | 14 | - |
| | | | 14 | |

| Total Credit Hours | 134 |
|---|---|

## Elective Courses

| Elective course will be offered from the pool of courses given below |
|---|
| Novel Separation Processes |
| Polymer Engineering |
| Computational Fluid Dynamics (CFD) |
| Molecular Modelling |
| Gas Processing |

# BS Environmental Engineering

4 Years (8 Semesters) Program

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | ENEN-1101 | Introduction to Environmental Engineering | 3(3,0) | 3 |
| 2 | MATH-1101 | Calculus-I | 3(3,0) | 3 |
| 3 | CPEN-1101 CPEN-1201 | Computing and Computation | 3(2,1) | 5 |
| 4 | ISLS-1112 | Islamic Studies / Ethics* | 2(2,0) | 2 |
| 5 | ENGL-1118 | Functional English | 3(3,0) | 3 |
| 6 | CHEM-1120 CHEM-1220 | Applied Chemistry | 3(2,1) | 5 |
| **Total** | | | **17** | **21** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CIEN-1100 CIEN-1200 | Surveying and Levelling | 3(2,1) | 5 |
| 2 | MATH-1102 | Calculus-II | 3(3,0) | 3 |
| 3 | PAKS-1113 | Pakistan Studies | 2(2,0) | 2 |
| 4 | ENEN-1102 | Environmental Physics | 2(2,0) | 2 |
| 5 | BIOL-1181 | Applied Biology | 3(3,0) | 3 |
| 6 | MEEN-1201 | Engineering Drawing & Graphics Lab | 1(0,1) | 3 |
| 7 | ENSC-2104 | Environmental Pollution | 3(3,0) | 3 |
| **Total** | | | **17** | **21** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | ENEN-2101 | Environmental Microbiology and Biotechnology | 3(3,0) | 3 |
| 2 | ENEN-2102 ENEN-2202 | Environmental Engineering Thermodynamics | 3(2,1) | 5 |
| 3 | MATH-2104 | Linear Algebra and Differential Equations | 3(3,0) | 3 |
| 4 | ENSC-3107 | Natural Resources and Management | 3(3,0) | 3 |
| 5 | ENSC-4102 | Renewable Energy and Environment | 3(3,0) | 3 |
| 6 | CHEM-4181 CHEM-4281 | Environmental Chemistry | 3(2,1) | 5 |
| **Total** | | | **18** | **22** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | ENEN-2103 ENEN-2203 | Fluid Mechanics for Environmental Engineers | 4(3,1) | 6 |
| 2 | ENSC-2103 ENSC-2203 | Environmental Toxicology | 3(2,1) | 5 |
| 3 | ENSC-3101 | Air and Noise Pollution | 3(3,0) | 3 |
| 4 | AGEN-4104 AGEN-4204 | Remote Sensing and GIS | 3(2,1) | 5 |
| 5 | ENSC-4105 | Solid Waste Management | 3(3,0) | 3 |
| **Total** | | | **16** | **22** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | ENSC-3101 | Pollutants Movement in Soil | 2(2,0) | 2 |
| 2 | ENEN-3101 | Sewerage System Design | 3(3,0) | 3 |
| 3 | ENEN-3102 | Ground Water Hydrology | 3(3,0) | 3 |
| 4 | ENSC-3103 | Environmental Monitoring | 3(2,1) | 5 |
| 5 | MSCI-3111 | Entrepreneurship | 3(3,0) | 3 |
| 6 | MEEN-3134 MEEN-3234 | Numerical Methods for Engineers | 4(3,1) | 6 |
| **Total** | | | **18** | **22** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | MSCI-2112 | Engineering Economics | 2(2,0) | 2 |
| 2 | ENEN-3103 | Wastewater Treatment and Desalination | 3(3,0) | 3 |
| 3 | ENEN-3104 | Cleaner Production Technologies | 3(3,0) | 3 |
| 4 | ENEN-3105 | Environmental Remediation | 3(3,0) | 3 |
| 5 | ENSC-3106 | Environmental Policy and Law | 3(3,0) | 3 |
| 6 | ENEN-3206 | Water Quality Analysis Lab | 2(0,2) | 6 |
| **Total** | | | **16** | **20** |

## Summer Semester

| S. No. | Course Code | Course Title | Duration |
|---|---|---|---|
| 1 | ENEN-3301 | Industrial Training/Internship | 4-6 weeks |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | STAT-1100 | Statistical Theory | 2(2,0) | 2 |
| 2 | HLTH-1113 | Basic Health Awareness | 2(2,0) | 2 |
| 3 | ENGL-2111 | Technical Writing and Presentation Skills | 3(3,0) | 3 |
| 4 | ENSC-4103 ENSC-4203 | Environmental Impact Assessment | 3(2,1) | 5 |
| 5 | ENEN-4101 | Wastewater Engineering and Design | 3(3,0) | 3 |
| 6 | ENEN-4301 | Final Year Design Project – Part A | 3(3,0) | 3 |
| **Total** | | | **18** | **22** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | SSCI-3120 | Constitution and Legal System of Pakistan | 2(2,0) | 2 |
| 2 | ENEN-4102 | Industrial and Procurement Management | 2(2,0) | 2 |
| 3 | ENEN-4103 | Occupational Health and Safety | 2(2,0) | 2 |
| 4 | ENEN-4104 | Industrial and Hazardous Waste Management | 3(3,0) | 3 |
| 5 | ENEN-4205 | Environmental Modelling Lab | 1(0,1) | 3 |
| 6 | ENSC-4107 | Environmental Management Systems | 3(3,0) | 3 |
| 7 | ENEN-4301 | Final Year Design Project – Part B | 3(0,3) | 3 |
| **Total** | | | **16** | **18** |

*Non-Muslim students can opt for Ethics instead of Islamic Studies*

*"This is your World that you strive to gain and that you cry over"*

*- Hazrat Umar Ibn Al-Khattab (RA)*

# List of MS Chemical Engineering Courses

## Core Courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab |
|--------|-------------|--------------|--------------------|
| 1 | CHEN-5101 | Research Methodology | 3(3,0) |
| 2 | CHEN-5102 | Advanced Chemical Reaction Engineering | 3(3,0) |
| 3 | CHEN-5103 | Advanced Heat Transfer | 3(3,0) |
| 4 | CHEN-5104 | Process Safety and Loss Prevention | 3(3,0) |

# MS & PhD Environmental Science

From the following consolidated list of courses, first four (04) courses will be offered as core courses while further (04) four more courses will be offered as elective courses in MS Environmental Science program. However, for PhD Environmental Science program, a total of six (06) courses with course code format ENSC-61XX and ENSC-71XX will be offered from the following consolidated list of courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab |
|--------|-------------|--------------|--------------------|
| 1. | ENSC-5101 | Research Methodology | 3(3,0) |
| 2. | ENSC-5102 | Statistical Data Analysis | 3(3,0) |
| 3. | ENSC-5103 | Environmental Analytical Techniques | 3(2,1) |
| 4. | ENSC-5104 | Environmental Chemistry and Microbiology | 3(3,0) |
| 5. | ENSC-5105 | Advance Principles of Environmental Science | 3(3,0) |
| 6. | ENSC-5106 | Physico-Chemical Processes in Environmental Science | 3(3,0) |
| 7. | ENSC-5107 | Advance Biological Wastewater Treatment Processes | 3(3,0) |
| 8. | ENSC-5108 | Advance Anaerobic Wastewater Treatment | 3(3,0) |
| 9. | ENSC-5109 | Green Engineering Technologies | 3(3,0) |
| 10. | ENSC-6101 | Advance Membrane Technologies for Water and Waste-water Treatment | 3(3,0) |
| 11. | ENSC-6102 | Biotechnology for Environment | 3(3,0) |
| 12. | ENSC-6103 | Ecology and Risk Assessment | 3(3,0) |
| 13. | ENSC-6104 | Strategic Environmental Impact Assessment | 3(3,0) |
| 14. | ENSC-6105 | Advance Remote Sensing and GIS | 3(2,1) |
| 15. | ENSC-6106 | Remote Sensing and GIS Applications in Environmental Science | 3(2,1) |
| 16. | ENSC-6107 | Environmental Laws and Policies | 3(3,0) |
| 17. | ENSC-6108 | Advance Occupational Health and Safety | 3(3,0) |

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab |
|--------|-------------|--------------|--------------------|
| 18. | ENSC-6109 | Municipal Solid Waste Principles and Management | 3(3,0) |
| 19. | ENSC-6110 | Advance Air Pollution Control | 3(3,0) |
| 20. | ENSC-6111 | Hazardous Air Pollutants (HAPs) Characterization and Control | 3(3,0) |
| 21. | ENSC-6112 | Industrial Wastewater Pollution Control and Management | 3(3,0) |
| 22. | ENSC-6113 | Agricultural Pollution Control | 3(3,0) |
| 23. | ENSC-6114 | Marine Pollution Monitoring and Control | 3(3,0) |
| 24. | ENSC-7101 | Advance Environmental Remediation | 3(3,0) |
| 25. | ENSC-7102 | Meteorology and Effluent Dispersion | 3(3,0) |
| 26. | ENSC-7103 | Advance Wastewater Engineering and Design | 3(3,0) |
| 27. | ENSC-7104 | Advance Water Supply and Wastewater Collection Systems | 3(3,0) |
| 28. | ENSC-7105 | Advance Water Resources Management | 3(3,0) |
| 29. | ENSC-7106 | Advance Watershed Management | 3(3,0) |
| 30. | ENSC-7107 | Renewable Energy Resources | 3(3,0) |
| 31. | ENSC-7108 | Applied Mathematics for Environmental Scientists | 3(3,0) |
| 32. | ENSC-7109 | Water Quality Modelling | 3(3,0) |
| 33. | ENSC-7110 | Modelling of Environmental Systems | 3(2,1) |



*Foreign Delegation Visiting Department of Chemical Engineering*

*BOS of Department of Chemical Engineering (December 2018)*



*BOS of Department of Chemical Engineering Group Photo (December 2018)*

# Faculty Profile

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*Industrial Visit (January 2018)*

## Department of
# Civil Engineering

## Introduction and Overview

History of Civil Engineering dates back to the evolution of human needs for food, shelter and routes for transportation. It stands among the oldest engineering disciplines in human history and is universally recognized as the mother of all engineering disciplines. Civil Engineering is a broad and vast field which encompasses everything that we see around us, that either has been built or being built using the natural and or man-made resources. Civil Engineering covers the planning, design, construction, operations and maintenance of buildings, bridges, streets and highways, railways, airports, industries, all kind of infrastructure for water supply, sewage, hydraulic structures and irrigation systems and many more.

Civil Engineering Department at Khwaja Fareed University of Engineering & Information Technology was established in 2017 with the first intake of fifty (50) students of BS Civil Engineering from Fall 2017. Pakistan Engineering Council issued the green signal after the successful zero visit in November 2017. MS Civil Engineering (Specialization in Water Resources & Irrigation Engineering) is started from Spring 2019 after HEC issued the NOC. KFUEIT is among the few public sector universities in Southern Punjab, offering BS and MS Programs in Civil Engineering. Infrastructure of department has already been completed and labs have been equipped with the state-of-the-art equipment and commercial testing facilities. Currently, the departmental lab facilities are not only meeting the educational requirements and professional growth of students, but also covering the regional needs of commercial testing for various industrial projects.

## Vision & Mission

Vision of the department is to achieve the national and international acceptance by developing the learning environment for theoretical and practical education in Civil Engineering and purposeful research. We aim to produce competent and problem solver civil engineers in the seven major areas: Hydraulics and water resources, Structural Engineering, Materials and Forensic Engineering, Geotechnical Engineering, Transportation Engineering, Environmental engineering and Construction Project Management. Mission of the department is to impart high quality civil engineering education by missing modern teaching techniques and research methodologies for acquiring the latest, creative and lifelong learning

## Programs being offered

| BS Civil Engineering (4 Years Program) | MS Civil Engineering (2 Years Program) |
| --- | --- |
| | Specialization in Water Resources & Irrigation Engineering |

knowledge of engineering, sciences and technology. The mission also focuses on the development of professional and ethical qualities required of a successful Engineer and responsible member of society for national and international infrastructural and socio-economic development.





## Key Facts:

- Departmental Strength
  - 1 PhD, 4 MSc Civil Engineering
  - Director Labs, 3 Engineers, 8 Support Staff

- Well established departmental infrastructure (12 faculty offices, 4 lecture theatres, 13 Large – scale laboratories, 2 Admin offices, 1 departmental Library)

- PEC and HEC Approved Program

- Faculty is graduated from the top ranked universities nationally and internationally

- Laboratories with latest Equipment and Machinery (Latest Universal Testing Machine, Computerized Triaxial Compression Machine, Reaction Frame, Computerized Compression Testing Machine, Non – destructive Testing Facilities.



## Lab Facilities / Infrastructure

- Following state of the art laboratory facilities have been developed at the Department of Civil Engineering.
- Engineering Mechanics Lab
- Computers Center Lab
- Strength of Materials Lab
- Plain and Reinforced Concrete Lab
- Geotechnical Engineering Lab
- Foundation Engineering Lab
- Hydraulics Engineering Lab
- Transportation Engineering Lab
- Hydrology and Irrigation Engineering Lab
- Environmental Engineering Lab
- GIS & RS Lab
- Earthquake Engineering Lab
- Survey Lab

*BOS (Department of Civil Engineering)*



*Faculty of Civil Engineering Department*



*Civil Engineering Lab Equipments*

## Commercial Activities (Tests and Reports)

### Civil Engineering Department

Civil Engineering Department is actively engaged in commercial testing services by offering services from following labs:

- Strength of Materials Lab
- Plain & Reinforced Concrete Lab
- Transportation Lab
- Survey Lab
- Geotechnical Engineering Lab
- Hydraulics Engineering Lab
- Hydrology & Irrigation Engineering

The Department has clients from a wide range of government, private and industry stakeholders. Following departments, industries, consultants and construction companies are among our valuable clients and taking benefit of our services:

- NESPAK Pvt Ltd
- Unilever Pakistan Pvt Ltd
- Fatima Fertilizer Co Ltd
- Mott MacDonald Pakistan (MMP)
- Mari Petroleum Co Ltd
- Pak Arab Fertilizers Pvt Ltd
- Municipal Committees
- ETTIHAD Industries
- TMA's
- Asian Consultants
- Highways Department
- Public Health Engineering Department
- ACE Pvt Ltd RYK
- And many others construction companies





Students have the opportunities to get hands-on experience and chances of interaction with the future employers and to grasp the essence of their practical field work. The testing data is useful for the students for learning the real world scenarios. Testing experimentation is creating a professional environment that is directly helping in grooming the abilities of future Civil Engineers.

*"A moment of patience in the moment of anger prevents thousands of moments of regrets"*

*- Hazrat Ali Ibn Abi Talib (RA)*

*Civil Engineering Lab Equipments*

*Students Performing Lab Experiments with Instrutors*

# Scheme of Study

## BS Civil Engineering

### Semester 1

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-1101 | Construction Materials | 2 | 2 |
| 2 | CIEN-1201 | Construction Materials Lab | 3 | 1 |
| 3 | COSC-1101 | Programming Fundamentals | 3 | 3 |
| 4 | COSC-1201 | Programming Fundamentals Lab | 3 | 1 |
| 5 | CIEN-1102 | Civil Engineering Drawing | 1 | 1 |
| 6 | CIEN-1202 | Civil Engineering Drawing Lab | 6 | 2 |
| 7 | ELEC-1108 | Basic Electrical Engineering | 1 | 1 |
| 8 | ELEC-1208 | Basic Electrical Engineering Lab | 3 | 1 |
| 9 | MATH-1131 | Applied Calculus | 3 | 3 |
| 10 | ISLS-1112/ ETIC-1112 MTSC-3209 | Islamic Studies/ Ethics | 2 | 2 |
| **Credit Hours** | | | **17** | **27** |

### Semester 2

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-1103 | Surveying-I | 2 | 2 |
| 2 | CIEN-1203 | Surveying-I Lab | 3 | 1 |
| 3 | CIEN-1104 | Engineering Geology | 2 | 2 |
| 4 | PHYS-1124 | Engineering Mechanics | 2 | 2 |
| 5 | PHYS-1224 | Engineering Mechanics Lab | 3 | 1 |
| 6 | HLTH-1113 | Basic Health Awareness | 2 | 2 |
| 7 | ENGL-1119 | Communication Skills | 3 | 3 |
| 8 | PAKS-1113 | Pakistan Studies | 2 | 2 |
| **Credit Hours** | | | **19** | **15** |

### Semester 3

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-2101 | Mechanics of Materials | 2 | 2 |
| 2 | CIEN-2201 | Mechanics of Materials Lab | 3 | 1 |
| 3 | CIEN-2102 | Fluid Mechanics-I | 3 | 3 |
| 4 | CIEN-2202 | Fluid Mechanics-I Lab | 3 | 1 |
| 5 | CIEN-2103 | Geotechnical Engineering-I | 3 | 3 |
| 6 | CIEN-2203 | Geotechnical Engineering-I Lab | 3 | 1 |
| 7 | CIEN-2104 | Civil Eng. Construction & Graphics | 1 | 1 |
| 8 | CIEN-2204 | Civil Eng. Construction & Graphics Lab | 6 | 2 |
| 9 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 2 |
| 10 | MATH-2122 | Differential Equations | 3 | 3 |
| **Credit Hours** | | | **29** | **19** |

### Semester 4

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-2105 | Surveying-II | 2 | 2 |
| 2 | CIEN-2205 | Surveying-II Lab | 3 | 1 |
| 3 | CIEN-2106 | Elementary Structural Analysis | 2 | 2 |
| 4 | CIEN-2107 | Plain & Reinforced Concrete-I | 3 | 3 |
| 5 | CIEN-2207 | Plain & Reinforced Concrete-I Lab | 3 | 1 |
| 6 | MSCI-2112 | Eng Economics | 2 | 2 |
| 7 | MSCI-3109 | Construction Project Management | 2 | 2 |
| 8 | MSCI-3109 | Construction Project Management lab | 3 | 1 |
| 9 | STAT-2131 | Probability and Statistics | 3 | 3 |
| **Credit Hours** | | | **24** | **18** |

### Semester 5

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-3101 | Fluid Mechanics-II | 3 | 3 |
| 2 | CIEN-3201 | Fluid Mechanics-II Lab | 3 | 1 |
| 3 | CIEN-3102 | Structural Analysis | 2 | 2 |
| 4 | CIEN-3103 | Geotechnical Engineering-II | 3 | 3 |
| 5 | CIEN-3203 | Geotechnical Engineering-II Lab | 3 | 1 |
| 6 | CIEN-3104 | Environmental Engineering-I | 2 | 2 |
| 7 | CIEN-3204 | Environmental Engineering-I Lab | 3 | 1 |
| 8 | CIEN-3105 | Transportation Engineering-I | 2 | 2 |
| 9 | CIEN-3205 | Transportation Engineering-I Lab | 3 | 1 |
| 10 | MATH-2124 | Numerical Analysis | 3 | 3 |
| **Credit Hours** | | | **27** | **19** |

### Semester 6

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-3106 | Steel Structures | 2 | 2 |
| 2 | CIEN-3107 | Hydraulic Engineering | 2 | 2 |
| 3 | CIEN-3207 | Hydraulic Engineering Lab | 3 | 1 |
| 4 | CIEN-3108 | Structural Mechanics | 2 | 2 |
| 5 | CIEN-3208 | Structural Mechanics Lab | 3 | 1 |
| 6 | CIEN-3109 | Engineering Hydrology | 2 | 2 |
| 7 | CIEN-3209 | Engineering Hydrology Lab | 3 | 1 |
| 8 | CIEN-3110 | Quantity & Cost estimation | 2 | 2 |
| 9 | CIEN-3210 | Quantity & Cost estimation lab | 3 | 1 |
| 10 | ENGL-2111 | Technical Writing & Presentation Skills | 3 | 3 |
| **Credit Hours** | | | **25** | **17** |

*"When all else is lost, the future still remains"*

*- Christian Nestel Bovee*

## Semester 7

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-4101 | Plain & Reinforced Concrete-II | 3 | 3 |
| 2 | CIEN-4201 | Plain & Reinforced Concrete-II Lab | 3 | 1 |
| 3 | CIEN-4102 | Transportation Engineering-II | 2 | 2 |
| 4 | CIEN-4202 | Transportation Engineering-II Lab | 3 | 1 |
| 5 | CIEN-4103 | Environmental Engineering-II | 2 | 2 |
| 6 | CIEN-4104 | Structural Engineering | 2 | 2 |
| 7 | CIEN-4204 | Structural Engineering-Lab | 3 | 1 |
| 8 | CIEN-4106 | Civil Engineering Project I | 3 | 3 |
| 9 | CIEN-4105 | Geo-Informatics | 2 | 2 |
| 10 | CIEN-4205 | Geo-Informatics Lab | 3 | 1 |
| **Credit Hours** | | | **26** | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Contact Hours | Credit Hours |
|---|---|---|---|---|
| 1 | CIEN-4107 | Irrigation Engineering | 3 | 3 |
| 2 | CIEN-4207 | Irrigation Engineering Lab | 3 | 1 |
| 3 | CIEN-4108 | Design of Structures | 2 | 2 |
| 4 | CIEN-4208 | Design of Structures Lab | 3 | 1 |
| 5 | CIEN-4109 | Architecture & Town Planning | 2 | 2 |
| 6 | CIEN-4110 | Civil Engineering Project II | 3 | 3 |
| 7 | MSCI-3107 | Hazards & Disaster Management | 3 | 3 |
| **Credit Hours** | | | **19** | **15** |

| **Total Credit Hours** | **138** |
|---|---|

## MS Civil Engineering

Civil Engineering Department's target is to launch the master programs of Civil Engineering in the following areas of specializations.
- Water Resources and Irrigation Engineering
- Structure Engineering
- Geotechnical Engineering
- Transportation Engineering
- Environmental Engineering

## MS Civil Engineering (Water Resources & Irrigation Engineering)

The department launched Graduate degree program in Civil Engineering with major in Water Resources and Irrigation Engineering from Spring 2019. The objective of initiating this degree was to lay emphasis on water crisis and power related issues being faced globally. Furthermore, it was also aimed to address the deteriorating groundwater quality by conducting advance level research in the field of groundwater resource management and remediation.

## Water Resources & Irrigation Engineering

| S. No. | Course Code | Course Title | Examination Marks | Part-II (Lab) Sessional | Part-II (Lab) Viva Voce | Contact Hours | Contact Hours |
|---|---|---|---|---|---|---|---|
| | | **CORE SUBJECTS** | | | | | |
| 1 | CIEN-5101 | Water Resource System | 100 | | | 2 | 2 |
| | CIEN-5201 | Water Resource System Lab | | 75 | 25 | 1 | 3 |
| 2 | CIEN-5102 | Applied Engineering Hydrology | 100 | | | 2 | 2 |
| | CIEN-5202 | Applied Engineering Hydrology Lab | | 75 | 25 | 1 | 3 |
| 3 | CIEN-5103 | Water Resources Management & Planning | 100 | | | 2 | 2 |
| | CIEN-5203 | Water Resources Management & Planning Lab | | 75 | 25 | 1 | 3 |
| 4 | CIEN-6101 | Sediment Transport Engineering | 100 | | | 2 | 2 |
| | CIEN-6201 | Sediment Transport Engineering Lab | | 75 | 25 | 1 | 3 |
| 5 | CIEN-6102 | Design of Hydraulic Structures | 100 | | | 2 | 2 |
| | CIEN-6202 | Design of Hydraulic Structures Lab | | 75 | 25 | 1 | 3 |
| 6 | CIEN-6103 | Irrigation Engineering & Practices | 100 | | | 2 | 2 |
| | CIEN-6203 | Irrigation Engineering & Practices Lab | | 75 | 25 | 1 | 3 |
| **Total (Core Subjects)** | | | **600** | **450** | **150** | **12** | **06** |

## ELECTIVE SUBJECTS (ANY TWO OF THE FOLLOWINGS)

| S. No. | Course Code | Course Title | Examination Marks | Part-II (Lab) Sessional | Part-II (Lab) Viva Voce | Contact Hours | Contact Hours |
|---|---|---|---|---|---|---|---|
| | | **CORE SUBJECTS** | | | | | |
| 1 | CIEN-5104 | Advance Fluid Mechanics | 100 | | | 2 | 2 |
| | CIEN-5204 | Advance Fluid Mechanics Lab | | 75 | 25 | 1 | 3 |
| 2 | CIEN-5105 | Advanced Fluvial Hydraulics | 100 | | | 2 | 2 |
| | CIEN-5205 | Advanced Fluvial Hydraulics Lab | | 75 | 25 | 1 | 3 |
| 3 | CIEN-5106 | Drainage Engineering | 100 | | | 2 | 2 |
| | CIEN-5206 | Drainage Engineering Lab | | 75 | 25 | 1 | 3 |
| 4 | CIEN-5107 | Resources Conservation Engineering | 100 | | | 2 | 2 |
| | CIEN-5207 | Resources Conservation Engineering Lab | | 75 | 25 | 1 | 3 |
| 5 | CIEN-6104 | Computer aided Design of Hydraulic Structures | 100 | | | 2 | 2 |
| | CIEN-6204 | Computer aided Design of Hydraulic Structures Lab | | 75 | 25 | 1 | 3 |
| 6 | CIEN-6105 | Application of RS & GIS in Civil Engineering | 100 | | | 2 | 2 |
| | CIEN-6205 | Application of RS & GIS in Civil Engineering Lab | | 75 | 25 | 1 | 3 |
| 7 | CIEN-6106 | Ground Water Engineering | 100 | | | 2 | 2 |
| | CIEN-6206 | Ground Water Engineering Lab | | 75 | 25 | 1 | 3 |
| 8 | CIEN-6107 | Hydro Power Engineering | 100 | | | 2 | 2 |
| | CIEN-6207 | Hydro Power Engineering Lab | | 75 | 25 | 1 | 3 |
| 9 | CIEN-7101 | Hydrological Modeling | 100 | 75 | 25 | 2 | 2 |
| | CIEN-7102 | Hydrological Modeling Lab | | | | 1 | 3 |
| 10 | CIEN-7102 | River Engineering & Flood Management | 100 | 75 | 25 | 2 | 2 |
| | CIEN-7202 | River Engineering & Flood Management Lab | | | | 1 | 3 |
| 11 | CIEN-7103 | Climate Change and Water Resources | 100 | 75 | 25 | 2 | 2 |
| | CIEN-7203 | Climate Change and Water Resources Lab | | | | 1 | 3 |
| 12 | CIEN-7104 | Coastal sediments and beach processes | 100 | 75 | 25 | 2 | 2 |
| | CIEN-7204 | Coastal sediments and beach processes Lab | | | | 1 | 3 |
| 13 | CIEN-7105 | Environmental Fluid Mechanics | 100 | 75 | 25 | 2 | 2 |
| | CIEN-7205 | Environmental Fluid Mechanics Lab | | | | 1 | 3 |
| 14 | CIEN-7106 | Watershed Management & Soil Erosion | 100 | 75 | 25 | 2 | 2 |
| | CIEN-7206 | Watershed Management & Soil Erosion | | | | 1 | 3 |
| **Total (Elective Subjects)** | | | **200** | **150** | **50** | **04** | **02** |

## MS Theses

| S. No. | Course Code | Course Title | Examination Marks | Part-II (Lab) Sessional | Part-II (Lab) Viva Voce | Contact Hours | Contact Hours |
|---|---|---|---|---|---|---|---|
| | | **CORE SUBJECTS** | | | | | |
| 1 | CIEN-8101 | Pre-Final Defence Examination | - | 30 | 30 | 3 | |
| 2 | CIEN-8102 | Final Defence Examination | - | 60 | 70 | 9 | |
| 3 | | Research Papers | 10 | - | - | | |
| **Total (Elective Subjects)** | | | **10** | **90** | **100** | **12** | |
| | | | **810** | **690** | **300** | | |
| | | | **1700** | | | | |

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*"Don't depend too much on anyone in this world because even your own shadow leaves you when you are in the dark!"*

*- Ibn Taymiyyah (RA)*

# Department of
# Computer Engineering

## Introduction and Overview

Computer Engineering Department (CPED) at Khwaja Fareed University of Engineering and Information Technology (KFUEIT) was established in 2017. CPED enjoys newly purpose built infrastructure with faculty offices, teaching rooms, lecture theatres and laboratories. The department has well experienced teaching staff from diverse backgrounds. CPED offers specialization in:

- Image Processing
- VLSI System Design
- Communication
- Software Engineering

At CPED we follow Outcome Base Education (OBE) paradigm to get aligned with Washington accord for our Undergraduate Programs.

## Department Vision & Mission

To become a globally recognized Computer Engineering Department that will have an overwhelming impact on society through continual innovation in education, research, creativity and entrepreneurship.

The Department mission is the discovery, dissemination and application of knowledge. It offers degree programs at the undergraduate and graduate levels and pursues a broad agenda of research and creative activities. It aims to shape the future by:

- Offering nationally competitive and internationally recognized opportunities for learning
- Fostering continual innovation and creativity and promoting new ideas
- Making a significant, sustainable and socially responsible contribution to the region, the nation and the World
- Creating awareness and promoting health, economic and cultural wellbeing

## Key Features / Facilities

- 5 PhD Faculty Members
- 4 MS Faculty Members
- 3 Lab Engineers
- 3 Research Assistants
- 3 Lab Assistants
- 1 Office Attendant
- Young, energetic and dynamic team.
- Outcome Based Education in practice at CPE to conform to Washington Accord.
- Dedicated infra-structure. (12 Faculty Offices, 6 large scale labs, 2 Admin offices)
- PEC and HEC Approved Programs
- Our faculty is graduated from the top ranked Universities nationally and internationally.
- State of art laboratories (Latest Computing machines, micro-processors, micro-controllers, trainer kits)
- State of art research equipment
- One of the first spectral Imaging Lab in Pakistan



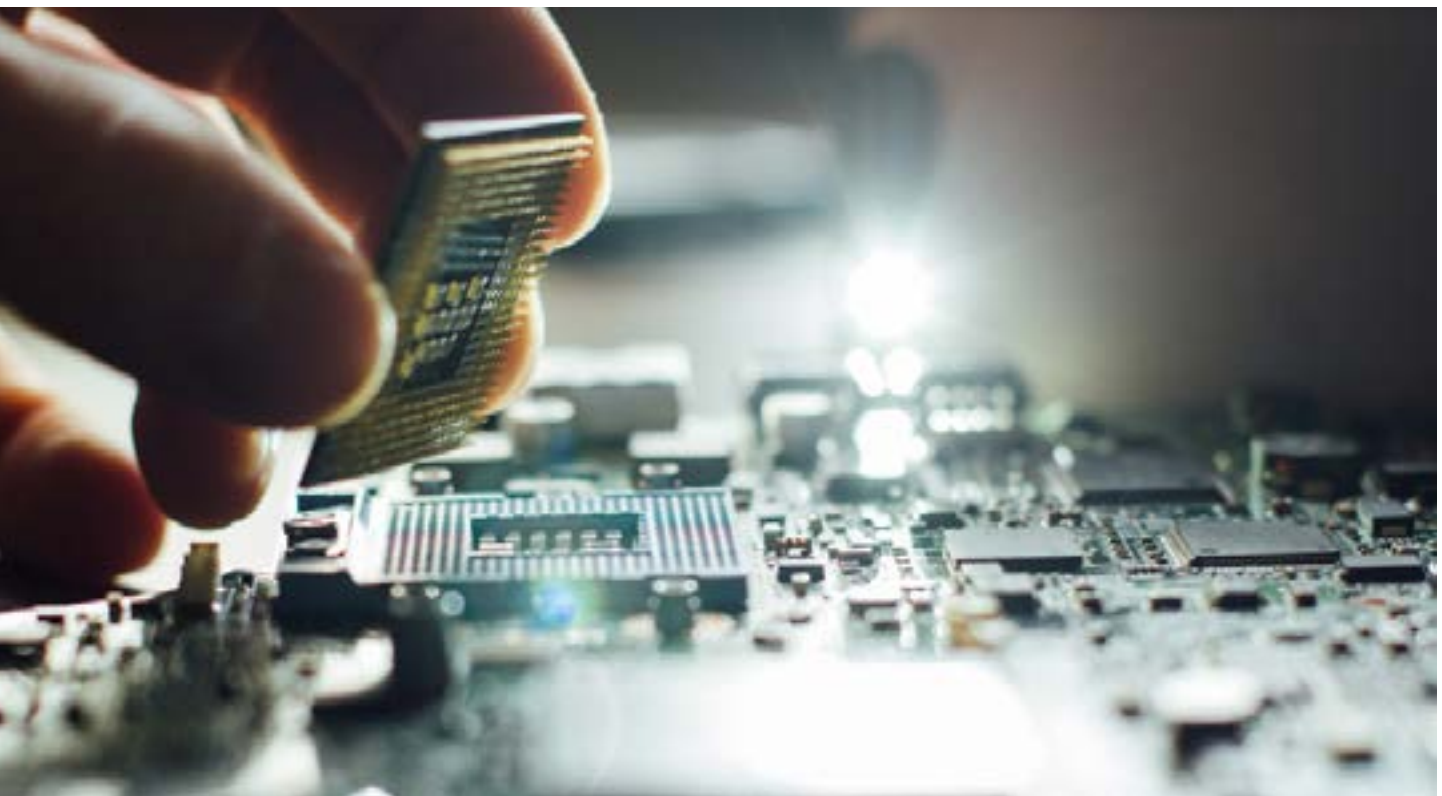## Programs being offered

| BS Computer Engineering |
| BS Software Engineering |
| MS Computer Engineering |
| MS Software Engineering |

*Students & Faculty Members of Computer Engineering Department with Vice Chancellor (ESPICE Project Exibition)*

# Scheme of Study

## BS Computer Engineering

### Semester 1

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | ISLS-1112 | Islamic Studies/Ethics | Humanities | 2 |
| 2 | ENGL-1118 | Functional English | Humanities | 3 |
| 3 | MATH-1100 | Calculus | Natural Sciences | 3 |
| 4 | PHYS-1123 | Engineering Physics | Natural Sciences | 2 |
| 5 | PHYS-1223 | Engineering Physics Lab | Natural Sciences | 1 |
| 6 | CPEN-1114 | Introduction to Computing | Computing | 2 |
| 7 | CPEN-1214 | Introduction to Computing Lab | Computing | 1 |
| 8 | ELEN-1201 | Workshop practice | Engineering Foundation | 1 |
| **Credit Hours** | | | **15** | |

### Semester 2

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | PAKS-1113 | Pakistan Studies | Humanities | 2 |
| 2 | CPEN-1122 | Intensive Programming | Computing | 3 |
| 3 | CPEN-1122 | Intensive Programming | Computing | 1 |
| 4 | MATH-2103 | Linear Algebra | Natural Sciences | 3 |
| 5 | CPEN-1121 | Circuit Analysis | Engineering Foundation | 3 |
| 6 | CPEN-1221 | Circuit Analysis Lab | Engineering Foundation | 1 |
| 7 | ENGL-1119 | Communication Skills | Humanities | 3 |
| 8 | ELEN-2201 | Computer Aided Engineering Drawing | Engineering Foundation | 1 |
| **Credit Hours** | | | **17** | |

### Semester 3

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | CPEN-2120 | Digital Logic Design | Engineering Foundation | 3 |
| 2 | CPEN-2220 | Digital Logic Design Lab | Engineering Foundation | 1 |
| 3 | CPEN-2123 | Object Oriented Programming | Engineering Foundation | 3 |
| 4 | CPEN-2223 | Object Oriented Programming Lab | Engineering Foundation | 1 |
| 5 | CPEN-2110 | Discrete structures | Computing | 3 |
| 6 | CPEN-2122 | Electronic Devices and Circuits | Engineering Foundation | 3 |
| 7 | CPEN-2222 | Electronic Devices and Circuits Lab | Engineering Foundation | 1 |
| 8 | MATH-2122 | Differential Equations | Natural Sciences | 3 |
| **Credit Hours** | | | **18** | |

### Semester 4

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | STAT-2104 | Probability & Statistics | Natural Sciences | 3 |
| 2 | CPEN-2124 | Computer Organization & Architecture | Engineering Foundation | 3 |
| 3 | CPEN-2224 | Computer Organization & Architecture Lab | Engineering Foundation | 1 |
| 4 | ENGL-2121 | Technical Report Writing Skills | Core (Breadth) | 2 |
| 5 | CPEN-2121 | Data Structures and Algorithms | Engineering Foundation | 3 |
| 6 | CPEN-2221 | Data Structures and Algorithms Lab | Engineering Foundation | 1 |
| 7 | CPEN-2125 | Signals & Systems | Engineering Foundation | 3 |
| 8 | CPEN-2225 | Signals & Systems Lab | Engineering Foundation | 1 |
| **Credit Hours** | | | **17** | |

### Semester 5

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | MSCI-XXXX | Management Elective-I | Management Science | 3 |
| 2 | CPEN-3131 | Operating Systems | Core (Breadth) | 3 |
| 3 | CPEN-3231 | Operating Systems Lab | Core (Breadth) | 1 |
| 4 | CPEN-3132 | Microprocessors and Microcontroller Interfacing | Core (Breadth) | 3 |
| 5 | CPEN-3232 | Microprocessors and Microcontroller Interfacing Lab | Core (Breadth) | 1 |
| 6 | MATH-3116 | Numerical Analysis | Core (Breadth) | 3 |
| 7 | CPEN-3134 | Digital Signal Processing | Core (Breadth) | 3 |
| 8 | CPEN-3234 | Digital Signal Processing Lab | Core (Breadth) | 1 |
| **Credit Hours** | | | **18** | |

### Semester 6

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | CPEN-314X | CE Depth Elective-I | Major Based Core (Depth) | 3 |
| 2 | CPEN-3135 | Data Communication & Computer Networks | Core (Breadth) | 3 |
| 3 | CPEN-3235 | Data Communication & CompNet Lab | Core (Breadth) | 1 |
| 4 | SWEN-1111 | Software Engineering | Core (Breadth) | 3 |
| 5 | CPEN-3130 | Digital System Design | Core (Breadth) | 3 |
| 6 | CPEN-3230 | Digital System Design Lab | Core (Breadth) | 1 |
| 7 | SWEN-3111 | Database Systems | Computing | 3 |
| 8 | SWEN-3211 | Database Systems Lab | Computing | 1 |
| **Credit Hours** | | | **18** | |

### Semester 7

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | CPEN-314X | CE Depth Elective- II | Major Based Core (Depth) | 3 |
| 2 | CPEN-4390 | FYP-I | Senior Design project | 3 |
| 3 | CPEN-415X | IDEE-I | IDEE (Breadth) | 3 |
| 4 | CPEN-4140 | CE Depth Elective-III | Major Based Core (Depth) | 3 |
| 5 | CPEN-415X | IDEE-II | IDEE (Breadth) | 3 |
| 6 | SSCI-3120 | Constitution and Legal System of Pakistan | Humanities | 2 |
| **Credit Hours** | | | **17** | |

### Semester 8

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | MSCI-XXXX | Management elective-II | Management Sciences | 2 |
| 2 | CPEN-4391 | FYP-II | Senior Design project | 3 |
| 3 | CPEN-415X | IDEE-III | IDEE (Breadth) | 3 |
| 4 | CPEN-414X | CE Depth Elective-IV | Major Based Core (Depth) | 3 |
| 5 | HLTH-1113 | Basic Health Awareness | Humanities | 2 |
| 6 | SSCI-2111 | Professional Ethics | Humanities | 2 |
| **Credit Hours** | | | **15** | |

| **GRAND TOTAL** | | | **135** |
|---|---|---|---|

# BS Software Engineering

## Semester 1

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | ISLS-1112 | Islamic Studies/Ethics | General Education | 2 |
| 2 | ENGL-1118 | Functional English | General Education | 3 |
| 3 | MATH-1100 | Calculus | Math & Science Foun | 3 |
| 4 | PHYS-1123 | Engineering Physics | Math & Science Foun | 2 |
| 5 | PHYS-1223 | Engineering Physics Lab | Math & Science Foun | 1 |
| 6 | CPEN-1114 | Introduction to Computing | General Education | 2 |
| 7 | CPEN-1214 | Introduction to Computing Lab | General Education | 1 |
| 8 | MSCI-2116 | Principles of Accounting | Management Sciences | 3 |
| **Credit Hours** | | | | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | PAKS-1113 | Pakistan Studies | General Education | 2 |
| 2 | CPEN-1122 | Intensive Programming | Computing Core | 3 |
| 3 | CPEN-1222 | Intensive Programming Lab | Computing Core | 1 |
| 4 | SWEN-1111 | Software Engineering | Computing Core | 3 |
| 5 | ENGL-1119 | Communication Skills | General Education | 3 |
| 6 | MATH-2103 | Linear Algebra | Math & Science Foun | 3 |
| 7 | ENGL-2121 | Technical Report Writing Skills | General Education | 2 |
| **Credit Hours** | | | | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | CPEN-2110 | Discrete Structures | Computing Core | 3 |
| 2 | CPEN-2123 | Object Oriented Programming | Computing Core | 3 |
| 3 | CPEN-2223 | Object Oriented Programming Lab | Computing Core | 1 |
| 4 | SWEN-2113 | Software Requirement Eng | SE Core | 3 |
| 5 | MATH-2122 | Differential Equations | Math and Science Foun | 3 |
| 6 | CPEN-2120 | Digital Logic Design | Computing Core | 3 |
| 7 | CPEN-2220 | Digital Logic Design Lab | Computing Core | 1 |
| **Credit Hours** | | | | **17** |

## Semester 4

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | STAT-2104 | Probability and Statistics | Math and Science Foun | 3 |
| 2 | SWEN-2112 | Software Design & Architecture | SE Core | 2 |
| 3 | SWEN-2212 | Software Design & Architecture Lab | SE Core | 1 |
| 4 | SWEN-3111 | Database Systems | Computing Core | 3 |
| 5 | SWEN-3211 | Database Systems Lab | Computing Core | 1 |
| 6 | SWEN-XXXX | SE Supporting-I | SE Supporting | 3 |
| 7 | CPEN-2121 | Data Structure & Algorithm | Computing Core | 3 |
| 8 | CPEN-2221 | Data Structure & Algorithm Lab | Computing Core | 1 |
| **Credit Hours** | | | | **17** |

## Semester 5

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | SSCI-3120 | Constitution and Legal System of Pakistan | University Elective | 2 |
| 2 | CPEN-3131 | Operating Systems | Computing Core | 3 |
| 3 | CPEN-3231 | Operating System Lab | Computing Core | 1 |
| 4 | SWEN-3132 | Mobile Application Development | SE Core | 3 |
| 5 | SWEN-3115 | Web Engineering | SE Core | 3 |
| 6 | SWEN-3113 | Software Construction and Development | SE Core | 2 |
| 7 | SWEN-3212 | Software Construction and Deve Lab | SE Core | 1 |
| 8 | SWEN-XXXX | | SE Supporting | 3 |
| **Credit Hours** | | | | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | SWEN-3114 | Software Quality Engineering | SE Core | 3 |
| 2 | SWEN-3112 | Information Security | Computing Core | 3 |
| 3 | CPEN-3135 | Data Communication & Comp Networks | Computing Core | 3 |
| 4 | CPEN-3235 | Data Communication & Comp Networks Lab | Computing Core | 1 |
| 5 | SWEN-XXXX | SE Elective I | SE Elective | 3 |
| 6 | SWEN-XXXX | SE Supporting III | SE Supporting | 3 |
| 7 | SSCI-3120 | Professional Ethics | General Education | 2 |
| **Credit Hours** | | | | **18** |

## Semester 7

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | SWEN-4113 | Software Project Management | SE Core | 3 |
| 2 | SWEN-4114 | Software Re – Engineering | SE Core | 3 |
| 3 | SWEN-XXXX | SE Elective II | SE Elective | 3 |
| 4 | SWEN-XXXX | SE Elective III | SE Elective | 3 |
| 5 | MSCI-XXXX | Management elective-I | Management Sciences | 3 |
| 6 | SWEN-4391 | Final year Project I | Computing Core | 3 |
| **Credit Hours** | | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Knowledge Area | Credit Hrs. |
|---|---|---|---|---|
| 1 | SWEN-2111 | Human Computer Interaction | SE Core | 3 |
| 2 | SWEN-XXXX | SE Elective IV | SE Elective | 3 |
| 3 | SWEN-XXXX | SE Elective V | SE Elective | 3 |
| 4 | SWEN-4392 | Final Year Project-II | Computing Core | 3 |
| 5 | MSCI-XXXX | Management elective-II | Management Sciences | 3 |
| 6 | HLTH-1113 | Basic Health Awareness | University Elective | 2 |
| **Credit Hours** | | | | **17** |

| **GRAND TOTAL** | **139** |
|---|---|

*"Some people remain deprived of knowledge due to their poor ability to remain silent"*

*- Ibn Al-Qayyim (RA)*

# MS Computer Engineering

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | CPEN- XXXX | Core – I | 3 |
| 2 | CPEN- XXXX | Core – II | 3 |
| 3 | XXXX-XXXX | Elective – I | 3 |
| 4 | CPEN-XXXX | Elective – II | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | CPEN- XXXX | Core – III | 3 |
| 2 | CPEN-XXXX | Elective – III | 3 |
| 3 | CPEN-XXXX | Elective – IV | 3 |
| 4 | CPEN-XXXX | Elective – V | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | CPEN-6691 | Thesis | 12 |
| **Total Credit Hours** | | | **12** |

# MS Software Engineering

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | SWEN- XXXX | Core – I | 3 |
| 2 | SWEN- XXXX | Core – II | 3 |
| 3 | XXXX-XXXX | Elective – I | 3 |
| 4 | SWEN-XXXX | Elective – II | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | SWEN- XXXX | Core – III | 3 |
| 2 | SWEN-XXXX | Elective – III | 3 |
| 3 | SWEN-XXXX | Elective – IV | 3 |
| 4 | SWEN-XXXX | Elective – V | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | SWEN-6691 | Thesis | 12 |
| **Total Credit Hours** | | | **12** |

# BS Computer Engineering List of Courses

## Major Based Depth Electives

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | CPEN-6111 | Advanced Computer Architecture |
| 2 | CPEN-3136 | Control Engineering |
| 3 | CPEN-3137 | Parallel and Distributed Computing |
| 4 | CPEN-3138 | Wireless and Mobile Networks |
| 5 | CPEN-3139 | Artificial Intelligence |
| 6 | CPEN-3140 | Digital Image Processing |
| 7 | CPEN-3141 | Data Warehousing and Mining |
| 8 | CPEN-3142 | Embedded Systems |
| 9 | CPEN-3143 | VLSI Design |
| 10 | CPEN-3144 | Introduction to Data Science |
| 11 | CPEN-3145 | Introduction Machine Learning |
| 12 | CPEN-5116 | System on Chip Design |
| 13 | SWEN-3114 | Software Quality Engineering |
| 14 | SWEN-4113 | Software Project Management |

## Inter-Disciplinary Engineering

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | CPEN-4101 | Communication Systems |
| 2 | CPEN-4102 | Fault Tolerant Computing |
| 3 | CPEN-4103 | Neural Networks and Fuzzy Logic |
| 4 | CPEN-4104 | Robotics |
| 5 | CPEN-4105 | System Programming |
| 6 | CPEN-4106 | Multimedia Systems |
| 7 | CPEN-4107 | Speech Signal Processing |
| 8 | CPEN-4108 | Power Electronics |
| 9 | CPEN-4109 | Opto-Electronics |
| 10 | CPEN-4110 | Computer Vision |
| 11 | CPEN-4111 | Integrated Circuit Design |
| 12 | CPEN-4112 | Electromagnetic Interference |
| 13 | CPEN-4113 | Biomedical Engineering/Bioinformatics |
| 14 | SWEN-3132 | Mobile Application Development |
| 15 | SWEN-4123 | Computer Graphics |
| 16 | SWEN-4126 | Game Application Development |
| 17 | SWEN-4131 | Natural Language Processing |
| 18 | SWEN-4132 | Real Time Systems |

## Management Electives

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | MSCI-XXXX | Entrepreneurship |
| 2 | MSCI-XXXX | Business Management |
| 3 | MSCI-XXXX | Technology Startups |
| 4 | MSCI-XXXX | Quality Management |
| 5 | MSCI-XXXX | Engineering Management |
| 6 | MSCI-XXXX | Technology Management |
| 7 | MSCI-XXXX | Manufacturing Management |
| 8 | MSCI-XXXX | Software Management/Information System |
| 9 | MSCI-XXXX | Knowledge Management |
| 10 | MSCI-XXXX | Supply Chain Management |
| 11 | MSCI-XXXX | Project Management |

# BS Software Engineering List of Courses

## Computing Core Courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | CPEN-1122 | Intensive Programming |
| 2 | CPEN-2123 | Object Oriented Programming |
| 3 | CPEN-2121 | Data Structures & Algorithms |
| 4 | CPEN-2110 | Discrete Structures |
| 5 | CPEN-3131 | Operating Systems |
| 6 | SWEN- 3111 | Database Systems |
| 7 | SWEN-1111 | Software Engineering |
| 8 | CPEN-3135 | Data Communications & Computer Networks |
| 9 | SWEN-3112 | Information Security |
| 10 | CPEN-2120 | Digital Logic Design |
| 11 | SWEN-4391-4392 | Final Year Project |

## Software Engineering CORE (Compulsory) courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | SWEN-2111 | Human Computer Interaction |
| 2 | SWEN-2113 | Software Requirements Engineering |
| 3 | SWEN-2112 | Software Design & Architecture |
| 4 | SWEN-3113 | Software Construction & Development |
| 5 | SWEN-4113 | Software Project Management |
| 6 | SWEN-3114 | Software Quality Engineering |
| 7 | SWEN-4114 | Software Re-Engineering |
| 8 | SWEN-3115 | Web Engineering |
| 9 | SWEN-3132 | Mobile Application Development |

## General Education Courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | ENGL-1118 | Functional English |
| 2 | ENGL-1119 | Communication Skills |
| 3 | ENGL-2121 | Technical Report Writing Skills |
| 4 | SSCI-3120 | Professional Ethics |
| 5 | CPEN-1114 | Introduction to Computing |
| 6 | PAKS-1113 | Pakistan Studies |
| 7 | ISLS-1112 | Islamic Studies/ Ethics |

## University Elective Courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | MSCI-XXXX | Social Service |
| 2 | HLTH-1113 | Basic Health Awareness |
| 3 | SSCI-3120 | Constitution and Legal System of Pakistan |
| 4 | MSCI-XXXX | Entrepreneurship |
| 5 | MSCI-2111 | Engineering Economics |
| 6 | MSCI-2111 | Engineering Economics and Management |

# MS Computer Engineering List of Courses

## Core Courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | CPEN-6111 | Advanced Computer Architecture |
| 2 | CPEN-6112 | Advanced Digital Systems Design |
| 3 | CPEN-6113 | Advanced Digital Signal Processing |
| 4 | CPEN-6110 | Advanced Operating Systems |
| 5 | COSC-5101 | Advanced Algorithms Analysis & Design |
| 6 | CPEN-6122 | Information Theory and Coding |
| 7 | COSC-5108 | Advanced Database Systems |
| 8 | SWEN-6100 | Advanced Software Engineering |

## Specialization Electives

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | CPEN-5118 | Advanced Digital Image Processing |
| 2 | COSC-6109 | Deep learning |
| 3 | CPEN-5122 | Medical Image Processing and Analysis |
| 4 | CPEN-5123 | Image and Video Coding |
| 5 | COSC-6121 | Advanced Data Mining |
| 6 | CPEN-5113 | Multimedia Systems |
| 7 | COSC-5112 | Machine Learning |

| S. No. | Course Code | Course Title |
|---|---|---|
| 8 | CPEN-6114 | Robotics Vision |
| 9 | CPEN-6115 | Big Data Analytics |
| 10 | COSC-6120 | Internet of Things |
| 11 | CPEN-6116 | Advanced Embedded System Design |
| 12 | CPEN-5114 | VLSI Principles and Applications |
| 13 | CPEN-5115 | Advanced Microprocessor Design |
| 14 | CPEN-6117 | Design of Analog CMOS Integrated Circuits |
| 15 | CPEN-6118 | Digital IC Design |
| 16 | CPEN-6119 | Fault Diagnosis and Testing |
| 17 | CPEN-6120 | Design of Fault Tolerant Digital Systems |
| 18 | CPEN-6121 | Low Power Chip Design Techniques |
| 19 | CPEN-5116 | System on Chip Design |
| 20 | ELEN-6201 | Antenna and Wave Propagation |
| 21 | ELEN-6202 | Advanced Wireless Communications |
| 22 | ELEN-6203 | Advanced Digital Communications Systems |
| 23 | ELEN-6210 | Advanced Optical Communications |
| 24 | ELEN-6211 | Microwave Devices and Circuits |
| 25 | COSC-6121 | Advanced Computer Networks |

| S. No. | Course Code | Course Title |
|---|---|---|
| 26 | CPEN-6123 | Advanced Engineering Electromagnetics |
| 27 | CPEN-5122 | Radar Engineering |
| 28 | CPEN-5123 | Wireless Sensor Networks |
| 29 | SWEN -5101 | Advanced Requirement Engineering |
| 30 | SWEN -5102 | Advanced Software System Architecture |
| 31 | SWEN-5103 | Software Testing and Quality Assurance |
| 32 | SWEN-5110 | Object Oriented Software Engineering |
| 33 | COSC-5103 | Semantic Web |
| 34 | SWEN-6101 | Reliability Engineering |
| 35 | SWEN-6102 | Agile Software Development Methods |
| 36 | SWEN-6103 | Advanced Human Computer Interaction |

## General Electives

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | CPEN-6124 | Mathematical Optimization |
| 2 | CPEN-5151 | Stochastic Processes |
| 3 | CPEN-6125 | Advanced Topics in Computer Engineering |
| 4 | MSCI-6102 | Research Methodology (University Mandatory) |

*"Patience is a pillar of Faith"*

*- Hazrat Umar Ibn Al-Khattab (RA)*

# MS Software Engineering List of Courses

## Core Courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | SWEN-5101 | Advanced Requirements Engineering |
| 2 | SWEN-5102 | Advanced Software System Architecture |
| 3 | SWEN-5103 | Software Testing and Quality Assurance |
| 4 | COSC-5101 | Advanced Algorithms Analysis & Design |
| 5 | COSC-5108 | Advanced Database Systems |
| 6 | SWEN-6100 | Advanced Software Engineering |
| 7 | SWEN-6102 | Agile Software Development Methods |
| 8 | SWEN-5111 | Advanced Software Development |
| 9 | SWEN-5112 | Model Driven Software Engineering |
| 10 | COSC-5103 | Semantic Web |
| 11 | COSC-5105 | Advanced Computer Networks |
| 12 | COSC-5106 | Wireless Networks and Mobile Computing |
| 13 | COSC-5109 | Distributed Database Systems |
| 14 | COSC-5111 | Information Retrieval Techniques |
| 15 | COSC-5112 | Machine Learning |
| 16 | COSC-5113 | Multi-Agent Systems |
| 17 | COSC-5117 | Knowledge-Based Systems |
| 18 | SWEN-6101 | Reliability Engineering |
| 19 | SWEN-6103 | Advanced Human Computer Interaction |
| 20 | SWEN-6104 | Advanced Software Project Management |
| 21 | SWEN-6105 | Formal Methods |
| 22 | SWEN-6106 | Model Checking |
| 23 | SWEN-6107 | Advanced Topics in Software Engineering |
| 24 | COSC-6108 | Natural Language Processing |
| 25 | COSC-6110 | Theory of Programming Languages |

## Elective Courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | SWEN-5104 | Software Risk Management |
| 2 | SWEN-5105 | Software Measurement and Metrics |
| 3 | SWEN-5106 | Software Configuration Management |
| 4 | SWEN-5107 | Component Based Software Engineering |
| 5 | SWEN-5108 | Empirical Software Engineering |
| 6 | SWEN-5109 | Agent Oriented Software Engineering |
| 7 | SWEN-5110 | Object Oriented Software Engineering |
| 27 | COSC-6120 | Internet of Things |
| 34 | COSC-6123 | NoSQL Databases |
| 35 | COSC-6124 | Big Data Analytics |
| 36 | SWEN-6108 | Initiating and Planning Projects |
| 37 | SWEN-6109 | Project Risks and Change |
| 38 | SWEN-6110 | Project Management in IT Security |
| 39 | COSC-5118 | Advanced Digital Image Processing |
| 40 | COSC-6109 | Deep learning |
| 41 | COSC-6121 | Advanced Data Mining |
| 42 | CPEN-5113 | Multimedia Systems |
| 43 | CPEN-6119 | Fault Diagnosis and Testing |

## General Elective Courses

| S. No. | Course Code | Course Title |
|---|---|---|
| 1 | CPEN-5124 | Stochastic Processes |
| 2 | MSCI-6102 | Research Methodology |
| 3 | CPEN-6124 | Mathematical Optimization |

*BOS (Department of Computer Engineering)*



*Student Project Exibition (Department of Computer Engineering)*

*Student Project Exibition (Department of Computer Engineering)*



*BOS (Department of Computer Engineering)*

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*"Stick to the Truth even if the Truth kills you"*

*- Hazrat Umar Ibn Al-Khattab (RA)*

## Department of
# Electrical Engineering

## Introduction and Overview

Electrical Engineering Department aims to provide high quality education to cope with the technical challenges of the modern age. The graduates of the department will be able to effectively investigate, evaluate and provide solutions for the complex engineering problems. Department aims to impart extraordinary managerial skills with effective communication and great ethics to its graduates, while working as an individual or in a team to solve the problems of the society by providing sustainable and environment friendly solutions. Highly qualified and experienced faculty, trained staff and well equipped state of the art laboratories are there to make this dream come true.

## Vision

To build identity of excellence in electrical engineering domain at intersection of academia and industry.

## Mission

Committed to achieve excellence by equipping its graduates with high quality technically innovative skills, required to create positive impact in academia, industry, research and pursuance of higher studies.

## Key Features

- Highly qualified faculty
- Well established dedicated state of the art laboratories
- High Voltage Laboratory (HVL)
- Dedicated building containing lecture theatres, laboratories, offices and other relevant infrastructure.
- Departmental Library

## Programs being offered

| BS Electrical Engineering |
| --- |
| MS Electrical Engineering |
| PhD Electrical Engineering * |
| BS Electronics |
| MS Electronics * |
| BS Electrical  Technology * |

* Subject to approval / NOC from HEC / Competent Authority / Accreditation Body

# Scheme of Study

## BS Electrical Engineering

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ELEN-1100 | Linear Circuit Analysis | 3 |
| 2 | ELEN-1200 | Linear Circuit Analysis LAB | 1 |
| 3 | ENGL-1118 | Functional English | 3 |
| 4 | MATH-1100 | Calculus | 3 |
| 5 | PHYS-1123 | Engineering Physics | 2 |
| 6 | PHYS-1223 | Engineering Physics Lab | 1 |
| 7 | CPEN-1114 | Introduction to Computing | 2 |
| 8 | CPEN-1214 | Introduction to Computing Lab | 1 |
| 9 | ELEN-1201 | Workshop Practice | 1 |
| **Total** | | | **17** |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PAKS-1113 | Pakistan Studies | 2 |
| 2 | ELEN-2102 | Electrical Network Analysis | 3 |
| 3 | ELEN-2202 | Electrical Network Analysis LAB | 1 |
| 4 | MATH-2103 | Linear Algebra | 3 |
| 5 | ENGL-1119 | Communication Skills | 3 |
| 6 | MEEN-1110 | Basic Mechanical Engineering | 2 |
| 7 | CPEN-XXXX | Intensive Computer Programming | 3 |
| 8 | CPEN-XXXX | Intensive Computer Programming Lab | 1 |
| **Total** | | | **18** |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | MATH-2122 | Differential Equations | 3 |
| 2 | ELEN-2100 | Digital Logic Design | 3 |
| 3 | ELEN-2200 | Digital Logic Design Lab | 1 |
| 4 | ELEN-1121 | Electronic Devices & Circuits | 3 |
| 5 | ELEN-1221 | Electronic Devices & Circuits LAB | 1 |
| 6 | MEEN-1109 | Applied Thermodynamics | 3 |
| 7 | MEEN-1209 | Applied Thermodynamics Lab | 1 |
| 8 | ISLS-1112 | Islamic Studies/Ethics | 2 |
| 9 | ELEN-2201 | Computer Aided Engineering Drawing | 1 |
| **Total** | | | **18** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ELEN-3120 | Electronic Circuit Design | 3 |
| 2 | ELEN-3220 | Electronic Circuit Design LAB | 1 |
| 3 | MATH-2123 | Complex Variables and Transforms | 3 |
| 4 | ELEN-3130 | Signals and Systems | 3 |
| 5 | ELEN-3230 | Signals and Systems Lab | 1 |
| 6 | ENGL-4135 | Professional Ethics (SS-I) | 2 |
| 7 | STAT-3133 | Probability Methods in Engineering | 3 |
| 8 | HLTH-1113 | Basic Health Awareness (UE-I) | 2 |
| **Total** | | | **18** |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | MSCI-2111 | Engineering Economics and Management | 3 |
| 2 | ELEN-2110 | Electrical Machines | 3 |
| 3 | ELEN-2210 | Electrical Machines LAB | 1 |
| 4 | ELEN-3151 | Embedded Systems | 3 |
| 5 | ELEN-3252 | Embedded Systems LAB | 1 |
| 6 | ELEN-3131 | Electromagnetic Theory | 3 |
| 7 | MATH-2124 | Numerical Analysis | 3 |
| **Total** | | | **17** |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-2121 | Technical Report Writing Skills | 2 |
| 2 | ELEN-3140 | Linear Control Systems | 3 |
| 3 | ELEN-3240 | Linear Control Systems LAB | 1 |
| 4 | ELEN-4121 | Power Electronics | 3 |
| 5 | ELEN-4221 | Power Electronics LAB | 1 |
| 6 | ELEN-3121 | Instrumentation and Measurements | 3 |
| 7 | ELEN-3221 | Instrumentation and Measurements LAB | 1 |
| 8 | ELEN-3132 | Communication Systems | 3 |
| 9 | ELEN-3232 | Communication Systems Lab | 1 |
| **Total** | | | **18** |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ELEN-XXXX | Elective-I | 3 |
| 2 | ELEN-XXXX | Elective-II | 3 |
| 3 | ELEN-XXXX | Elective-III | 3 |
| 4 | ELEN-XXXX | Elective-I LAB | 1 |
| 5 | ELEN-XXXX | Elective-II LAB | 1 |
| 6 | SSCI-3120 | Constitution and Legal System of Pakistan (UE-II) | 2 |
| 7 | ELEN-4390 | Final Year Project (Phase -I) | 2 |
| **Total** | | | **15** |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ELEN-4391 | Final Year Project (Phase -II) | 4 |
| 2 | ELEN-XXXX | Elective –IV | 3 |
| 3 | ELEN-XXXX | Elective -IV LAB | 1 |
| 4 | ELEN-XXXX | Elective –V | 3 |
| 5 | MSCI-3111 | Entrepreneurship | 3 |
| **Total** | | | **14** |

# List of Elective Courses

## Power Engineering Specialization

| S. No. | Course Title |
|---|---|
| 1 | Power Transmission and Distribution |
| 2 | Power System Analysis |
| 3 | Power Generation |
| 4 | Power System Protection |
| 5 | Power System operation & Control |
| 6 | High Voltage Engineering |
| 7 | Digital Signal Processing |
| 8 | PLC and Industrial Drives |

## Communication Engineering Specialization

| S. No. | Course Title |
|---|---|
| 1 | Computer Communication Networks |
| 2 | Digital Communications |
| 3 | Digital Signal Processing |
| 4 | Wireless and Mobile Communications |
| 5 | Wave Propagation and Antennas |
| 6 | Satellite Communication |
| 7 | RF and Microwave Engineering |
| 8 | Digital Image Processing |
| 9 | Data Structure and Algorithms |

## Electronics Engineering Specialization

| S. No. | Course Title |
|---|---|
| 1 | Industrial Electronics |
| 2 | VLSI Design |
| 3 | Opto-Electronics |
| 4 | PLC and Industrial Drives |
| 5 | Digital Control System |
| 6 | Integrated Electronics |
| 7 | Digital Signal Processing |
| 8 | RF and Microwave Engineering |

*"Leadership is the key to 99 percent of all successful efforts"*

*-Erskine Bowles*

# MS Electrical Engineering

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | ELEN-51XX | Core-I | 3 |
| 2 | ELEN-51XX | Core-II | 3 |
| 3 | ELEN-61XX | Elective-I | 3 |
| 4 | ELEN-61XX | Elective-II | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | ELEN- 51XX | Core-III | 3 |
| 2 | ELEN-61XX | Elective-III | 3 |
| 3 | ELEN-61XX | Elective-IV | 3 |
| 4 | ELEN-61XX | Elective-V | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | ELEN-6601 | Thesis | 12 |
| **Total Credit Hours** | | | **12** |

| | |
|---|---|
| **Program Total Credit Hours** | **36** |

## Core Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ELEN-5101 | Optimization Theory | 3 |
| 2 | ELEN-5102 | Stochastic Processes | 3 |
| 3 | ELEN-5103 | Linear Systems Theory | 3 |
| 4 | ELEN-5104 | Research Methodology | 3 |
| 5 | ELEN-5105 | Advanced Digital Signal Processing | 3 |

## Power Engineering Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ELEN-6101 | Renewable Energy Systems | 3 |
| 2 | ELEN-6102 | Advanced Power Transmission and Distribution | 3 |
| 3 | ELEN-6103 | Electric Power Generation and Plant Operation | 3 |
| 4 | ELEN-6104 | High Voltage Engineering Design | 3 |
| 5 | ELEN-6105 | Advanced Electrical Machines Design | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 6 | ELEN-6106 | Energy Management | 3 |
| 7 | ELEN-6107 | Generalized Machine Theory | 3 |
| 8 | ELEN-6108 | Smart Grid System Operation | 3 |
| 9 | ELEN-6109 | Hydro Power Plant Design | 3 |
| 10 | ELEN-6110 | Integration of Distributed Generation | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 11 | ELEN-6111 | Power System Reliability | 3 |
| 12 | ELEN-6112 | Solar Power Generation System | 3 |
| 13 | ELEN-6113 | Wind Power Generation System | 3 |
| 14 | ELEN-6114 | Advanced Power System Protection | 3 |
| 15 | ELEN-6115 | Advanced Power System Planning | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 16 | ELEN-6116 | Advanced Power System Analysis | 3 |
| 17 | ELEN-6117 | Insulation Coordination for Power Systems | 3 |
| 18 | ELEN-6118 | Advanced Research in Electric Power System | 3 |
| 19 | ELEN-6119 | Power System Dynamics and Stability | 3 |
| 20 | ELEN-6212 | Advanced Power Electronics | 3 |
| 21 | ELEN-6218 | Nonlinear Control System | 3 |

*"The wealth of a miser is as useless as a pebble"*

*- Hazrat Ali Ibn Abi Talib (RA)*

## Electronics/ Communication Courses

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ELEN-6201 | Antennas and Wave Propagation | 3 |
| 2 | ELEN-6202 | Advanced Wireless Communication | 3 |
| 3 | ELEN-6203 | Advanced Digital Communication Systems | 3 |
| 4 | ELEN-6204 | Advanced Satellite Communication | 3 |
| 5 | ELEN-6205 | Signal Detection and Estimation | 3 |
| 6 | ELEN-6206 | Adaptive Filters | 3 |
| 7 | ELEN-6207 | Wireless & Mobile Communications | 3 |
| 8 | ELEN-6208 | Advanced Wireless Networks | 3 |
| 9 | ELEN-6209 | Advanced Networking | 3 |
| 10 | ELEN-6210 | Advanced Optical Communication | 3 |
| 11 | ELEN-6211 | Microwave Devices and Circuits | 3 |
| 12 | ELEN-6212 | Advanced Power Electronics | 3 |
| 13 | ELEN-6213 | Theory of Semiconductor Devices | 3 |
| 14 | ELEN-6214 | Solid State Lighting | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 15 | ELEN-6215 | Nanotechnology: Theory and Applications | 3 |
| 16 | ELEN-6216 | Advanced Integrated Electronics | 3 |
| 17 | ELEN-6217 | Advanced Opto-Electronics | 3 |
| 18 | ELEN-6218 | Control System Design | 3 |
| 19 | ELEN-6219 | Nonlinear Control System | 3 |
| 20 | CPEN-5118 | Advanced Digital Image Processing | 3 |
| 21 | COSC-5112 | Machine Learning | 3 |
| 22 | COSC-6120 | Internet of Things | 3 |
| 23 | CPEN-6116 | Advanced Embedded System Design | 3 |
| 24 | CPEN-5115 | Advanced Microprocessor Design | 3 |
| 25 | CPEN-6117 | Design of Analog CMOS Integrated Circuits | 3 |
| 26 | COSC-6121 | Advanced Computer Networks | 3 |
| 27 | CPEN-6123 | Advanced Engineering Electromagnetics | 3 |
| 28 | CPEN-5123 | Wireless Sensor Networks | 3 |

## BS Electronics

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ELEC-1100 | Linear Circuit Analysis | 3 |
| 2 | ELEC-1200 | Linear Circuit Analysis LAB | 1 |
| 3 | ENGL-1118 | Functional English | 3 |
| 4 | MATH-1100 | Calculus | 3 |
| 5 | PHYS-1123 | Engineering Physics | 2 |
| 6 | PHYS-1223 | Engineering Physics Lab | 1 |
| 7 | CPEN-1114 | Introduction to computing | 2 |
| 8 | CPEN-1214 | Introduction to Computing Lab | 1 |
| 9 | ELEC-1201 | Workshop Practice | 1 |
| **Total** | | | **17** |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PAKS-1113 | Pakistan Studies | 2 |
| 2 | ELEN-2102 | Electrical Network Analysis | 3 |
| 3 | ELEN-2202 | Electrical Network Analysis LAB | 1 |
| 4 | MATH-2103 | Linear Algebra | 3 |
| 5 | ENGL-1119 | Communication Skills | 3 |
| 6 | MEEN-1110 | Basic Health Awareness (UE-I) | 2 |
| 7 | CPEN-XXXX | Intensive Computer Programming | 3 |
| 8 | CPEN-XXXX | Intensive Computer Programming Lab | 1 |
| **Total** | | | **18** |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | MATH-2122 | Differential Equations | 3 |
| 2 | ELEC-2100 | Digital Logic Design | 3 |
| 3 | ELEC-2200 | Digital Logic Design Lab | 1 |
| 4 | ELEC-1121 | Electronic Devices & Circuits | 3 |
| 5 | ELEC-1221 | Electronic Devices & Circuits LAB | 1 |
| 6 | MSCI-2111 | Engineering Economics and Management | 3 |
| 7 | ISLS-1112 | Islamic Studies/Ethics | 2 |
| 8 | ELEC-2201 | Computer Aided Engineering Drawing | 1 |
| **Total** | | | **17** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ELEC-3120 | Electronic Circuit Design | 3 |
| 2 | ELEC-3220 | Electronic Circuit Design LAB | 1 |
| 3 | MATH-2123 | Complex Variables and Transforms | 3 |
| 4 | ELEC-3130 | Signals and Systems | 3 |
| 5 | ELEC-3230 | Signals and Systems Lab | 1 |
| 6 | ENGL-4135 | Professional Ethics | 2 |
| 7 | STAT-3133 | Probability Methods in Engineering | 3 |
| 8 | ELEC-2110 | Solid State Electronics | 2 |
| **Total** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ELEC-3109 | Digital Integrated Circuits | 3 |
| 2 | ELEC-2110 | Electrical Machines | 3 |
| 3 | ELEC-2210 | Electrical Machines LAB | 1 |
| 4 | ELEC-3151 | Embedded Systems | 3 |
| 5 | ELEC-3252 | Embedded Systems LAB | 1 |
| 6 | ELEC-3131 | Electromagnetic Theory | 3 |
| 7 | MATH-2124 | Numerical Analysis | 3 |
| **Total** | | | **17** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2121 | Technical Report Writing Skill | 2 |
| 2 | ELEC-3140 | Linear Control Systems | 3 |
| 3 | ELEC-3240 | Linear Control Systems LAB | 1 |
| 4 | ELEC-4121 | Power Electronics | 3 |
| 5 | ELEC-4221 | Power Electronics LAB | 1 |
| 6 | ELEC-3121 | Instrumentation and Measurements | 3 |
| 7 | ELEC-3221 | Instrumentation and Measurements LAB | 1 |
| 8 | ELEC-3132 | Communication Systems | 3 |
| 9 | ELEC-3232 | Communication Systems Lab | 1 |
| **Total** | | | **18** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ELEC-XXXX | Elective-I | 3 |
| 2 | ELEC-XXXX | Elective-II | 3 |
| 3 | ELEC-XXXX | Elective-III | 3 |
| 4 | ELEC-XXXX | Elective-I LAB | 1 |
| 5 | ELEC-XXXX | Elective-II LAB | 1 |
| 6 | SSCI-3120 | Constitution and Legal System of Pakistan (UE-II) | 2 |
| 7 | ELEC-4390 | Final Year Project (Phase -I) | 2 |
| **Total** | | | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ELEC-4391 | Final Year Project (Phase -II) | 4 |
| 2 | ELEC-XXXX | Elective -IV | 3 |
| 3 | ELEC-XXXX | Elective -IV LAB | 1 |
| 4 | ELEC-XXXX | Elective -V | 3 |
| 5 | MSCI-3216 | Entrepreneurship | 3 |
| **Total** | | | **14** |

# List of Elective Courses

| S. No. | Course Title |
|---|---|
| 1 | Industrial Electronics |
| 2 | Introduction to Robotics |
| 3 | Industrial Automation |
| 4 | Opto-Electronics |
| 5 | Laser and Fibre Optics |
| 6 | Nanotechnology |
| 7 | Linear Integrated Circuits |
| 8 | Artificial Intelligence |

| S. No. | Course Title |
|---|---|
| 9 | Pattern Recognition |
| 10 | Digital Image Processing |
| 11 | Information & Coding Theory |
| 12 | Digital Image Processing |
| 13 | Wireless and Mobile Communications |
| 14 | Integrated Electronics |
| 15 | Opto-Electronics |
| 16 | VLSI Design |
| 17 | Industrial Electronics |
| 18 | Digital Signal Processing |

# MS Electronics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | ELEC-51XX | Core-I | 3 |
| 2 | ELEC-51XX | Core-II | 3 |
| 3 | ELEC-61XX | Elective-I | 3 |
| 4 | ELEC-61XX | Elective-II | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | ELEC- 51XX | Core-III | 3 |
| 2 | ELEC-61XX | Elective-III | 3 |
| 3 | ELEC-61XX | Elective-IV | 3 |
| 4 | ELEC-61XX | Elective-V | 3 |
| **Total Credit Hours** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hrs. |
|---|---|---|---|
| 1 | ELEC-6601 | Thesis | 12 |
| **Total Credit Hours** | | | **12** |
| **Program Total Credit Hours** | | | **36** |

## Core Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ELEN-5101 | Optimization Theory | 3 |
| 2 | ELEN-5102 | Stochastic Processes | 3 |
| 3 | ELEN-5103 | Linear Systems Theory | 3 |
| 4 | ELEN-5104 | Research Methodology | 3 |
| 5 | ELEN-5105 | Advanced Digital Signal Processing | 3 |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | ELEC-6101 | Renewable Energy Systems | 3 | 15 | ELEC-6219 | Nonlinear Control System | 3 |
| 2 | ELEC-6201 | Antennas and Wave Propagation | 3 | 16 | CPEN-5118 | Advanced Digital Image Processing | 3 |
| 3 | ELEC-6205 | Signal Detection and Estimation | 3 | 17 | COSC-5112 | Machine Learning | 3 |
| 4 | ELEC-6206 | Adaptive Filters | 3 | 18 | COSC-6120 | Internet of Things | 3 |
| 5 | ELEC-6209 | Advanced Networking | 3 | 19 | CPEN-6116 | Advanced Embedded System Design | 3 |
| 6 | ELEC-6210 | Advanced Optical Communication | 3 | 20 | CPEN-5115 | Advanced Microprocessor Design | 3 |
| 7 | ELEC-6211 | Microwave Devices and Circuits | 3 | 21 | CPEN-6117 | Design of Analog CMOS Integrated Circuits | 3 |
| 8 | ELEC-6212 | Advanced Power Electronics | 3 | 22 | COSC-6121 | Advanced Computer Networks | 3 |
| 9 | ELEC-6213 | Theory of Semiconductor Devices | 3 | 23 | CPEN-6123 | Advanced Engineering Electromagnetics | 3 |
| 10 | ELEC-6214 | Solid State Lighting | 3 | | | | |
| 11 | ELEC-6215 | Nanotechnology: Theory and Applications | 3 | | | | |
| 12 | ELEC-6216 | Advanced Integrated Electronics | 3 | | | | |
| 13 | ELEC-6217 | Advanced Opto-Electronics | 3 | | | | |
| 14 | ELEC-6218 | Control System Design | 3 | | | | |

# PhD Electrical Engineering

## Semester 1

| S. No. | Course Title | Credit Hrs. |
|---|---|---|
| 1 | Elective 1 | 3 |
| 2 | Elective 2 | 3 |
| 3 | Elective 3 | 3 |

## Semester 2

| S. No. | Course Title | Credit Hrs. |
|---|---|---|
| 1 | Elective 4 | 3 |
| 2 | Elective 5 | 3 |
| 3 | Elective 6 | 3 |

## Semester 3 & onward

| S. No. | Course Title | Credit Hrs. |
|---|---|---|
| 1 | Thesis | 12 |
| **Total Credit Hours** | | **30** |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | ELEN-6101 | Renewable Energy Systems | 3 | 15 | ELEN-6114 | Advanced Power System Protection | 3 |
| 2 | ELEN-6102 | Advanced Power Transmission and Distribution | 3 | 16 | ELEN-6115 | Advanced Power System Planning | 3 |
| 3 | COSC-6102 | Model Checking | 3 | 17 | ELEN-6116 | Advanced Power System Analysis | 3 |
| 4 | ELEN-6103 | Electric Power Generation and Plant Operation | 3 | 18 | ELEN-6117 | Insulation Coordination for Power Systems | 3 |
| 5 | ELEN-6104 | High Voltage Engineering Design | 3 | 19 | ELEN-6118 | Advanced Research in Electric Power System | 3 |
| 6 | ELEN-6105 | Advanced Electrical Machines Design | 3 | 20 | ELEN-6119 | Power System Dynamics and Stability | 3 |
| 7 | ELEN-6106 | Energy Management | 3 | 21 | ELEN-6212 | Advanced Power Electronics | 3 |
| 8 | ELEN-6107 | Generalized Machine Theory | 3 | 22 | ELEN-6218 | Nonlinear Control System | 3 |
| 9 | ELEN-6108 | Smart Grid System Operation | 3 | 23 | ELEN-6201 | Antennas & Wave Propagation | 3 |
| 10 | ELEN-6109 | Hydro Power Plant Design | 3 | 24 | ELEN-6202 | Advanced Wireless Communication | 3 |
| 11 | ELEN-6110 | Integration of Distributed Generation | 3 | 25 | ELEN-6203 | Advanced Digital Communication Systems | 3 |
| 12 | ELEN-6111 | Power System Reliability | 3 | 26 | ELEN-6204 | Advanced Satellite Communication | 3 |
| 13 | ELEN-6112 | Solar Power Generation System | 3 | 27 | ELEN-6205 | Signal Detection and Estimation | 3 |
| 14 | ELEN-6113 | Wind Power Generation System | 3 | 28 | ELEN-6206 | Adaptive Filters | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ELEN-6207 | Wireless & Mobile Communication | 3 |
| 2 | ELEN-6208 | Advanced Wireless Networks | 3 |
| 3 | ELEN-6209 | Advanced Networking | 3 |
| 4 | ELEN-6210 | Advanced Optical Communication | 3 |
| 5 | ELEN-6211 | Microwave Devices and Circuits | 3 |
| 6 | ELEN-6212 | Advanced Power Electronics | 3 |
| 7 | ELEN-6213 | Theory of Semiconductor Devices | 3 |
| 8 | ELEN-6214 | Solid State Lighting | 3 |
| 9 | ELEN-6215 | Nanotechnology: Theory and Applications | 3 |
| 10 | ELEN-6216 | Advanced Integrated Electronics | 3 |
| 11 | ELEN-6217 | Advanced Opto-Electronics | 3 |
| 12 | ELEN-6218 | Control System Design | 3 |
| 13 | ELEN-6219 | Nonlinear Control System | 3 |
| 14 | COSC-6120 | Internet of Things | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 15 | CPEN-6116 | Advanced Embedded System Design | 3 |
| 16 | CPEN-6117 | Design of Analog CMOS Integrated Circuits | 3 |
| 17 | COSC-6121 | Advanced Computer Networks | 3 |
| 18 | CPEN-6123 | Advanced Engineering Electromagnetics | 3 |
| 19 | ELEN-7101 | Process Instrumentation | 3 |
| 20 | ELEN-7102 | Queueing Theory | 3 |
| 21 | ELEN-7103 | Information Theory | 3 |
| 22 | ELEN-7104 | Special Topics on Control Systems | 3 |
| 23 | ELEN-7105 | Special Topics on Electric Machines | 3 |
| 24 | ELEN-7106 | Special Topics on Communication Systems | 3 |
| 25 | ELEN-7107 | Special Topics on Photonics | 3 |
| 26 | COSC-7105 | Mathematical Modelling | 3 |
| 27 | COSC-7106 | Pattern Recognition | 3 |
| 28 | COSC-7110 | Network Simulation and Modelling | 3 |

# BS Electrical Technology

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-1100 | Linear Circuit Analysis | 3 | 3 | 0 |
| 2 | ELET-1200 | Linear Circuit Analysis Lab | 1 | 1 | 0 |
| 3 | PHYS-1123 | Engineering Physics | 2 | 0 | 2 |
| 4 | PHYS-1223 | Engineering Physics Lab | 1 | 0 | 1 |
| 5 | CPEN-1114 | Introduction to Computing | 2 | 0 | 2 |
| 6 | CPEN-1214 | Introduction to Computing Lab | 1 | 0 | 1 |
| 7 | MATH-XXXX | Applied Mathematics-I | 3 | 0 | 3 |
| 8 | ELET-1120 | Electronics | 3 | 3 | 0 |
| 9 | ELET-1220 | Electronics Lab | 1 | 1 | 0 |
| **Total** | | | **17** | **8** | **9** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 2 | ELET-1101 | Electrical Network Analysis | 3 | 3 | 0 |
| 3 | ELET-1201 | Electrical Network Analysis Lab | 1 | 1 | 0 |
| 4 | MATH-XXXX | Applied Mathematics-II | 3 | 0 | 3 |
| 5 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 6 | MEET-1110 | Basic Mechanical Technology | 2 | 2 | 0 |
| 7 | MEET-1210 | Basic Mechanical Technology Lab | 1 | 1 | 0 |
| 8 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 9 | ENGL-2121 | Technical Report Writing Skills | 2 | 0 | 2 |
| **Total** | | | **19** | **7** | **12** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-2111 | Power Generation Systems | 3 | 3 | 0 |
| 2 | ELET-2110 | Electrical Machines-I | 3 | 3 | 0 |
| 3 | ELET-2210 | Electrical Machines-I Lab | 1 | 1 | 0 |
| 4 | ISLS-1112 | Islamic Studies/Ethics | 2 | 0 | 2 |
| 5 | ELET-2112 | Power Transmission and Distribution | 3 | 3 | 0 |
| 6 | ELET-2212 | Power Transmission and Distribution Lab | 1 | 1 | 0 |
| 7 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 | 2 |
| **Total** | | | **15** | **11** | **4** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-2113 | Electrical Machines-II | 3 | 3 | 0 |
| 2 | ELET-2213 | Electrical Machines-II Lab | 1 | 1 | 0 |
| 3 | ELET-2200 | Engineering Drawing | 1 | 1 | 0 |
| 4 | ELET-2120 | Instrumentation and Measurements | 3 | 3 | 0 |
| 5 | ELET-2220 | Instrumentation and Measurements Lab | 1 | 1 | 0 |
| 6 | ELET-2130 | Communication Technology | 3 | 3 | 0 |
| 7 | ELET-2230 | Communication Technology Lab | 1 | 1 | 0 |
| 8 | ELET-2140 | Control Technology | 3 | 3 | 0 |
| 9 | ELET-2240 | Control Technology Lab | 1 | 1 | 0 |
| **Total** | | | **17** | **17** | **0** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-3110 | High Voltage Technology | 3 | 3 | 0 |
| 2 | ELET-3210 | High Voltage Technology Lab | 1 | 1 | 0 |
| 3 | ELET-3150 | Embedded Systems | 3 | 3 | 0 |
| 4 | ELET-3250 | Embedded Systems Lab | 1 | 1 | 0 |
| 5 | ELET-3130 | Electromagnetic Theory | 3 | 3 | 0 |
| 6 | ELET-3111 | Power System Analysis | 3 | 3 | 0 |
| 7 | MSCI-2111 | Engineering Economics and Management | 3 | 0 | 3 |
| **Total** | | | **17** | **14** | **3** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-3120 | Power Electronics | 3 | 3 | 0 |
| 2 | ELET-3220 | Power Electronics Lab | 1 | 1 | 0 |
| 3 | ELET-3112 | Switch Gear and Protective Devices | 3 | 3 | 0 |
| 4 | ELET-3212 | Switch Gear and Protective Devices Lab | 1 | 1 | 0 |
| 5 | ELET-3113 | Industrial Drives and PLC | 3 | 3 | 0 |
| 6 | ELET-3213 | Industrial Drives and PLC Lab | 1 | 1 | 0 |
| 7 | MSCI-3111 | Entrepreneurship | 3 | 0 | 3 |
| 8 | ELET-3390 | Project | 3 | 3 | 0 |
| **Total** | | | **18** | **15** | **3** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-3391 | Project | 3 | 3 | 0 |
| **Total** | | | **3** | **3** | **0** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-4390 | Industrial Training | 16 | 16 | 0 |
| **Total** | | | **16** | **16** | **0** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | Tech. | Related |
|---|---|---|---|---|---|
| 1 | ELET-4391 | Industrial Training | 16 | 16 | 0 |
| **Total** | | | | **107** | **31** |
| | | | | **77%** | **23%** |





*Inauguration Ceremony of High Voltage Lab (Department of Electrical Engineering)*

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# Department of
# Mechanical Engineering

## Introduction and Overview

The Department of Mechanical Engineering was established in 2014 and is one of the pioneer departments in Khwaja Fareed University of Engineering and Information Technology. The Department implements a series of continuous quality improvement measures and continuously strives to produce successful engineers who are able to excel on global stage.

## Vision

To be recognized as world class Mechanical Engineering Department for excellence in education, research and innovation.

## Mission

To serve the national and the international community by providing quality education, research and innovations in the field of Mechanical Engineering by producing competent professionals and to establish an effective partnership among the university, industry, and government based organizations which will eventually enhance the economic development of the state of Pakistan.

## Key Features / Facilities

- PEC and HEC Approved Programs & Level II OBE accreditation from PEC
- High Tech Laboratories
- Highly Qualified Teaching Staff

## Laboratories

The Department of Mechanical Engineering has following fully equipped laboratories:

- Thermodynamics Lab
- Fluid Mechanics Lab
- Simulation & CAD Lab
- Engineering Mechanics Lab
- Mechanics of Machines Lab
- Mechanics of Materials Lab
- Heat and Mass Transfer Lab
- Internal Combustion Engines Lab
- Refrigeration and Air Conditioning Lab
- Mechanical Vibration Lab
- Renewable Energy & Power Plant Lab
- Manufacturing Process Lab
- Engineering Drawing and Graphics Lab
- Workshop
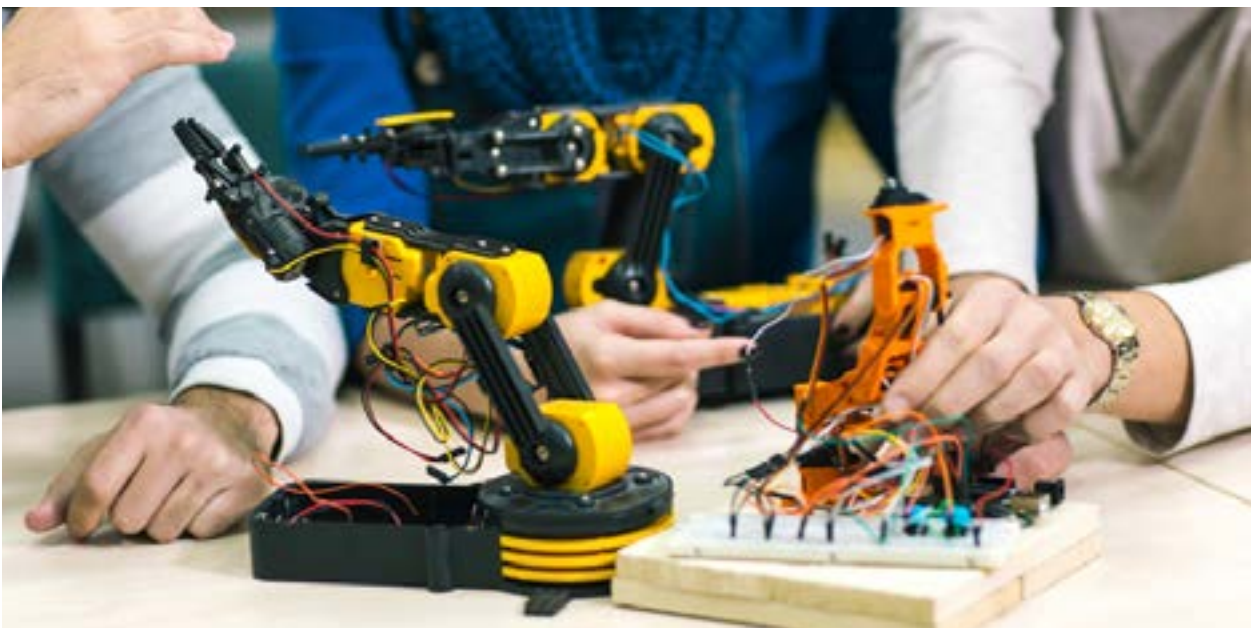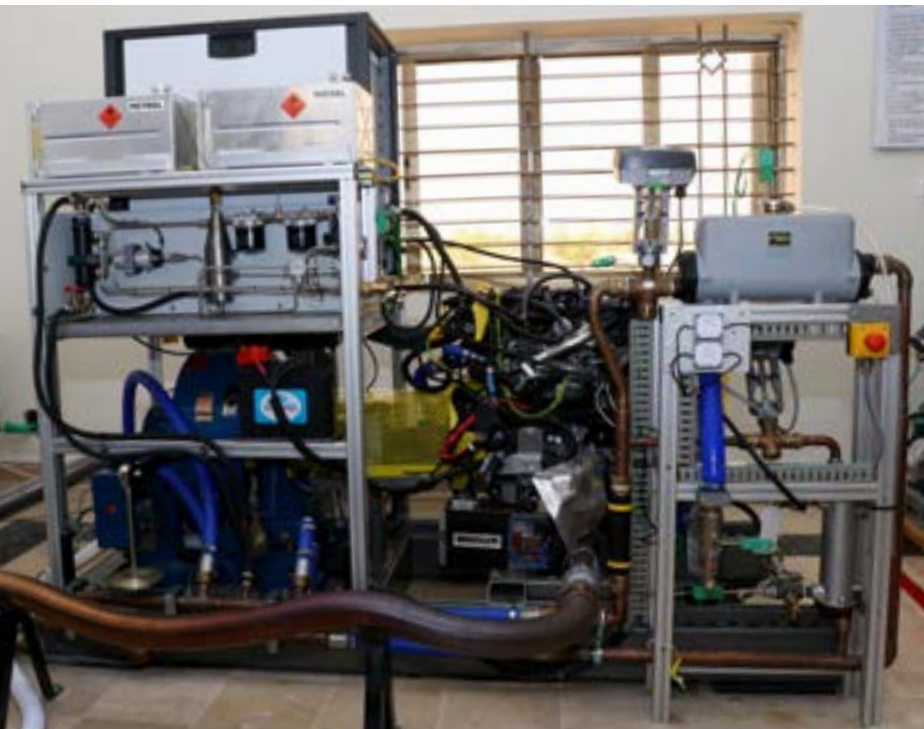
## Program Educational Objectives (PEO's) for BS Mechanical

### PEO-1
The graduates will apply knowledge and skills to provide sustainable solutions to challenging mechanical engineering problems in industry and academia.

### PEO-2
The graduates will make a positive contribution towards society by strong ethical values, communication skills, and leadership.

### PEO-3
The graduates will demonstrate professional growth and exhibit continual improvement in learning modern engineering techniques and their applications in practice.

## Program Learning Outcomes (PLO's) for BS Mechanical Engineering

1. Engineering Knowledge
2. Problem Analysis
3. Development of Solutions
4. Investigation
5. Modern Tool Usage
6. The Engineer and Society
7. Environment and Sustainability
8. Ethics
9. Individual and Team Work
10. Communication
11. Project Management
12. Lifelong Learning

## Programs being offered

| |
| --- |
| BS Mechanical Engineering |
| BS Material Sciences* |
| MS Mechanical Engineering |
| PhD Mechanical Engineering* |

* Subject to approval / NOC from HEC / Competent Authority / Accreditation Body



*Foreign Delegation Visiting Mechanical Engineering Lab*

# Scheme of Study

## BS Mechanical Engineering

### Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | SSCI-XXXX | University / Social Elective | 2 | 0 |
| 2 | PHYS-1123 | Engineering Physics | 2 | 0 |
| 3 | PHYS-1223 | Engineering Physics Lab | 0 | 1 |
| 4 | CHEM-1191 | Engineering Chemistry | 2 | 0 |
| 5 | MEEN-1101 | Engineering Drawing & Graphics | 2 | 0 |
| 6 | MEEN-1201 | Engineering Drawing & Graphics Lab | 0 | 1 |
| 7 | MATH-1100 | Calculus | 3 | 0 |
| 8 | ISLS-1112 | Islamic Studies | 2 | 0 |
| 9 | MEEN-1102 | Engineering Statics | 3 | 0 |
| **Credit Hours** | | | **16** | **02** |
| **Program Total Credit Hours** | | | | **18** |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | MEEN-1111 | Engineering Materials | 3 | 0 |
| 2 | ENGL-1119 | Communication Skills | 3 | 0 |
| 3 | MEEN-1105 | Engineering Dynamics | 3 | 0 |
| 4 | MEEN-1214 | Engineering Mechanics Lab | 0 | 1 |
| 5 | MEEN-1106 | Thermodynamics-I | 3 | 0 |
| 6 | MEEN -1208 | Workshop Practice | 0 | 2 |
| 7 | MATH-2103 | Linear Algebra | 3 | 0 |
| **Credit Hours** | | | **15** | **03** |
| **Program Total Credit Hours** | | | | **18** |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | MATH-2122 | Differential Equation | 3 | 0 |
| 2 | CPEN-1110 | Introduction to Computing | 2 | 0 |
| 3 | CPEN-1210 | Introduction to Computing Lab | 0 | 1 |
| 4 | MEEN-2117 | Fluid Mechanics-I | 3 | 0 |
| 5 | MEEN-2217 | Fluid Mechanics-I Lab | 0 | 1 |
| 6 | MEEN-2118 | Thermodynamics-II | 3 | 0 |
| 7 | MEEN-2218 | Thermodynamics-II Lab | 0 | 1 |
| 8 | MEEN-2119 | Mechanics of Materials-I | 3 | 0 |
| **Credit Hours** | | | **14** | **03** |
| **Program Total Credit Hours** | | | | **17** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | PAKS-1113 | Pakistan Studies | 2 | 0 |
| 2 | ELEN-2109 | Electrical Engineering & Electronics | 3 | 0 |
| 3 | ELEN-2209 | Electrical Engineering & Electronics Lab | 0 | 1 |
| 4 | STAT-2104 | Probability & Statistics | 3 | 0 |
| 5 | MEEN-2128 | Fluid Mechanics-II | 3 | 0 |
| 6 | MEEN-2228 | Fluid Mechanics-II Lab | 0 | 1 |
| 7 | MEEN-2120 | Mechanics of Materials-II | 3 | 0 |
| 8 | MEEN-2220 | Mechanics of Materials-II Lab | 0 | 1 |
| **Credit Hours** | | | **14** | **03** |
| **Program Total Credit Hours** | | | | **17** |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | MATH-3116 | Numerical Analysis | 3 | 0 |
| 2 | MATH-3216 | Numerical Analysis Lab | 0 | 1 |
| 3 | MEEN-3137 | Precision Engineering & Metrology | 2 | 0 |
| 4 | MEEN-3237 | Precision Engineering & Metrology Lab | 0 | 1 |
| 5 | MEEN-3138 | Machine Design & CAD-I | 3 | 0 |
| 6 | MEEN-3238 | Machine Design & CAD-I Lab | 0 | 1 |
| 7 | MSCI-XXXX | Management Elective-I | 3 | 0 |
| 8 | MEEN-3130 | Manufacturing Process | 3 | 0 |
| 9 | MEEN-3230 | Manufacturing Process Lab | 0 | 1 |
| **Credit Hours** | | | **14** | **04** |
| **Program Total Credit Hours** | | | | **18** |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | MEEN-3136 | Heat & Mass Transfer | 3 | 0 |
| 2 | MEEN-3236 | Heat & Mass Transfer Lab | 0 | 1 |
| 3 | MEEN-3127 | Theory of Machines | 3 | 0 |
| 4 | MEEN-3227 | Theory of Machines Lab | 0 | 1 |
| 5 | MEEN-3138 | Machine Design & CAD-II | 3 | 0 |
| 6 | MEEN-3238 | Machine Design & CAD-II Lab | 0 | 1 |
| 7 | HLTH-XXXX | University/Social Elective | 2 | 0 |
| 8 | ENGL-2121 | Technical Report Writing | 2 | 0 |
| **Credit Hours** | | | **13** | **03** |
| **Program Total Credit Hours** | | | | **16** |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | MEEN-4147 | Internal Combustion Engines | 2 | 0 |
| 2 | MEEN-4247 | Internal Combustion Engines Lab | 0 | 1 |
| 3 | MEEN-4148 | Refrigeration & Air Conditioning | 3 | 0 |
| 4 | MEEN-4248 | Refrigeration & Air Conditioning Lab | 0 | 1 |
| 5 | MEEN-4149 | Mechanical Vibrations | 3 | 0 |
| 6 | MEEN-4249 | Mechanical Vibrations Lab | 0 | 1 |
| 7 | MEEN-4xyz | Technical Elective-I | 3 | - |
| 8 | MEEN-4398 | Project (Phase-I) | 0 | 3 |
| **Credit Hours** | | | **8** | **6** |
| **Program Total Credit Hours** | | | | **17** |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | MSCI-4xyz | Management Elective-II | 3 | 0 |
| 2 | MEEN-4163 | Control Engineering | 2 | 0 |
| 3 | MEEN-4263 | Control Engineering Lab | 0 | 1 |
| 4 | MEEN-4xyz | Technical Elective-II | 3 | - |
| 5 | MEEN-4xyz | Technical Elective-III | 3 | - |
| 6 | MEEN-4399 | Project (Phase-II) | 0 | 3 |
| **Credit Hours** | | | **11** | **04** |
| **Program Total Credit Hours** | | | | **15** |

| **GRAND TOTAL** | **136** |
|---|---|

# List of Elective Courses

## Technical Electives

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MEEN-4xyz | Power Plants | 3 |
| 2 | MEEN-4xyz | Renewable Energy Sources | 3 |
| 3 | MEEN-4xyz | Finite Element Methods | 3 |
| 4 | MEEN-4xyz | Computational Fluid Dynamics | 3 |
| 5 | MEEN-4xyz | Mechatronics | 3 |
| 6 | MEEN-4xyz | Tribology | 3 |
| 7 | MEEN-4xyz | Maintenance Engineering | 3 |
| 8 | MEEN-4xyz | Fluid Power: Hydraulics & Pnematics | 3 |
| 9 | MEEN-4xyz | Gas Dynamics | 3 |
| 10 | MEEN-4xyz | Aerodynamics | 3 |

## Social Sciences / University Electives

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | SSCI-3117 | Professional Psychology | 3 |
| 2 | SSCI-4103 | Professional Ethics | 3 |
| 3 | HLTH-1113 | Basic Health Awareness | 3 |
| 4 | SSCI-3120 | Constitution & Legal System of Pakistan | 3 |

## Management Electives

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-2112 | Engineering Economics | 3 |
| 2 | MSCI-3110 | Organizational Behaviour | 3 |
| 3 | MEEN-4170 | Industrial Management | 3 |
| 4 | MSCI-1102 | Principle of Management | 3 |
| 5 | MSCI-2116 | Principle of Accounting | 3 |
| 6 | MSCI-4155 | Total Quality Management | 3 |
| 7 | MEEN-4174 | Operations Management | 3 |
| 8 | MSCI-3111 | Entrepreneurship | 3 |

*"Habits are qualities of the soul"*

*- Ibn Khaldun*

# BS Materials Science

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English (English-I) | 3 | 0 |
| 2 | PAKS-1113 | Pakistan Studies (Pakistan Studies) | 2 | 0 |
| 3 | MATH-1101 | Mathematics – I (Algebra) (Math/Stat-I) | 3 | 0 |
| 4 | INFT-1102 | Introduction to Computing (General-I) | 2 | 0 |
| 5 | INFT-1202 | Introduction to Computing Lab (General-I) | 0 | 1 |
| 6 | HLTH-1113 | Basic Health Awareness (General-II) | 2 | 0 |
| 7 | MTSC-1101 | Introduction to Materials Science – I (Foundation-I) | 3 | 0 |
| | | **Credit Hours** | **15** | **01** |
| | | **Program Total Credit Hours** | | **16** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills (English-II) | 3 | 0 |
| 2 | ISLS-1112/ETIC-1112 | Islamic Studies (Islamic Studies/Ethics) | 2 | 0 |
| 3 | MATH-1101 | Calculus - I (Math/Stat-II / University Optional) | 3 | 0 |
| 4 | STAT-2131 | Probability & Statistics (General-III) | 3 | 0 |
| 5 | SSCI-3120 | Constitution and Legal System of Pakistan (General-IV) | 2 | 0 |
| 6 | MTSC-1102 | Introduction to Materials Science – II (Foundation-II) | 3 | 0 |
| | | **Credit Hours** | **16** | **0** |
| | | **Program Total Credit Hours** | | **16** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Skills (English-III) | 3 | 0 |
| 2 | COSC-1101 | Programming Fundamentals (Introduction to Computer) | 3 | 0 |
| 3 | COSC-1201 | Programming Fundamentals Lab (Introduction to Comp) | 0 | 1 |
| 4 | MEEN-1110 | Basic Mechanical Engineering (General-V) | 3 | 0 |
| 5 | MATH-3124 | Linear Algebra (General-VI) | 3 | 0 |
| 6 | MTSC-2101 | Thermal Properties of Materials (Foundation-III) | 3 | 0 |
| 7 | MTSC-2201 | Thermal Properties of Materials Lab (Foundation-III) | 0 | 1 |
| | | **Credit Hours** | **15** | **02** |
| | | **Program Total Credit Hours** | | **17** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | HLTH-XXXX | From university electives (English-IV / University Optional) | 3 | 0 |
| 2 | ELEN-2109 | Electrical Engineering and Electronics (General-VII) | 3 | 0 |
| 3 | MTSC-2102 | Theory of Solids (General-VIII) | 3 | 1 |
| 4 | MTSC-2104 | Optical Properties of Materials (Foundation-IV) | 3 | 0 |
| 5 | MTSC-2204 | Optical Properties of Materials Lab (Foundation-IV) | 0 | 0 |
| 6 | MTSC-2106 | Synthesis and Characterization of Materials (Foundation-V) | 3 | 0 |
| 7 | MTSC-2206 | Synthesis and Characterization of Materials Lab (Foundation-V) | 0 | 1 |
| | | **Credit Hours** | **15** | **02** |
| | | **Program Total Credit Hours** | | **17** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hrs. | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | MTSC-3101 | Electrical and Magnetic Properties of Materials (Foundation-VI) | 3 | 0 |
| 2 | MTSC-3103 | Thermodynamics of Materials (Foundation-VII) | 3 | 0 |
| 3 | MTSC-3105 | Computational Methods in Materials Science (Major-I) | 3 | 0 |
| 4 | MTSC-3107 | Vacuum Science and Technology (Major-II) | 3 | 0 |
| 5 | MTSC-3207 | Vacuum Science and Technology Lab (Major-II) | 0 | 1 |
| 6 | MTSC-3109 | Structure of Materials (Major-III) | 3 | 0 |
| 7 | MTSC-3209 | Structure of Materials Lab (Major-III) | 0 | 1 |
| **Credit Hours** | | | **15** | **02** |
| **Program Total Credit Hours** | | | | **17** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hrs. | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | MTSC-3102 | Introduction to Advanced Materials (Foundation-VIII) | 3 | 0 |
| 2 | MTSC-3104 | Selection of Materials (Foundation-IX) | 3 | 0 |
| 3 | MTSC-3106 | Nanomaterials and Nanotechnology - I (Major-IV) | 3 | 0 |
| 4 | MTSC-3108 | Corrosion / Erosion of Materials (Major-V) | 3 | 0 |
| 5 | MTSC-3208 | Corrosion / Erosion of Materials Lab (Major-V) | 0 | 1 |
| 6 | MTSC-3110 | Phase Transformations in Materials (Major-VI) | 3 | 0 |
| 7 | MTSC-3210 | Phase Transformations in Materials Lab (Major-VI) | 0 | 1 |
| **Credit Hours** | | | **15** | **02** |
| **Program Total Credit Hours** | | | | **17** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | MTSC-4101 | Mechanics of Materials (Major-VII) | 3 | 0 |
| 2 | MTSC-4201 | Mechanics of Materials Lab (Major-VII) | 0 | 1 |
| 3 | MTSC-4103 | Nanomaterials and Nanotechnology - II (Major-VIII) | 3 | 0 |
| 4 | MTSC-4105 | Surface Science of Materials (Major-IX) | 3 | 0 |
| 5 | MTSC-4205 | Surface Science of Materials Lab (Major-IX) | 0 | 1 |
| 6 | MTSC- XXXX | Select from list (Elective-I) | 3 | 0 |
| 7 | MTSC-4301 | Bibliographic Report (Major-X Research Project / Internship) | 3 | 0 |
| **Credit Hours** | | | **15** | **02** |
| **Program Total Credit Hours** | | | | **17** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. | |
|---|---|---|---|---|
| | | | Theory | Lab |
| 1 | MTSC-4302 | Internship,Research Project (Major-XI Research Project / Internship) | 3 | 0 |
| 2 | MTSC-4102 | Heat Treatments of Materials (Major-XII) | 3 | 0 |
| 3 | MTSC- XXXX | Select from list Elective-II | 3 | 0 |
| 4 | MTSC- XXXX | Select from list Elective-III | 3 | 0 |
| 5 | MTSC- XXXX | Select from list Elective-IV | 3 | 0 |
| 6 | MTSC-4303 | Latest in Materials Science (Invited Lectures/Talks/ Presentations) | 0 | 0 |
| **Credit Hours** | | | **15** | **0** |
| **Program Total Credit Hours** | | | | **15** |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MTSC 4111 | Ceramic Materials | 3 |
| 2 | MTSC 4112 | Energy Materials | 3 |
| 3 | MTSC 4113 | Magnetic Materials | 3 |
| 4 | MTSC 4114 | Nano Materials | 3 |
| 5 | MTSC 4115 | Bio/Medical Materials | 3 |
| 6 | MTSC 4116 | Deformation of Materials | 3 |
| 7 | MTSC 4117 | Fracture of Materials | 3 |
| 8 | MTSC 4118 | Metallic Materials | 3 |
| 9 | MTSC 4119 | Composite Materials | 3 |
| 10 | MTSC 4120 | Thin Film Materials | 3 |

## List of University Electives/Optional Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-XXXX. | Entrepreneurship | 3 |
| 2 | MSCI-XXXX. | Total Quality Management | 3 |
| 3 | MSCI-XXXX. | Engineering Management | 3 |
| 4 | MSCI-XXXX. | Engineering Economics | 3 |
| 5 | MSCI-XXXX. | Project Management | 3 |
| 6 | MSCI-XXXX. | Organizational Behavior | 3 |
| 7 | MSCI_XXXX. | International Relations | 3 |
| 8 | SSCI-XXXX. | Principles of Philosophy | 3 |
| 9 | SSCI-XXXX. | Principles of Psychology | 3 |
| 10 | MSCI-XXXX. | Entrepreneurship | 3 |

# MS Mechanical Engineering

## Semester 1

| S. No. | Course Title | Credit Hours |
|---|---|---|
| 1 | Core 1 | 3 |
| 2 | Core 2 | 3 |
| 3 | Core 3 | 3 |
| 4 | Elective 1 | 3 |
| **Credit Hours** | | **12** |

## Semester 2

| S. No. | Course Title | Credit Hours |
|---|---|---|
| 1 | Core 4 | 3 |
| 2 | Elective 2 | 3 |
| 3 | Elective 3 | 3 |
| 4 | Elective 4 | 3 |
| **Credit Hours** | | **12** |

## Semester 3 and onwards

| S. No. | Course Title | Credit Hours |
|---|---|---|
| 1 | Thesis | 12 |
| **Credit Hours** | | **12** |

# List of Core Courses

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | MEEN-6102 | Advanced Manufacturing Systems | 3 | 11 | MEEN-6415 | Advanced Stress Analysis | 3 |
| 2 | MEEN-6105 | Computer Integrated Manufacturing | 3 | 12 | MEEN-6417 | Advanced Internal Combustion Engines | 3 |
| 3 | MEEN-6106 | Advanced Control System | 3 | 13 | MEEN-6420 | Thermal Design of Heat Exchangers | 3 |
| 4 | MEEN-6110 | Advanced Fluid Mechanics | 3 | 14 | MEEN-6422 | Advanced Water Desalination | 3 |
| 5 | MEEN-6112 | Computational Fluid Dynamics | 3 | 15 | MEEN-6423 | Special Topics in Mechanical Engineering | 3 |
| 6 | MEEN-6113 | Thermal System Design | 3 | | | | |
| 7 | MATH-6115 | Advanced Engineering Mathematics | 3 | | | | |
| 8 | MEEN-6401 | Advanced Engineering Materials | 3 | | | | |
| 9 | MEEN-6406 | Advanced Tribology | 3 | | | | |
| 10 | MEEN-6411 | Continuum Mechanics | 3 | | | | |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | MEEN-5434 | Energy Management | 3 | 11 | MEEN-6114 | Advanced Heat Transfer | 3 |
| 2 | MEEN-5435 | Optimization Theory | 3 | 12 | MEEN-6402 | Product Life Cycle Management | 3 |
| 3 | MEEN-5438 | Operations Research | 3 | 13 | MEEN-6403 | Design Management & Prediction | 3 |
| 4 | MEEN-5139 | Advanced Numerical Analysis Techniques | 3 | 14 | MEEN-6405 | Human Factor Engineering | 3 |
| 5 | MEEN-6103 | Product and Process Design | 3 | 15 | MEEN-6407 | Combustion and Environment | 3 |
| 6 | MEEN-6104 | CAD/CAM | 3 | 16 | MEEN-6408 | Expert Systems in Mechanical Engineering | 3 |
| 7 | MEEN-6107 | Robotics | 3 | 17 | MEEN-6409 | Mechanism Design | 3 |
| 8 | MEEN-6108 | Advanced Dynamics | 3 | 18 | MEEN-6410 | Sensors and Sensing Technology | 3 |
| 9 | MEEN-6109 | Modelling & Simulation | 3 | 19 | MEEN-6412 | Advanced Finite Element Methods | 3 |
| 10 | MEEN-6111 | Advanced Thermodynamics | 3 | 20 | MEEN-6413 | Advanced Mechanical Vibration | 3 |

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 21 | MEEN-6414 | Industrial Automation | 3 | 31 | MATH-6158 | Mathematical Statistics | 3 |
| 22 | MEEN-6427 | Turbulence Modelling | 3 | 32 | MEEN-7102 | Advanced Manufacturing Design Techniques | 3 |
| 23 | MEEN-6428 | Intelligent Control | 3 | 33 | MEEN-7103 | Industrial Control Technology | 3 |
| 24 | MEEN-6429 | Optimal Control | 3 | 34 | MEEN-7104 | Precision Manufacturing Systems | 3 |
| 25 | MEEN-6430 | Advanced Aerodynamics | 3 | 35 | MEEN-7106 | Advanced Measurement Techniques | 3 |
| 26 | MEEN-6431 | Micro electromechanical Systems | 3 | 36 | MEEN-7107 | Advanced Topics in Mechatronics | 3 |
| 27 | MSCI-5143 | Total Quality Management | 3 | 37 | MEEN-7109 | Combustion Engineering | 3 |
| 28 | MSCI-5431 | Engineering Management | 3 | 38 | MEEN-7110 | Advanced Mechanical Vibration | 3 |
| 29 | MSCI-5432 | Engineering Economics | 3 | 39 | MEEN-7118 | Advanced Renewable Energy Systems | 3 |
| 30 | MSCI-6135 | Supply Chain Management | 3 | 40 | MEEN-7124 | Processing of Composites | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 41 | MEEN-7125 | Theory of Elasticity | 3 |
| 42 | MEEN-7126 | Design of Experiments | 3 |
| 43 | MEEN-7127 | System Dynamics and Controls | 3 |
| 44 | MEEN-7128 | Robotics and Parallel Mechanisms | 3 |
| 45 | MEEN-7129 | Advanced Fracture Mechanics | 3 |
| 46 | MEEN-7130 | Advanced Convection Heat Transfer | 3 |
| 47 | MEEN-7131 | Boundary Layer Theory | 3 |

*"Leader is a dealer in a hope"*

-Napoleon Bonaparte

# PhD Mechanical Engineering

## Semester 1

| S. No. | Course Title | Credit Hours |
|--------|--------------|--------------|
| 1 | Elective 1 | 3 |
| 2 | Elective 2 | 3 |
| 3 | Elective 3 | 3 |
| **Credit Hours** | | **9** |

## Semester 2

| S. No. | Course Title | Credit Hours |
|--------|--------------|--------------|
| 1 | Elective 4 | 3 |
| 2 | Elective 5 | 3 |
| 3 | Elective 6 | 3 |
| **Credit Hours** | | **9** |

## Semester 3 and onwards

| S. No. | Course Title | Credit Hours |
|--------|--------------|--------------|
| 1 | Thesis | 30 |
| **Credit Hours** | | **30** |

# List of Core Courses

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | MEEN-6102 | Advanced Manufacturing Systems | 3 |
| 2 | MEEN-6105 | Computer Integrated Manufacturing | 3 |
| 3 | MEEN-6106 | Advanced Control System | 3 |
| 4 | MEEN-6110 | Advanced Fluid Mechanics | 3 |
| 5 | MEEN-6112 | Computational Fluid Dynamics | 3 |
| 6 | MEEN-6113 | Thermal System Design | 3 |
| 7 | MATH-6115 | Advanced Engineering Mathematics | 3 |
| 8 | MEEN-6401 | Advanced Engineering Materials | 3 |
| 9 | MEEN-6406 | Advanced Tribology | 3 |
| 10 | MEEN-6411 | Continuum Mechanics | 3 |
| 11 | MEEN-6415 | Advanced Stress Analysis | 3 |
| 12 | MEEN-6417 | Advanced Internal Combustion Engines | 3 |
| 13 | MEEN-6420 | Thermal Design of Heat Exchangers | 3 |
| 14 | MEEN-6422 | Advanced Water Desalination | 3 |
| 15 | MEEN-6423 | Special Topics in Mechanical Engineering | 3 |
| 16 | MEEN-6103 | Product and Process Design | 3 |
| 17 | MEEN-6104 | CAD/CAM | 3 |
| 18 | MEEN-6107 | Robotics | 3 |
| 19 | MEEN-6108 | Advanced Dynamics | 3 |
| 20 | MEEN-6109 | Modelling & Simulation | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 21 | MEEN-6111 | Advanced Thermodynamics | 3 |
| 22 | MEEN-6114 | Advanced Heat Transfer | 3 |
| 23 | MEEN-6402 | Product Life Cycle Management | 3 |
| 24 | MEEN-6403 | Design Management & Prediction | 3 |
| 25 | MEEN-6404 | Materials for High-Temperature Applications | 3 |
| 26 | MEEN-6405 | Human Factor Engineering | 3 |
| 27 | MEEN-6407 | Combustion and Environment | 3 |
| 28 | MEEN-6408 | Expert Systems in Mechanical Engineering | 3 |
| 29 | MEEN-6409 | Mechanism Design | 3 |
| 30 | MEEN-6410 | Sensors and Sensing Technology | 3 |
| 31 | MEEN-6412 | Advanced Finite Element Methods | 3 |
| 32 | MEEN-6413 | Advanced Mechanical Vibration | 3 |
| 33 | MEEN-6414 | Industrial Automation | 3 |
| 34 | MEEN-6418 | Energy Resources and Utilization | 3 |
| 35 | MEEN-6419 | Precision Manufacturing Systems | 3 |
| 36 | MEEN-6421 | Convection Heat Transfer | 3 |
| 37 | MEEN-6424 | Processing of Composites | 3 |
| 38 | MEEN-6425 | Theory of Elasticity | 3 |
| 39 | MEEN-6426 | Design of Experiments | 3 |
| 40 | MEEN-6427 | Turbulence Modelling | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 41 | MEEN-6428 | Intelligent Control | 3 |
| 42 | MEEN-6429 | Optimal Control | 3 |
| 43 | MEEN-6430 | Fundamentals of Aerodynamics | 3 |
| 44 | MEEN-6439 | Advanced Numerical Analysis Techniques | 3 |
| 45 | MSCI-6135 | Supply Chain Management | 3 |
| 46 | MATH-6158 | Mathematical Statistics | 3 |
| 47 | MEEN-7102 | Advanced Manufacturing Design Techniques | 3 |
| 48 | MEEN-7103 | Industrial Control Technology | 3 |
| 49 | MEEN-7104 | Precision Manufacturing Systems | 3 |
| 50 | MEEN-7105 | Smart Materials and Structures | 3 |
| 51 | MEEN-7106 | Advanced Measurement Techniques | 3 |
| 52 | MEEN-7109 | Combustion Engineering | 3 |
| 53 | MEEN-7110 | Advanced Mechanical Vibration | 3 |
| 54 | MEEN-8104 | Materials for High-Temperature Applications | 3 |
| 55 | MEEN-8105 | Smart Materials and Structures | 3 |
| 56 | MEEN-8108 | Special Topics for Advanced Thermodynamics | 3 |
| 57 | MEEN-8111 | Advanced Solid Mechanics | 3 |
| 58 | MEEN-8112 | Advanced Power Plant Systems | 3 |
| 59 | MEEN-8113 | Theory of Plasticity | 3 |

*Parlementarian getting Briefing on Mechanical Engineering Test Bed*
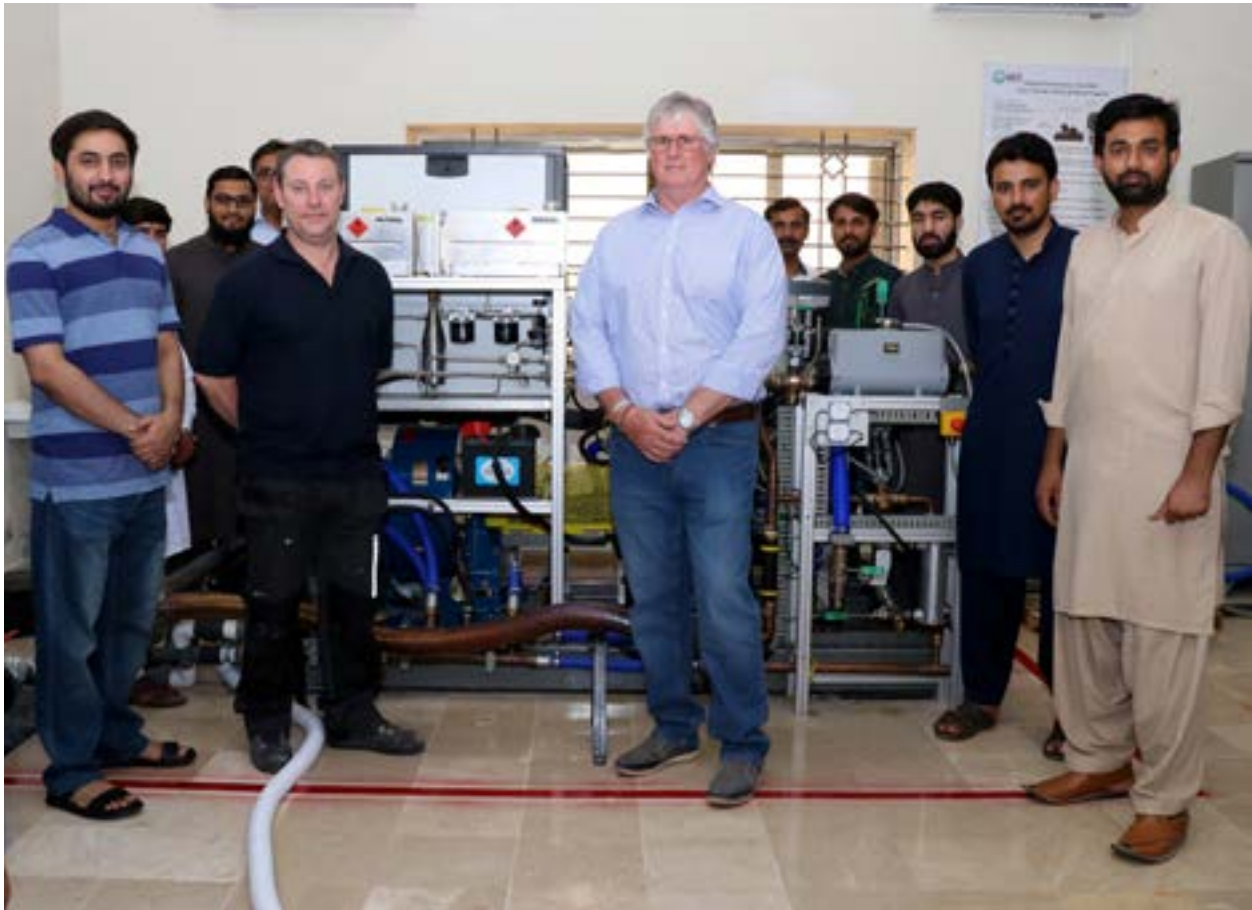
*Foreign Delegation Visiting Mechanical Engineering Lab*

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*A leader is one who knows the way,*
*goes the way, and shows the way.*

*- John Maxwell*

# Faculty of
## Computer Science & Information Technology

## Department of

# Computer Science

## Introduction

The Department of Computer Science at KFUEIT offers students and faculty a close-knit community to learn, discover and innovate, in a shared quest for computational solutions to a spectrum of challenging problems. Our focus is on quality teaching and research using state of the art facilities. The department copes with the modern needs of Information Technology where the main objective is to produce quality computer professionals and software engineers to meet the emerging demands of IT at national and international markets. We have a well designed curriculum as per HEC requirements with a combination of foundation, core and elective courses supported by the final year projects and internship programs.

The department educates and conducts research covering wide areas of attractive educational programs for students to learn from the basics to advanced technologies related to computer science and information technology. Students are taught and groomed to become leading developers and researchers who are highly motivated and have practical, creative and management skills to drive an advanced next-generation information society in all industrial zones

## Vision

To be recognized as a centre of excellence internationally in teaching and research in computer science to contribute for the local and national development.

## Key Features / Facilities

- State of the art Computing Labs
- Fareed Computing Research Center (www.fcrc.work)
- Highly qualified faculty having national and international exposure.

## Mission

Our mission is to provide quality education and;

- To produce graduates who are successful professionally, ethically, technically and scientifically to make positive contributions in the field of computing.
- To create, share, and apply knowledge in interdisciplinary research areas to perform a significant role in the continuing local and global transformations.
- To contribute positively to the economic development of the country providing services to the local community.
- To prepare the human resource to overcome the shortage of skilled manpower who can face the challenges of the 21st Century.

## Key Features / Facilities

- Best Teacher Award 2018
- Won National level competitions such as; ASCII, Microsoft Imagine Cup.
- Research Publications in high ranked journals.
- Member of National Curriculum Revision Committee.
- Dr. Arif Mehmood become reviewer of ETRI journal.
- Mr. Saqib Ubaid became member of Punjab Curriculum & Textbook Board (PCTB)

## Programs being offered

| BS Computer Science |
| MSc Computer Science |
| MS Computer Science |
| MS Data Science |
| PhD Computer Science * |

* Subject to approval / NOC from HEC / Competent Authority / Accreditation Body

# Scheme of Study

## BS Computer Science

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-1105 | Introduction to ICT | 2 | |
| 2 | COSC-1205 | Introduction to ICT-Lab | 1 | |
| 3 | COSC-1101 | Programming Fundamentals | 3 | |
| 4 | COSC-1201 | Programming Fundamentals-Lab | 1 | |
| 5 | ENGL-1118 | Functional English | 3 | |
| 6 | MATH-1100 | Calculus | 3 | |
| 7 | PHYS-1122 | Applied Physics | 3 | |
| 8 | ISLS-1112 | Islamic Studies/Ethics | 2 | |
| **Semester-I Credit Hours** | | | **18** | |

### Semester 2

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-1102 | Object Oriented Programming | 3 | COSC-1101 |
| 2 | COSC-1202 | Object Oriented Programming-Lab | 1 | & COSC-1201 |
| 3 | COSC-1104 | Software Engineering | 3 | |
| 4 | COSC-1103 | Discrete Structures | 3 | |
| 5 | ENGL-1119 | Communication Skills | 3 | |
| 6 | PAKS-1113 | Pakistan Studies | 2 | |
| 7 | SSCI-1111 | Introduction to Sociology | 3 | |
| **Semester-II Credit Hours** | | | **18** | |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | ELEN-2100 | Digital Logic Design | 3 | PHYS-1122 |
| 2 | ELEN-2200 | Digital Logic Design-Lab | 1 | |
| 3 | COSC-2101 | Data Structures & Algorithms | 3 | COSC-1102 & |
| 4 | COSC-2201 | Data Structures & Algorithms-Lab | 1 | COSC-1202 |
| 5 | COSC-3101 | Computer Networks | 3 | |
| 6 | COSC-3201 | Computer Networks-Lab | 1 | |
| 7 | ENGL-4117 | Technical & Business Writing | 3 | |
| 8 | MATH-2103 | Linear Algebra | 3 | |
| **Semester-III Credit Hours** | | | **18** | |

### Semester 4

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-2103 | Database Systems | 3 | |
| 2 | COSC-2203 | Database Systems-Lab | 1 | |
| 3 | COSC-2102 | Operating Systems | 3 | |
| 4 | COSC-2202 | Operating Systems-Lab | 1 | |
| 5 | COSC-2105 | Theory of Automata | 3 | COSC-1103 |
| 6 | STAT-2104 | Probability & Statistics | 3 | |
| 7 | HLTH-1113 | Basic Health Awareness | 2 | |
| **Semester-IV Credit Hours** | | | **16** | |

### Semester 5

| S. No. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-3114 | Computer Organization & Assembly Language | 3 | ELEN-2100 & |
| 2 | COSC-3214 | Computer Organization & Assembly Language-Lab | 1 | ELEN-2200 |
| 3 | COSC-3115 | Design & Analysis of Algorithms | 3 | COSC-2101 |
| 4 | MATH-2122 | Differential Equations | 3 | |
| 5 | COSC-3107 | Machine Learning | 3 | |
| 6 | MSCI-2116 | Principles of Accounting | 3 | |
| **Semester-V Credit Hours** | | | **16** | |

### Semester 6

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-3102 | Information Security | 3 | |
| 2 | COSC-3112 | Artificial Intelligence | 3 | COSC-1103 |
| 3 | COSC-3212 | Artificial Intelligence-Lab | 1 | |
| 4 | COSC-3104 | Compiler Construction | 3 | COSC-2105 |
| 5 | COSC-3116 | Mobile Application Development | 3 | |
| 6 | COSC-3109 | Data Science | 3 | |
| **Semester-VI Credit Hours** | | | **16** | |

### Semester 7

| S. No. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-4301 | Final Year Project-I | 3 | COSC-1104 & |
| 2 | COSC-4101 | Parallel and Distributed Computing | 3 | COSC-2103 |
| 3 | MATH-3116 | Numerical Analysis | 3 | COSC-2102 |
| 4 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | |
| 5 | COSC-4111 | Visual Programming | 3 | |
| 6 | COSC-4109 | Graph Theory | 3 | |
| **Semester-VII Credit Hours** | | | **17** | |

### Semester 8

| S. No. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-4302 | Final Year Project-II | 3 | COSC-4301 |
| 2 | SSCI-2111 | Professional Ethics | 2 | |
| 3 | MSCI-3111 | Entrepreneurship | 3 | |
| 4 | COSC-4120 | Web Programming | 3 | COSC-3101 |
| 5 | INFT-4107 | Routing & Switching | 2 | |
| **Semester-VIII Credit Hours** | | | **13** | |

| **Program Total Credit Hours** | **132** |
|---|---|

# MSc Computer Science

## Semester 1

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|----|--------|--------------|--------------|---------------|
| 1 | COSC-1101 | Programming Fundamentals | 3 | |
| 2 | COSC-1201 | Programming Fundamentals-Lab | 1 | |
| 3 | COSC-3103 | Data Communication & Computer Networks | 3 | |
| 4 | ELEN-2100 | Digital Logic Design | 3 | |
| 5 | COSC-1103 | Discrete Structures | 3 | |
| 6 | ENGL-1119 | Communication Skills | 3 | |
| **Total Credit Hours** | | | **16** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|---------------|
| 1 | COSC-1102 | Object Oriented Programming | 3 | COSC-1101 & COSC-1201 |
| 2 | COSC-1202 | Object Oriented Programming-Lab | 1 | |
| 3 | COSC-1104 | Software Engineering | 3 | |
| 4 | COSC-2101 | Data Structures & Algorithms | 3 | COSC-1101 & COSC-1201 |
| 5 | COSC-2201 | Data Structures & Algorithms-Lab | 1 | |
| 6 | COSC-2103 | Database Systems | 3 | |
| 7 | COSC-2203 | Database Systems-Lab | 1 | |
| 8 | MSCI-2116 | Principles of Accounting | 3 | |
| **Total Credit Hours** | | | **18** | |

## Semester 3

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|----|--------|--------------|--------------|---------------|
| 1 | COSC-2102 | Operating Systems | 3 | |
| 2 | COSC-2202 | Operating Systems-Lab | 1 | |
| 3 | COSC-2108 | Computer Architecture & Organization | 3 | |
| 4 | COSC-3104 | Theory of Automata & Formal Language | 3 | COSC-1103 |
| 5 | COSC-3116 | Mobile Application Development | 3 | |
| 6 | COSC-4120 | Web Programming | 3 | COSC-1102 & COSC1202 |
| 7 | COSC-4301 | Final Year Project-I | 3 | COSC-1104 & COSC-2103 |
| **Total Credit Hours** | | | **19** | |

## Semester 4

| S. No. | Course | Course Title | Credit Hours | Pre-Requisite |
|--------|--------|--------------|--------------|---------------|
| 1 | COSC-3112 | Artificial Intelligence | 3 | |
| 2 | COSC-3104 | Compiler Construction | 3 | COSC-3104 |
| 3 | COSC-4111 | Visual Programming | 3 | |
| 4 | INFT-4107 | Routing & Switching | 2 | COSC-3103 |
| 5 | COSC-4302 | Final Year Project-II | 3 | COSC-4301 |
| 6 | MSCI-3111 | Entrepreneurship | 3 | |
| **Total Credit Hours** | | | **17** | |

| **Program Total Credit Hours** | **70** |
|--------------------------------|--------|

# MS Computer Science

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|--------|-------------|--------------|--------------|---------|
| 1 | COSC-5101 | Advanced Algorithms Design and Analysis | 3 | Core |
| 2 | | Elective-I | 3 | Elective |
| 3 | | Elective-II | 3 | Elective |
| 4 | | Elective-III | 3 | Elective |
| **Semester Credit Hours** | | | **12** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|--------|-------------|--------------|--------------|---------|
| 1 | COSC-5102 | Advanced Theory of Computation | 3 | Core |
| 2 | | Elective-IV | 3 | Elective |
| 3 | | Elective-V | 3 | Elective |
| 4 | | Elective-VI | 3 | Elective |
| **Semester Credit Hours** | | | **12** | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|--------|-------------|--------------|--------------|---------|
| 1 | COSC-6601 | Thesis | 12 | Core |
| **Semester Credit Hours** | | | **12** | |

| **Program Total Credit Hours** | **36** |
|--------------------------------|--------|

*"You are not a drop in the Ocean.*
*You are entire ocean, in a drop."*

*- Rumi*

# List of Elective Courses

| S. No. | Course Code | Course Title | Category | S. No. | Course Code | Course Title | Category |
|---|---|---|---|---|---|---|---|
| 1 | COSC-5101 | Advanced Algorithms Design and Analysis | Core | 27 | COSC-6109 | Deep Learning | Elective |
| 2 | COSC-5102 | Advanced Theory of Computation | Core | 28 | COSC-6110 | Theory of Programming Languages | Elective |
| 3 | COSC-5103 | Semantic Web | Elective | 29 | COSC-6111 | Advanced Software Development | Elective |
| 4 | COSC-5104 | Algorithmic Game Theory | Elective | 30 | COSC-6112 | Advanced Requirements Engineering | Elective |
| 5 | COSC-5105 | Advanced Computer Networks | Elective | 31 | COSC-6113 | Advanced Software Architecture | Elective |
| 6 | COSC-5106 | Wireless Networks and Mobile Computing | Elective | 32 | COSC-6114 | Model Driven Software Engineering | Elective |
| 7 | COSC-5107 | Cryptography and Network Security | Elective | 33 | COSC-6115 | Advanced Software Quality Assurance | Elective |
| 8 | COSC-5108 | Advanced Database Systems | Elective | 34 | COSC-6116 | Network Management and Administration | Elective |
| 9 | COSC-5109 | Distributed Database Systems | Elective | 35 | COSC-6117 | Network Performance Evaluation | Elective |
| 10 | COSC-5110 | Geographical Information Systems | Elective | 36 | COSC-6118 | Grid and Cloud Computing | Elective |
| 11 | COSC-5111 | Information Retrieval Techniques | Elective | 37 | COSC-6119 | Advanced Routing | Elective |
| 12 | COSC-5112 | Machine Learning | Elective | 38 | COSC-6120 | Internet of Things | Elective |
| 13 | COSC-5113 | Multi-Agent Systems | Elective | 39 | COSC-6121 | Advanced Data Mining | Elective |
| 14 | COSC-5114 | Agent Oriented Software Engineering | Elective | 40 | COSC-6122 | Data Warehousing | Elective |
| 15 | COSC-5115 | Object Oriented Software Engineering | Elective | 41 | COSC-6123 | NoSQL Databases | Elective |
| 16 | COSC-5116 | Advanced Software Project Management | Elective | 42 | COSC-6124 | Big Data Analytics | Elective |
| 17 | COSC-5117 | Knowledge-Based Systems | Elective | 43 | COSC-6125 | Research Methodology | Elective |
| 18 | COSC-5118 | Advanced Digital Image Processing | Elective | 44 | COSC-6601 | Thesis | Core |
| 19 | COSC-6101 | Formal Methods | Elective | | | | |
| 20 | COSC-6102 | Model Checking | Elective | | | | |
| 21 | COSC-6103 | Systems Modeling and Simulation | Elective | | | | |
| 22 | COSC-6104 | Algorithmic Graph Theory | Elective | | | | |
| 23 | COSC-6105 | Computer Vision | Elective | | | | |
| 24 | COSC-6106 | Geometric Algorithms | Elective | | | | |
| 25 | COSC-6107 | Control Systems and Robotics | Elective | | | | |
| 26 | COSC-6108 | Natural Language Processing | Elective | | | | |



*BOS (Department of Computer Science)*

*Faculty Group Photo  (Department of Computer Science)*



*FIT Challenge 2019*





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*FIT Challenge Inauguration (Department of Computer Science)*

## Department of
# Information Technology

## Introduction

The Department of Information Technology at KFUEIT offers its students and faculty a platform to learn and explore challenging problems related to Information Technology. More specifically, the stakeholders investigate and solve together the open challenges of Information Technology. The focus of the department is on quality teaching and research using available state-of-the-art facilities. The department aims to cope with the needs of Information Technology professionals to meet the rising demands at both National and International levels. The department has devised a well-designed curriculum, as per HEC guidelines / requirements, combining all necessary courses ranging from basic to advance, equally supported by thesis and case studies.

The department educates and conducts research covering wide areas from fundamental technologies such as software engineering, image processing, object oriented programming, computer architecture, algorithms, database system, networks and internet technologies, which support infrastructures of the highly information-oriented society to applied and advanced technologies. To achieve this mission, we provide attractive educational programs for students to learn from the basics to advanced technologies, related to information technology. Through our educational programs, students are expected to become leading Information Technology professionals and researchers who are highly motivated and have practical, creative, and management skills to drive next-generation secure information society.

## Vision

To be a professional leader in delivering IT based services in support of teaching, learning, research and produce self-motivated and creative professionals.

## Mission

Our mission is to provide a quality education and;

- To produce graduates who are successful professionally, ethically, technically and scientifically to make positive contributions in the field of Information Technology
- To prepare students to function effectively in a dynamic technological era
- To contribute positively to the economic development of the country providing services to the community
- To prepare the human resource to overcome the shortage of skilled manpower who can face the challenges of the 21st Century

## Key Features / Facilities

- General Purpose Lab
- Database / Software Engineering Lab
- Networking Lab
- Programming Lab
- Micro Processor / Embedded Lab
- Electronics / Circuits Lab
- Advance Network Research Lab

## Programs being offered

| BS Information Technology |
| BS Bioinformatics |
| BS Telecommunication Systems * |
| MS Information Security |
| MS Information Technology * |
| MS Telecommunication Systems * |

* Subject to approval / NOC from HEC /
Competent Authority / Accreditation Body
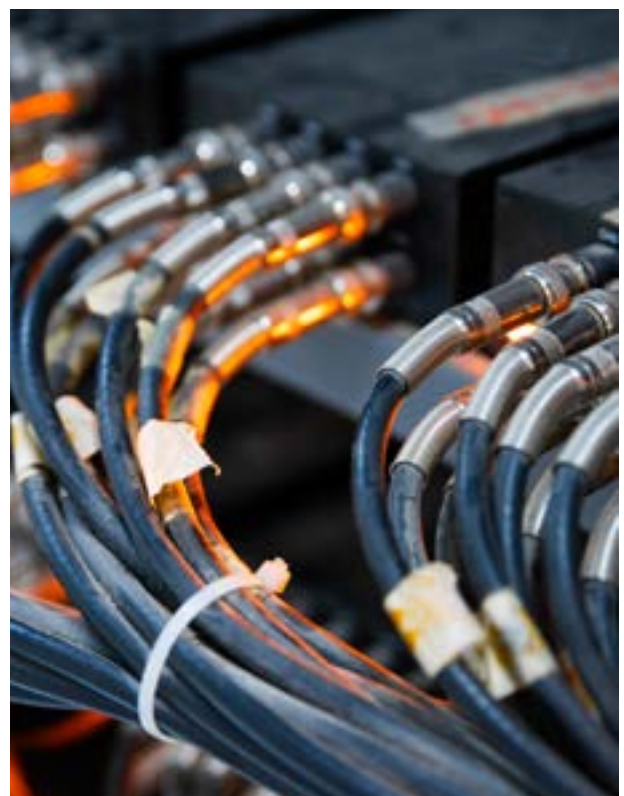
# BS Information Technology

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|---------------|
| 1 | COSC-1105 | Introduction to ICT | 2 | |
| 2 | COSC-1205 | Introduction to ICT-Lab | 1 | |
| 3 | COSC-1101 | Programming Fundamentals | 3 | |
| 4 | COSC-1201 | Programming Fundamentals-Lab | 1 | |
| 5 | MATH-1100 | Calculus | 3 | |
| 6 | ENGL-1118 | Functional English | 3 | |
| 7 | PHYS-1122 | Applied Physics | 3 | |
| 8 | ISLS-1112 | Islamic Studies/Ethics | 2 | |
| **Total Credit Hours** | | | **18** | |

## Semester 2

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|----|--------|--------------|--------------|---------------|
| 1 | COSC-1102 | Object Oriented Programming | 3 | |
| 2 | COSC-1202 | Object Oriented Programming-Lab | 1 | |
| 3 | COSC-1103 | Discrete Structures | 3 | |
| 4 | INFT-1101 | IT Infrastructure | 3 | |
| 5 | COSC-1104 | Software Engineering | 3 | |
| 6 | PAKS-1113 | Pakistan Studies | 2 | |
| 7 | ENGL-1119 | Communication Skills | 3 | |
| **Total Credit Hours** | | | **18** | |

## Semester 3

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|----|--------|--------------|--------------|---------------|
| 1 | COSC-2101 | Data Structures & Algorithms | 3 | |
| 2 | COSC-2201 | Data Structures & Algorithms-Lab | 1 | |
| 3 | COSC-3101 | Computer Networks | 3 | |
| 4 | COSC-3201 | Computer Networks-Lab | 1 | |
| 5 | MATH-2102 | Linear Algebra | 3 | |
| 6 | ENGL-4117 | Technical and Business Writing | 3 | |
| 7 | MSCI-2116 | Principles of Accounting | 3 | |
| **Total Credit Hours** | | | **17** | |

## Semester 4

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|----|--------|--------------|--------------|---------------|
| 1 | COSC-2102 | Operating Systems | 3 | |
| 2 | COSC-2202 | Operating Systems-Lab | 1 | |
| 3 | COSC-2103 | Database Systems | 3 | |
| 4 | COSC-2203 | Database Systems-Lab | 1 | |
| 5 | STAT-2131 | Probability & Statistics | 3 | |
| 6 | COSC-2120 | Software Requirements Engineering | 3 | |
| 7 | HLTH-1113 | Basic Health Awareness | 2 | |
| **Total Credit Hours** | | | **16** | |

## Semester 5

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|----|--------|--------------|--------------|---------------|
| 1 | INFT-3101 | System and Network Administration | 3 | COSC-2102 and COSC-2202 |
| 2 | INFT-3201 | System and Network Administration- Lab | 1 | |
| 3 | INFT-3102 | IT Project Management | 3 | |
| 4 | COSC-3120 | Formal Methods in Software Engineering | 3 | |
| 5 | COSC-3121 | Operations Research | 3 | |
| 6 | MSCI-3104 | Financial Management | 3 | |
| **Total Credit Hours** | | | **16** | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|---------------|
| 1 | COSC-3102 | Information Security | 3 | |
| 2 | INFT-3103 | Web Technologies | 3 | |
| 3 | INFT-3104 | Database Administration and Management | 3 | |
| 4 | INFT-3204 | Database Administration and Management-Lab | 1 | |
| 5 | COSC-3109 | Data Science | 3 | |
| 6 | COSC-3116 | Mobile Application Development | 3 | |
| **Total Credit Hours** | | | **16** | |

## Semester 7

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|----|--------|--------------|--------------|---------------|
| 1 | COSC-4301 | Final Year Project-I | 3 | COSC-1104 and COSC-2103 |
| 2 | INFT-4101 | Virtual Systems and Services | 3 | |
| 3 | INFT-4201 | Virtual Systems and Services-Lab | 1 | |
| 4 | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | |
| 5 | COSC-3112 | Artificial Intelligence | 3 | |
| 6 | COSC-41111 | Visual Programming | 3 | |
| 7 | INFT-4107 | Routing & Switching | 2 | |
| **Total Credit Hours** | | | **17** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|---------------|
| 1 | CSOC-4302 | Final Year Project-II | 3 | COSC-4301 |
| 2 | INFT-4102 | Cyber Security | 3 | |
| 3 | COSC-4120 | Web Programming | 3 | |
| 4 | MSCI-3111 | Entrepreneurship | 3 | |
| 5 | SSCI-2111 | Professional Ethics | 2 | |
| **Total Credit Hours** | | | **14** | |

| Program Total Credit Hours | 132 |
|----------------------------|-----|

# List of Elective Courses

| S. | Course | Course Title | Credit Hours | Pre-Requisite | Semester # | S. | Course | Course Title | Credit Hours | Pre-Requisite | Semester # |
|----|--------|--------------|--------------|---------------|------------|----|--------|--------------|--------------|---------------|------------|
| 1 | INFT-2102 | Telecommunication Systems | 3 | COSC-3101 | 6 | 15 | COSC-3109 | Data Science | 3 | - | |
| 2 | INFT-3105 | Wireless Networks | 3 | COSC-3101 | 6 | 16 | COSC-3110 | Data Warehousing | 3 | COSC-2103 | 6 |
| 3 | INFT-4103 | Mobile Networks | 3 | COSC-3101 | 6 | 17 | COSC-3111 | Distributed Database Systems | 3 | COSC-2103 | 6 |
| 4 | INFT-4104 | Internet of Things | 3 | COSC-3101 | 8 | 18 | COSC-3112 | Artificial Intelligence | 3 | COSC-1103 | 6 |
| 5 | INFT-4105 | Network Security | 3 | COSC-3101 | 8 | 19 | COSC-3113 | Data Mining | 3 | | 6 |
| 6 | INFT-4106 | Optical Networks | 3 | COSC-3101 | 8 | 20 | COSC-4101 | Parallel and Distributed | 3 | COSC-2102 | 6 |
| 7 | INFT-4107 | Routing & Switching | 3 | COSC-3101 | 7 | 21 | COSC-4107 | Theory of Progr Languages | 3 | | 7 |
| 8 | INFT-4108 | Software Defined Networks | 3 | COSC-3101 | 8 | 22 | SENG-3111 | Mobile Application Develpment | 3 | | 7 |
| 9 | COSC-2105 | Theory of Automata | 3 | COSC-1103 | 6 | 23 | SENG-3112 | Natural Language Processing | 3 | | 7 |
| 10 | COSC-3104 | Compiler Construction | 3 | COSC-2105 | 7 | 24 | SENG-3113 | Real Time Systems | 3 | | 6 |
| 11 | COSC-3105 | Advanced Real World Programming | 3 | - | 6 | 25 | SENG-4104 | Computer Graphics | 3 | | 6 |
| 12 | COSC-3106 | Advanced Object Oriented Prog | 3 | COSC-1102 | 6 | 26 | SENG-4106 | E-Commerce Application Dev | 3 | | 7 |
| 13 | COSC-3107 | Machine Learning | 3 | - | 6 | 27 | SENG-4112 | Semantic Web | 3 | | 7 |
| 14 | COSC-3108 | Image Processing | 3 | - | 6 | 28 | SENG-4115 | Visual Programming | 3 | | 8 |
| | | | | | | | | | | | 7 |

# BS Bioinformatics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|----------------|
| 1 | ENGL-1118 | Functional English | 3 | |
| 2 | COSC-1101 | Programming Fundamentals | 3 | |
| 3 | COSC-1201 | Programming Fundamentals Lab | 1 | |
| 4 | MATH- OR BIOL-1151 BIOL-1251 | Math-I OR Basic Biology Basic Biology-Lab | 3 OR 2 1 | |
| 5 | CHEM-1153 | Chemistry | 2 | |
| 6 | CHEM-1253 | Chemistry-Lab | 1 | |
| 7 | COSC-1105 | Introduction to ICT | 2 | |
| 8 | COSC-1205 | Introduction to ICT-Lab | 1 | |
| 9 | BIOI-1101 | Bioinformatics Colloquium | 1 | |
| **Total Credit Hours** | | | **17** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|----------------|
| 1 | BIOL-1153 | Basic Cell Biology | 3 | |
| 2 | BIOL-1253 | Basic Cell Biology-Lab | 1 | |
| 3 | COSC-1102 | Object Oriented Programming | 3 | |
| 4 | COSC-1202 | Object Oriented Program-ming-Lab | 1 | |
| 5 | MATH-1100 | Calculus | 3 | |
| 6 | ENGL-1119 | Communication Skills | 3 | |
| 7 | CHEM-1151 | Biochemistry-I | 3 | |
| 8 | CHEM-1251 | Biochemistry-I-Lab | 1 | |
| **Total Credit Hours** | | | **18** | |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|----------------|
| 1 | ENGL-1111 | Technical & Business Writing | 3 | |
| 2 | MATH-2103 | Linear Algebra | 3 | |
| 3 | BIOL-2152 | Essentials of Genetics | 3 | |
| 4 | BIOL-2252 | Essentials of Genetics-Lab | 1 | |
| 5 | COSC-2101 | Data Structures & Algorithms | 3 | |
| 6 | COSC-2201 | Data Structures & Algorithms-Lab | 1 | |
| 7 | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | |
| 8 | ISLS-1112 | Islamic Studies/Ethics | 2 | |
| **Total Credit Hours** | | | **18** | |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|----------------|
| 1 | BIOI-2101 | Introduction to Bioinformatics | 2 | |
| 2 | BIOI-2201 | Introduction to Bioinformatics-Lab | 1 | |
| 3 | STAT-2104 | Probability & Statistics | 3 | |
| 4 | PAKS-1113 | Pakistan Studies | 2 | |
| 5 | CHEM-2152 | Biochemistry-II | 3 | CHEM-1151 |
| 6 | BIOL-2154 | Molecular Biology | 3 | BIOL-1153 |
| 7 | BIOL-2254 | Molecular Biology-Lab | 1 | |
| 8 | COSC-1103 | Discrete Structures | 3 | |
| **Total Credit Hours** | | | **18** | |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|----------------|
| 1 | BIOI-3101 | Recombinant DNA Technology | 2 | |
| 2 | BIOI-3201 | Recombinant DNA Technology-Lab | 1 | |
| 3 | COSC-2103 | Database Systems | 3 | |
| 4 | COSC-2203 | Database Systems-Lab | 1 | |
| 5 | BIOI-3102 | Bioinformatics Analysis | 3 | |
| 6 | BIOI-3202 | Bioinformatics Analysis-Lab | 1 | |
| 7 | BIOI-3103 | Genomics | 3 | BIOL-2154 |
| 8 | COSC-3108 | Image Processing | 3 | |
| **Total Credit Hours** | | | **17** | |

## Semester 6

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|-----|--------|--------------|--------------|----------------|
| 1 | | Bioinformatics Computing-I | 3 | COSC-1101 |
| 2 | BIOI-3204 | Bioinformatics Computing-I-Lab | 1 | |
| 3 | SENG-3107 | Modeling and Simulation | 3 | |
| 4 | BIOI-3105 | Proteomics | 3 | BIOL-2154 |
| 5 | BIOI-3106 | Graphics and Visualization | 3 | COSC-1101 |
| 6 | BIOI-3206 | Graphics and Visualization-Lab | 1 | |
| 7 | BIOI-3107 | Systems Biology | 3 | BIOI-3103 |
| **Total Credit Hours** | | | **17** | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|----------------|
| 1 | COSC-3112 | Artificial Intelligence | 3 | COSC-1103 |
| 2 | BIOI-4101 | Bioinformatics Software Engineering | 2 | |
| 3 | BIOI-4201 | Bioinformatics Software Engineering-Lab | 1 | |
| 4 | SSCI-1112 | Social Service | 1 | |
| 5 | COSC-3109 | Data Science | 3 | |
| 6 | BIOI-4102 | Functional and Structural Bioinformatics | 3 | |
| 7 | BIOI-4103 | Ethical and Legal Issues in Bioin-formatics | 2 | BIOI-3102 |
| 8 | | Final Year Project-I | 3 | ENGL-1111 and COSC-2103 |
| **Total Credit Hours** | | | **18** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|--------|-------------|--------------|--------------|----------------|
| 1 | BIOI-4104 | Bioinformatics Computing-II | 3 | |
| 2 | BIOI-4105 | Network Biology | 3 | |
| 3 | HLTH-1113 | Basic Health Awareness | 2 | |
| 4 | BIOI-4302 | Final Year Project-II | 3 | |
| **Total Credit Hours** | | | **11** | |

| **Program Total Credit Hours** | **134** |
|--------|--------|

*"The past resembles the future more than
one drop of water resembles another"*

*- Ibn Khaldun*

## List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | BIOI-4106 | Immuno-Informatics | 3 |
| 2 | BIOI-4105 | Network Biology | 3 |
| 3 | COSC-3101 | Computer Networks | 3 |
| 4 | COSC-3107 | Machine Learning | 3 |
| 5 | COSC-3108 | Image Processing | 3 |
| 6 | COSC-3109 | Data Science | 3 |
| 7 | MSCI-3111 | Entrepreneurship | 3 |
| 8 | COSC-3113 | Data Mining | 3 |
| 9 | SENG-4115 | Visual Programming | 3 |
| 10 | SENG-4112 | Semantic Web | 3 |
| 11 | MATH-2122 | Differential Equations | 3 |
| 12 | SSCI-1112 | Social Service (Elective Mandatory) | 3 |
| 13 | BIOI-4107 | Special Topics in Biochemistry | 3 |
| 14 | BIOI-1101 | Bioinformatics Colloquium (Elective Mandatory) | 3 |

*"Innovation distinguishes between a leader and a follower"*

*-Steve Jobs*

## MS Information Security

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|--------|-------------|--------------|--------------|---------|
| 1 | COSC-5101 | Advanced Algorithms Design and Analysis | 3 | Core |
| 2 | COSC-5107 | Cryptography and Network Security | 3 | Core |
| 3 | | Specialization-I | 3 | Specialized |
| 4 | | Elective-I | 3 | Elective |
| **Total Credit Hours** | | | **12** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|--------|-------------|--------------|--------------|---------|
| 1 | INFS-5101 | Information Security and Privacy | 3 | Core |
| 2 | | Specialization-II | 3 | Specialized |
| 3 | | Elective-II | 3 | Elective |
| 4 | | Elective-II | 3 | Elective |
| **Total Credit Hours** | | | **12** | |

### Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|--------|-------------|--------------|--------------|---------|
| 1 | INFS-6601 | Thesis | 12 | Core |
| **Total Credit Hours** | | | **12** | |

| Program Total Credit Hours | 36 |
|----------------------------|----|

### Specialization: Information Security Management

| S. No. | Course Code | Course Title | Remarks |
|--------|-------------|--------------|---------|
| 1 | INFS-5102 | Legal Issues in Information Security | Elective |
| 2 | INFS-5103 | IT Security Evaluation and Auditing | Elective |
| 3 | INFS-6111 | Intrusion Detection Systems | Elective |
| 4 | INFS-6112 | Cyber Risk Management | Elective |

### Specialization: Digital Forensics

| S. No. | Course Code | Course Title | Remarks |
|--------|-------------|--------------|---------|
| 1 | INFS-6113 | Computer Forensics | Elective |
| 2 | INFS-6114 | Network Forensics | Elective |
| 3 | INFS-6115 | Operating System Forensics | Elective |
| 4 | INFS-6116 | IT Forensics and Investigation | Elective |

### General Elective Courses

| S. No. | Course Code | Course Title | Remarks |
|--------|-------------|--------------|---------|
| 1 | MSCI-6134 | Cases in Small Business & Entrepreneurship | Elective |
| 2 | INFS-5104 | ICT Innovation-Product Design and Development | Elective |
| 3 | INFS-6101 | Software Security | Elective |
| 4 | INFS-6102 | Advanced Software Engineering | Elective |
| 5 | INFS-6103 | Modeling and Analysis of Security Protocols | Elective |
| 6 | INFS-6104 | Usable Security and Privacy | Elective |
| 7 | INFS-6105 | Security of Smart Devices | Elective |
| 8 | INFS-6106 | Biometric Authentication | Elective |

| S. No. | Course Code | Course Title | Remarks |
|---|---|---|---|
| 9 | INFS-6107 | Principles of Data Protection | Elective |
| 10 | INFS-6108 | Cloud Computing Security | Elective |
| 11 | INFS-6109 | Security of Data Communication Networks | Elective |
| 12 | INFS-6110 | Advanced Topics in Network Security | Elective |

| S. No. | Course Code | Course Title | Remarks |
|---|---|---|---|
| 13 | COSC-5112 | Machine Learning | Elective |
| 14 | COSC-6101 | Formal Methods | Elective |
| 15 | COSC-6102 | Model Checking | Elective |
| 16 | COSC-6120 | Internet of Things | Elective |
| 17 | MSCI-6102 | Research Methodology | Elective |

## Deficiency Courses

| S. No. | Course Code | Course Title | Remarks |
|---|---|---|---|
| 1 | COSC-1101 | Programming Fundamentals | None |
| 2 | COSC-1102 | Object Oriented Programming | COSC-1101 |
| 3 | COSC-1103 | Discrete Structures | None |
| 4 | COSC-2101 | Data Structures & Algorithms | COSC-1101 |
| 5 | COSC-3101 | Computer Networks | None |

| S. No. | Course Code | Course Title | Remarks |
|---|---|---|---|
| 6 | Operating Systems | Operating Systems | None |
| 7 | Database Systems | Database Systems | None |
| 8 | Software Engineer | Software Engineering | None |
| 9 | Information Security | Information Security | None |

# MS Information Technology

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | INFT-5101 | Advanced Database Management Systems | 3 | Core |
| 2 | | Elective-I | 3 | Elective |
| 3 | | Elective-II | 3 | Elective |
| 4 | | Elective-III | 3 | Elective |
| **Total Credit Hours** | | | **12** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | INFT-5101 | Information Security and Assurance | 3 | Core |
| 2 | | Elective-IV | 3 | Elective |
| 3 | | Elective-V | 3 | Elective |
| 4 | | Elective-VI | 3 | Elective |
| **Total Credit Hours** | | | **12** | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | INFT-6601 | Thesis | 12 | Mandatory |
| **Total Credit Hours** | | | **12** | |

# List of Elective Courses

| S. No. | Course Code | Course Title | Category |
|---|---|---|---|
| 1 | INFT-5101 | Information Technology Infrastructure | Elective |
| 2 | INFT-5102 | Telecom Management | Elective |
| 3 | INFT-5103 | Data Warehousing Trends & Issues | Elective |
| 4 | INFT-5104 | Data Mining Trends & Issues | Elective |
| 5 | INFT-5105 | Advanced Business Intelligence and Analytics | Elective |
| 6 | INFT-5106 | Multimedia Databases | Elective |
| 7 | INFT-5107 | Mobile & Pervasive Computing | Elective |
| 8 | INFT-5108 | Enterprise Data Center Design and Methodology | Elective |
| 9 | INFT-5109 | Data Center Network Design, Implementation, and Security | Elective |
| 10 | INFT-5110 | Virtualized Data Center | Elective |
| 11 | INFT-5111 | Advanced Computer Networks | Elective |
| 12 | INFT-5112 | Network Performance Modelling and Evaluation | Elective |
| 13 | INFT-5113 | Integrated Services over Packet Networks | Elective |
| 14 | INFT-5114 | Stochastic Systems | Elective |

| S. No. | Course Code | Course Title | Category |
|---|---|---|---|
| 15 | INFT-5115 | Stochastic Processes | Elective |
| 16 | INFT-5116 | Knowledge-Based Systems | Elective |
| 17 | INFT-5117 | Distributed Databases | Elective |
| 18 | INFT-5118 | Advanced Telecommunication Networks | Elective |
| 19 | INFT-5119 | Telecommunication Systems | Elective |
| 20 | INFT-5120 | Advanced Network Security | Elective |
| 21 | INFT-5121 | Principles of Multimedia Systems | Elective |
| 22 | INFT-5122 | Advanced Multimedia Systems | Elective |
| 23 | INFT-5123 | Distributed System | Elective |
| 24 | INFT-5124 | Computer Graphics | Elective |
| 25 | INFT-5125 | Advanced Topics in Information Technology | Elective |
| 26 | INFS-6108 | Cloud Computing Security | Elective |
| 27 | COSC-5107 | Cryptography and Network Security | Elective |
| 28 | COSC-5111 | Information Retrieval Techniques | Elective |

| S. No. | Course Code | Course Title | Category |
|---|---|---|---|
| 29 | COSC-5112 | Machine Learning | Elective |
| 30 | COSC-5118 | Advanced Digital Image Processing | Elective |
| 31 | COSC-6105 | Computer Vision | Elective |
| 32 | COSC-6120 | Internet of Things | Elective |
| 33 | COSC-6124 | Big Data Analytics | Elective |
| 34 | MSCI-6102 | Advanced Research Methodology | Elective |
| 35 | COSC-5120 | Tools and Techniques in Data Science | Elective |

# BS Telecommunication Systems

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-1105 | Introduction to Computing | 2 | |
| 2 | COSC-1205 | Introduction to Computing-Lab | 1 | |
| 3 | PHYS-1121 | Applied Physics | 3 | |
| 4 | PHYS-1221 | Applied Physics -Lab | 1 | |
| 5 | TLC-1101 | Electric Circuits I | 3 | |
| 6 | TLC-1102 | Electric Circuits I-Lab | 1 | |
| 7 | MATH-1101 | Calculus I | 3 | |
| 8 | ENGL-1114 | Eng-I, English Composition and Comprehension | 2 | |
| **Total Credit Hours** | | | **16** | |

## Semester 2

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | COSC-1102 | Object Oriented Programming | 3 | |
| 2 | COSC-1202 | Object Oriented Programming-Lab | 1 | |
| 3 | ELEN-1120 | Electronic Devices & Circuits | 3 | |
| 4 | ELEN-1220 | Electronic Devices & Circuits-Lab | 1 | |
| 5 | MATH-1102 | Calculus II | 3 | |
| 6 | ENGL-1119 | Eng-II, Communication Skills | 3 | |
| 7 | PAKS-1113 | Pakistan Studies | 2 | |
| 8 | ISLS-1112 | Islamic Studies/Ethics | 2 | |
| **Total Credit Hours** | | | **18** | |

## Semester 3

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | ELEN-2100 | Digital Logic Design | 3 | |
| 2 | ELEN-2200 | Digital Logic Design | 1 | |
| 3 | COSC-3103 | Data Communications and Networking | 3 | |
| 4 | COSC-3203 | Data Communications and Networking -Lab | 1 | |
| 5 | MATH-2103 | Linear Algebra | 3 | |
| 6 | SSCI-2111 | Professional Ethics | 3 | |
| 7 | TLC-2101 | Electric Circuits II | 3 | |
| **Total Credit Hours** | | | **17** | |

## Semester 4

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | INFT-3103 | Telecommunication Systems | 3 | |
| 2 | TLC-2102 | Complex Variables and Transforms | 3 | |
| 3 | CEEN-2122 | Signals and Systems | 3 | |
| 4 | CEEN-2122 L | Signals and Systems-Lab | 1 | |
| 5 | MSCI-3110 | Organizational Behaviour | 3 | |
| 6 | ENGL-2111 | Eng-III, Technical Report Writing | 2 | |
| **Total Credit Hours** | | | **15** | |

## Semester 5

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | TLC-3101 | Analog & Digital Communications Systems | 3 | |
| 2 | TLC-3102 | Information and Network Security | 3 | |
| 3 | ELEN-3131 | Electromagnetic Theory | 3 | |
| 4 | TLC-3103 | Introduction to Business and Marketing | 3 | |
| 5 | TLC-3104 | Economics | 3 | |
| 6 | STAT-2131 | Probability & Statistics | 3 | |
| **Total Credit Hours** | | | **18** | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | TLC-3105 | Antenna and Wave Propagation | 3 | |
| 2 | TLC-3106 | Transmission and Switching Systems | 3 | |
| 3 | TLC-3107 | Telecommunication Policies and Regulations | 3 | |
| 4 | TLC-3108 | Microcontrollers & Embedded Systems | 3 | |
| 5 | TLC-3208 | Microcontrollers & Embedded Systems-Lab | 1 | |
| 6 | TLC-3109 | e-Business Management | 3 | |
| **Total Credit Hours** | | | **16** | |

## Semester 7

| S. | Course | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | TLC-4301 | Final Year Project-I | 3 | |
| 2 | ELEN-4131 | Wireless and Mobile Communications | 3 | |
| 3 | TLC-4101 | Telecommunication Network Management | 3 | |
| 4 | TLC-4106 | Cyber Policies and Regulations | 3 | |
| 5 | TLC-4110 | Parallel and Distributed Computing | 3 | |
| **Total Credit Hours** | | | **15** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours | Pre-Requisite |
|---|---|---|---|---|
| 1 | TLC-4302 | Final Year Project -II | 3 | |
| 2 | TLC-4102 | Optical Fiber Communication | 3 | |
| 3 | MSCI-6106 | Project Management | 3 | |
| 4 | TLC-4105 | Broadband Networks | 3 | |
| 5 | INFT-3118 | Real Time Systems | 3 | |
| **Total Credit Hours** | | | **15** | |

| **Program Total Credit Hours** | **130** |
|---|---|

# List of Elective Courses

| S. No. | Course Code | Course Title | Cr. Hrs |
|---|---|---|---|
| 29 | TLC-4103 | Ubiquitous Computing | 3 |
| 30 | TLC-4104 | Information Theory and Coding | 3 |
| 31 | TLC-4105 | Broadband Networks | 3 |
| 32 | TLC-4106 | Cyber Policies and Regulations | 3 |
| 33 | TLC-4107 | Software Define Radios | 3 |
| 34 | INFT-4114 | Optical Networks | 3 |
| 35 | INFT-4107 | Routing & Switching | 3 |
| 36 | TLC-4108 | Software Defined Networks | 3 |
| 37 | COSC-2105 | Theory of Automata | 3 |
| 38 | COSC-3104 | Compiler Construction | 3 |
| 39 | COSC-2160 | Advanced Real World Programming | 3 |
| 40 | COSC4110 | Advanced Object Oriented Programming | 3 |
| 41 | COSC-5112 | Machine Learning | 3 |
| 42 | COSC-3112 | Advanced Image Processing | 3 |

| S. No. | Course Code | Course Title | Cr. Hrs |
|---|---|---|---|
| 43 | INFT-4106 | Data Science | 3 |
| 44 | TLC-4109 | Data Warehousing | 3 |
| 45 | INFT-4106 | Distributed Database Systems | 3 |
| 46 | COSC-3112 | Artificial Intelligence | 3 |
| 47 | COSC-4108 | Data Mining | 3 |
| 48 | TLC-4110 | Parallel and Distributed Computing | 3 |
| 49 | TLC-4111 | Theory of Programming Languages | 3 |
| 50 | COSC-3116 | Mobile Application Development | 3 |
| 51 | COSC-4109 | Natural Language Processing | 3 |
| 52 | INFT-3118 | Real Time Systems | 3 |
| 53 | COSC-3114 | Computer Graphics | 3 |
| 54 | TLC-4112 | E-Commerce Application Development | 3 |
| 55 | COSC-3116 | Semantic Web | 3 |
| 56 | COSC-4111 | Visual Programming | 3 |

# MS Telecommunication Systems

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | TLC-5101 | Advanced Digital Communication | 3 | Core |
| 2 | TLC-5102 | Telecommunication Network Operations | 3 | Core |
| 3 | | Specialized Core Course-I | 3 | Specialized Core Course |
| 4 | | Elective-I | 3 | Elective |
| **Total Credit Hours** | | | **12** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | TLC-5103 | Digital Signal Processing | 3 | Core |
| 2 | | Specialized Core Course- II | 3 | Specialized Core Course |
| 3 | | Specialized Core Course-III | 3 | Specialized Core Course |
| 4 | | Elective-II | 3 | Elective |
| **Total Credit Hours** | | | **12** | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | TLC-6601 | Thesis | 12 | Mandatory |
| **Total Credit Hours** | | | **12** | |

# List of Elective Courses

| S. No. | Course Code | Course Title | Category |
|---|---|---|---|
| 1 | TLC-5125 | Advanced Telecommunication Management | Elective |
| 2 | TLC-5126 | Advanced e-business Management | Elective |
| 3 | TLC-5127 | Business Process Management | Elective |
| 4 | TLC-5128 | Multinational Project Management | Elective |
| 5 | TLC-5129 | Management Information Systems | Elective |
| 6 | TLC-5130 | Review of International Telecommunication Laws | Elective |
| 7 | TLC-5131 | Macro Economics | Elective |
| 8 | TLC-5132 | Investment Management | Elective |

# Specialization Core Courses

| S. No. | Course Code | Course Title | Category |
|---|---|---|---|
| 1 | TLC-5104 | Probability and Random Processes | Specialized Core Course |
| 2 | TLC-5105 | Advanced Communication Systems | Specialized Core Course |
| 3 | TLC-5106 | Information Theory and Coding | Specialized Core Course |
| 4 | TLC-5107 | Microwave Systems | Specialized Core Course |
| 5 | TLC-5108 | Advance Mobile Communication | Specialized Core Course |
| 6 | TLC-5109 | Advanced concepts in Radar Systems | Specialized Core Course |
| 7 | TLC-5110 | Cyber Security | Specialized Core Course |
| 8 | TLC-5111 | Cryptography and Security Systems | Specialized Core Course |
| 9 | TLC-5112 | Wireless Local Positioning Systems | Specialized Core Course |
| 10 | TLC-5113 | Global Positioning and Navigation Systems | Specialized Core Course |
| 11 | TLC-5114 | Signal Detection and Estimation | Specialized Core Course |
| 12 | TLC-5115 | Advanced Optical Communication Systems | Specialized Core Course |
| 13 | TLC-5116 | Advanced Satellite Communication Systems | Specialized Core Course |
| 14 | TLC-5117 | Advanced electromagnetic and Antenna systems | Specialized Core Course |
| 15 | TLC-5118 | Advanced Broadband Communication Systems | Specialized Core Course |
| 16 | TLC-5119 | Multimedia Communication Systems | Specialized Core Course |
| 17 | TLC-5120 | Modelling and Simulation of Telecommunication systems | Specialized Core Course |
| 18 | TLC-5121 | Electromagnetic Compatibility Regulations | Specialized Core Course |
| 19 | TLC-5122 | Quality of Service in Telecommunication systems | Specialized Core Course |
| 20 | TLC-5123 | Advances in transmission & switching system | Specialized Core Course |
| 21 | TLC-5124 | Selected Topics in Telecom systems | Specialized Core Course |

*"The happiness of the drop is to die in the river."*

*- Al-Ghazali*

# Faculty Profile

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# Faculty of
# Natural Sciences

## Department of
# Chemistry

## Introduction and Overview

Civilization started with the invention of fire or in other words it started with the knowledge of Chemistry. Later its contribution in providing energy, food, shelter, clothing, medicine, engineering materials, information technology gadgets and other necessities of life is evident of the fact that human being progress goes hand in hand with the progress of chemistry. Chemistry was one of the pioneer programs offered at KFUEIT in 2016 for quality education and specialization in its different core branches such as organic chemistry, inorganic chemistry, physical chemistry, analytical and applied chemistry. With highly qualified and internationally engaged faculty, well-equipped laboratories and resource rich library facilities, the Department of Chemistry is striving to prepare students for national and international challenging research problems and internships to fine tune their intellectual capabilities and technical skills.

## Vision

The department of chemistry at KFUEIT dreams to accomplish high distinction in teaching and research, to produce chemistry experts of international level proficiencies and to build up a world class centre of excellence in teaching and research within the industrial triangle of Southern Punjab.

## Labs Facilities / Instruments

- UV-Visible
- Rotatory Evaporators
- pH meters
- Conductometers
- Furnaces
- UV-Lamps
- Digital Melting Point
- Hot Plates
- Water Distillation Apparatus
- Incubators
- Centrifuge Machines
- Abbes Refractometer
- Flame Photometer

### Upcomming Instruments

- Atomic Absorption Spectrometer
- UV-Visible Spectrometers
- 400 MHz NMR Spectrometer
- FTIR
- HPLC

## Key Facts

- PhD Faculty Members: 18
- Teaching Assistant (MPhil): 01
- Non-Teaching Staff: 06

## Mission

To achieve the vision: the mission of the department of chemistry at KFUEIT is to make significant contribution towards education, research and practice in the field of chemistry. The department of chemistry is determinent to help each student to achieve his/her academic potential by creating environment that promotes;

a) rigorous curriculum and hands-on experiences which can prepare students to enter industry, academia and professional programs.

b) broad understanding of chemistry with critical thinking and effective oral and written communication.

c) high ethical standards in education and research.

d) use of modern educational technology during lecture and laboratory courses.

e) supporting scientific inquiries by individual faculty and student investigators.

f) promoting the development of innovative & interdisciplinary projects to apply discoveries and inventions to other fields.

g) strategic partnerships with other departments, academic institutions and relevant industries at national & international level for creation and dissemination of knowledge.

## Programs being offered

| | |
|---|---|
| BS Chemistry | BS Zoology |
| BS Biochemistry | MSc Chemistry |
| BS Biotechnology | MS Chemistry |
| BS Forensic Science | PhD Chemistry |
| BS Botany | |

# Scheme of Study

## BS Chemistry

### Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 |
| 2 | MATH-1111 | Mathematics-I | 3 | 0 |
| 3 | PAKS-1113 | Pakistan Studies | 2 | 0 |
| 4 | CHEM-1151 | Inorganic Chemistry | 3 | 0 |
| 5 | CHEM-1251 | Inorganic Chemistry-Lab | 0 | 1 |
| 6 | ZOOL-1171 | Zoology | 3 | 0 |
| 7 | HLTH-1113 | Basic Health Awareness | 2 | 0 |
| **Total Credit Hours** | | | **16** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | ISLS-1112 | Islamic Studies | 2 | 0 |
| | ETIC-1112 | Ethics | | |
| 2 | ENGL-1119 | Communication Skills | 3 | 0 |
| 3 | BTNY-1101 | Botany | 3 | 0 |
| 4 | CHEM-1162 | Organic Chemistry | 3 | 0 |
| 5 | CHEM-1262 | Organic Chemistry-Lab | 0 | 1 |
| 6 | MATH-1112 | Mathematics-II | 3 | 0 |
| 7 | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | 0 |
| **Total Credit Hours** | | | **17** | |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | COSC-1105 | Introduction to ICT | 2 | 0 |
| 2 | COSC-1205 | Introduction to ICT-Lab | 0 | 1 |
| 3 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 |
| 4 | CHEM-2171 | Physical Chemistry | 3 | 0 |
| 5 | CHEM-2271 | Physical Chemistry-Lab | 0 | 1 |
| 6 | ECON-2118 | Applied Economics | 3 | 0 |
| 7 | STAT-2104 | Probability and Statistics | 3 | 0 |
| 8 | CHEM-1582 | Applied Engineering Chemistry-I | 2 | 0 |
| **Total Credit Hours** | | | **18** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-2112 | Analytical Chemistry | 3 | 0 |
| 2 | CHEM-2212 | Analytical Chemistry-Lab | 0 | 1 |
| 3 | CHEM-2122 | Industrial Chemistry | 3 | 0 |
| 4 | CHEM-2132 | Biochemistry | 3 | 0 |
| 5 | PHYS-2126 | Applied Physics | 3 | 0 |
| 6 | CHEM-2119 | Code of Ethics for Physical Sciences | 3 | 0 |
| **Total Credit Hours** | | | **16** | |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-3151 | Basic Inorganic Chemistry-I | 3 | 0 |
| 2 | CHEM-3251 | Basic Inorganic Chemistry-I-Lab | 0 | 1 |
| 3 | CHEM-3161 | Basic Organic Chemistry-I | 3 | 0 |
| 4 | CHEM-3261 | Basic Organic Chemistry-I-Lab | 0 | 1 |
| 5 | CHEM-3171 | Basic Physical Chemistry-I | 3 | 0 |
| 6 | CHEM-3271 | Basic Physical Chemistry-I-Lab | 0 | 1 |
| 7* | CHEM-3111 | Basic Analytical Chemistry-I | 3 | 0 |
| | CHEM-3121 | Basic Applied Chemistry-I | | |
| 8* | CHEM-3211 | Basic Analytical Chemistry-I | | |
| | CHEM-3221 | Basic Applied Chemistry-I-Lab | 0 | 1 |
| **Total Credit Hours** | | | **16** | |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-3152 | Basic Inorganic Chemistry-II | 3 | 0 |
| 2 | CHEM-3252 | Basic Inorganic Chemistry-II-Lab | 0 | 1 |
| 3 | CHEM-3162 | Basic Organic Chemistry-II | 3 | 0 |
| 4 | CHEM-3262 | Basic Organic Chemistry-II-Lab | 0 | 1 |
| 5 | CHEM-3172 | Basic Physical Chemistry-II | 3 | 0 |
| 6 | CHEM-3272 | Basic Physical Chemistry-II-Lab | 0 | 1 |
| 7 | CHEM-3181 | Computer Applications in Chemistry | 1 | 0 |
| 8 | CHEM-3281 | Computer Applications in Chemistry-Lab | 0 | 1 |
| 9* | CHEM-3112 | Basic Analytical Chemistry-II | 3 | 0 |
| | CHEM-3122 | Basic Applied Chemistry-II | | |
| | CHEM-3132 | Basic Biochemistry-II | | |
| 10* | CHEM-3212 | Basic Analytical Chemistry-II-Lab | 0 | 1 |
| | CHEM-3222 | Basic Applied Chemistry-II-Lab | | |
| | CHEM-3232 | Basic Biochemistry-II-Lab | | |
| **Total Credit Hours** | | | **18** | |

## Specialization in Analytical Chemistry

### Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4111 | Advanced Analytical Chemistry-I | 3 | 0 |
| 2 | CHEM-4112 | Advanced Analytical Chemistry-II | 3 | 0 |
| 3 | CHEM-4113 | Advanced Analytical Chemistry-III | 3 | 0 |
| 4 | CHEM-4114 | Advanced Analytical Chemistry-IV | 3 | 0 |
| 5 | CHEM-4211 | Advanced Analytical Lab-I | 0 | 2 |
| 6 | CHEM-4582 | Applied Engineering Chemistry-II | 2 | 0 |
| **Total Credit Hours** | | | **16** | |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4115 | Advanced Analytical Chemistry-V | 3 | 0 |
| 2 | CHEM-4116 | Advanced Analytical Chemistry-VI | 3 | 0 |
| 3 | CHEM-4117 | Advanced Analytical Chemistry-VII | 3 | 0 |
| 4 | CHEM-4212 | Advanced Analytical Lab-II | 0 | 2 |
| 5 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| 6 | CHEM-4611 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **16** | |

| **Program Total Credit Hours** | | | **16** | |

| **Program Total Credit Hours** | | | **134** | |

# Specialization in Inorganic Chemistry

## Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4151 | Advanced Inorganic Chemistry-I | 3 | 0 |
| 2 | CHEM-4152 | Advanced Inorganic Chemistry-II | 3 | 0 |
| 3 | CHEM-4153 | Advanced Inorganic Chemistry-III | 3 | 0 |
| 4 | CHEM-4154 | Advanced Inorganic Chemistry-IV | 3 | 0 |
| 5 | CHEM-4251 | Advanced Inorganic Lab-I | 0 | 2 |
| 6 | CHEM-4582 | Applied Engineering Chemistry | 2 | 0 |
| **Total Credit Hours** | | | **16** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4155 | Advanced Inorganic Chemistry-V | 3 | 0 |
| 2 | CHEM-4156 | Advanced Inorganic Chemistry-VI | 3 | 0 |
| 3 | CHEM-4157 | Advanced Inorganic Chemistry-VII | 3 | 0 |
| 4 | CHEM-4252 | Advanced Inorganic Lab -II | 0 | 2 |
| 5 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| 6 | CHEM-4611 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **16** | |

| **Program Total Credit Hours** | **134** |
|---|---|

# Specialization in Organic Chemistry

## Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4161 | Advanced Organic Chemistry-I | 3 | 0 |
| 2 | CHEM-4162 | Advanced Organic Chemistry-II | 3 | 0 |
| 3 | CHEM-4163 | Advanced Organic Chemistry-III | 3 | 0 |
| 4 | CHEM-4164 | Advanced Organic Chemistry-IV | 3 | 0 |
| 5 | CHEM-4261 | Advanced Organic Lab -I | 0 | 2 |
| 6 | CHEM-4582 | Applied Engineering Chemistry-II | 2 | 0 |
| 2 | | | | |
| **Total Credit Hours** | | | **16** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4165 | Advanced Organic Chemistry-V | 3 | 0 |
| 2 | CHEM-4166 | Advanced Organic Chemistry-VI | 3 | 0 |
| 3 | CHEM-4167 | Advanced Organic Chemistry-VII | 3 | 0 |
| 4 | CHEM-4262 | Advanced Organic Lab-II | 0 | 2 |
| 5 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| 6 | CHEM-4611 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **16** | |

| **Program Total Credit Hours** | **136** |
|---|---|

# Specialization in Physical Chemistry

## Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4171 | Advanced Physical Chemistry-I | 3 | 0 |
| 2 | CHEM-4172 | Advanced Physical Chemistry-II | 3 | 0 |
| 3 | CHEM-4173 | Advanced Physical Chemistry-III | 3 | 0 |
| 4 | CHEM-4174 | Advanced Physical Chemistry-IV | 3 | 0 |
| 5 | CHEM-4271 | Advanced Physical Lab-I | 0 | 2 |
| 6 | CHEM-4582 | Applied Engineering Chemistry | 2 | 0 |
| **Total Credit Hours** | | | **16** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4175 | Advanced Physical Chemistry-V | 3 | 0 |
| 2 | CHEM-4176 | Advanced Physical Chemistry-VI | 3 | 0 |
| 3 | CHEM-4177 | Advanced Physical Chemistry-VII | 3 | 0 |
| 4 | CHEM-4272 | Advanced Physical Lab-II | 0 | 2 |
| 5 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| 6 | CHEM-4671 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **16** | |

| **Program Total Credit Hours** | **136** |
|---|---|

# Specialization in Applied Chemistry

## Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4121 | Advanced Applied Chemistry-I | 3 | 0 |
| 2 | CHEM-4122 | Advanced Applied Chemistry-II | 3 | 0 |
| 3 | CHEM-4123 | Advanced Applied Chemistry-III | 3 | 0 |
| 4 | CHEM-4124 | Advanced Applied Chemistry-IV | 3 | 0 |
| 5 | CHEM-4221 | Advanced Applied Lab-I | 0 | 2 |
| 6 | CHEM-4582 | Applied Engineering Chemistry-II | 2 | 0 |
| **Total Credit Hours** | | | **16** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | CHEM-4125 | Advanced Applied Chemistry-V | 3 | 0 |
| 2 | CHEM-4126 | Advanced Applied Chemistry-VI | 3 | 0 |
| 3 | CHEM-4127 | Advanced Applied Chemistry-VII | 3 | 0 |
| 4 | CHEM-4222 | Advanced Applied Lab -II | 0 | 2 |
| 5 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| 6 | CHEM-4621 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **16** | |

# MSc Chemistry

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-3151 | Basic Inorganic Chemistry-I | 3 | 0 |
| 2 | CHEM-3251 | Basic Inorganic Chemistry-I | 0 | 1 |
| 3 | CHEM-3161 | Basic Organic Chemistry-I | 3 | 0 |
| 4 | CHEM-3261 | Basic Organic Chemistry-I | 0 | 1 |
| 5 | CHEM-3171 | Basic Physical Chemistry-I | 3 | 0 |
| 6 | CHEM-3271 | Basic Physical Chemistry-I | 0 | 1 |
| 7 | MATH-3101 | Mathematics in Chemistry | 2 | 0 |
| 8* | CHEM-3111 | Basic Analytical Chemistry-I | | |
| | CHEM-3121 | Basic Applied Chemistry-I | 3 | 0 |
| | CHEM-3131 | Basic Biochemistry-I | | |
| 9* | CHEM-3211 | Basic Analytical Chemistry-I | | |
| | CHEM-3221 | Basic Applied Chemistry-I | 0 | 1 |
| | CHEM-3231 | Basic Biochemistry-I | | |
| | | | 14 | 11 |
| **Total Credit Hours** | | | **18** | |

*Electives: Only one subject/availability of resources or faculty in department

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-3152 | Basic Inorganic Chemistry-II | 3 | 0 |
| 2 | CHEM-3252 | Basic Inorganic Chemistry-II | 0 | 1 |
| 3 | CHEM-3162 | Basic Organic Chemistry-II | 3 | 0 |
| 4 | CHEM-3262 | Basic Organic Chemistry-II | 0 | 1 |
| 5 | CHEM-3172 | Basic Physical Chemistry-II | 3 | 0 |
| 6 | CHEM-3272 | Basic Physical Chemistry-II | 0 | 1 |
| 7 | CHEM-3181 | Computer Applications in Chemistry | 1 | 0 |
| 8 | CHEM-3281 | Computer Applications in Chemistry | 1 | |
| 9* | CHEM-3112 | Basic Analytical Chemistry-II | | 0 |
| | CHEM-3122 | Basic Applied Chemistry-II | 3 | |
| | CHEM-3132 | Basic Biochemistry-II | | |
| 10* | CHEM-3212 | Basic Analytical Chemistry-II | | 1 |
| | CHEM-3222 | Basic Applied Chemistry-II | 0 | |
| | CHEM-3232 | Basic Biochemistry-II | | |
| | | | 14 | 4 |
| **Total Credit Hours** | | | **18** | |

*Electives

# Specialization in Analytical Chemistry

## Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4111 | Advanced Analytical Chemistry-I | 3 | 0 |
| 2 | CHEM-4112 | Advanced Analytical Chemistry-II | 3 | 0 |
| 3 | CHEM-4113 | Advanced Analytical Chemistry-III | 3 | 0 |
| 4 | CHEM-4114 | Advanced Analytical Chemistry-IV | 3 | 0 |
| 5 | CHEM-4211 | Advanced Analytical Practical-I | 0 | 2 |
| 6 | CHEM-4581 | Applied Engineering Chemistry | 2 | 0 |
| 7 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| | | | 16 | 2 |
| **Total Credit Hours** | | | **18** | |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4115 | Advanced Analytical Chemistry-V | 3 | 0 |
| 2 | CHEM-4116 | Advanced Analytical Chemistry-VI | 3 | 0 |
| 3 | CHEM-4117 | Advanced Analytical Chemistry-VII | 3 | 0 |
| 4 | CHEM-4212 | Advanced Analytical Practical-II | 0 | 2 |
| 5 | CHEM-4611 | Research / Review Report | 3 | 0 |
| | | | 12 | 02 |
| **Total Credit Hours** | | | **14** | |

# Specialization in Inorganic Chemistry

## Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4151 | Advanced Inorganic Chemistry-I | 3 | 0 |
| 2 | CHEM-4152 | Advanced Inorganic Chemistry-II | 3 | 0 |
| 3 | CHEM-4153 | Advanced Inorganic Chemistry-III | 3 | 0 |
| 4 | CHEM-4154 | Advanced Inorganic Chemistry-IV | 3 | 0 |
| 5 | CHEM-4251 | Advanced Inorganic Practical-I | 0 | 2 |
| 6 | CHEM-4581 | Applied Engineering Chemistry | 2 | 0 |
| 7 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| | | | 16 | 02 |
| **Total Credit Hours** | | | **18** | |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4155 | Advanced Inorganic Chemistry-V | 3 | 0 |
| 2 | CHEM-4156 | Advanced Inorganic Chemistry-VI | 3 | 0 |
| 3 | CHEM-4157 | Advanced Inorganic Chemistry-VII | 3 | 0 |
| 4 | CHEM-4252 | Advanced Inorganic Practical-II | 0 | 2 |
| 5 | CHEM-4651 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **14** | |

*"To get what you love, you must first be patient with what you hate"*

*- Al Ghazali*

# Specialization in Organic Chemistry

### Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4161 | Advanced Organic Chemistry-I | 3 | 0 |
| 2 | CHEM-4162 | Advanced Organic Chemistry-II | 3 | 0 |
| 3 | CHEM-4163 | Advanced Organic Chemistry-III | 3 | 0 |
| 4 | CHEM-4164 | Advanced Organic Chemistry-IV | 3 | 0 |
| 5 | CHEM-4261 | Advanced Organic Practical-I | 0 | 2 |
| 6 | CHEM-4581 | Applied Engineering Chemistry | 2 | 0 |
| 7 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| **Total Credit Hours** | | | **18** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4165 | Advanced Organic Chemistry-V | 3 | 0 |
| 2 | CHEM-4166 | Advanced Organic Chemistry-VI | 3 | 0 |
| 3 | CHEM-4167 | Advanced Organic Chemistry-VII | 3 | 0 |
| 4 | CHEM-4262 | Advanced Organic Practical-II | 0 | 2 |
| 5 | CHEM-4661 | Research/ Review Report | 3 | 0 |
| **Total Credit Hours** | | | **14** | |

# Specialization in Physical Chemistry

### Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4171 | Advanced Physical Chemistry-I | 3 | 0 |
| 2 | CHEM-4172 | Advanced Physical Chemistry-II | 3 | 0 |
| 3 | CHEM-4173 | Advanced Physical Chemistry-III | 3 | 0 |
| 4 | CHEM-4174 | Advanced Physical Chemistry-IV | 3 | 0 |
| 5 | CHEM-4271 | Advanced Physical Practical-I | 0 | 2 |
| 6 | CHEM-4581 | Applied Engineering Chemistry | 2 | 0 |
| 7 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| **Total Credit Hours** | | | **18** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4175 | Advanced Physical Chemistry-V | 3 | 0 |
| 2 | CHEM-4176 | Advanced Physical Chemistry-VI | 3 | 0 |
| 3 | CHEM-4177 | Advanced Physical Chemistry-VII | 3 | 0 |
| 4 | CHEM-4272 | Advanced Physical Practical-II | 0 | 2 |
| 5 | CHEM-4671 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **14** | |

# Specialization in Applied Chemistry

### Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4121 | Advanced Applied Chemistry-I | 3 | 0 |
| 2 | CHEM-4122 | Advanced Applied Chemistry-II | 3 | 0 |
| 3 | CHEM-4123 | Advanced Applied Chemistry-III | 3 | 0 |
| 4 | CHEM-4124 | Advanced Applied Chemistry-IV | 3 | 0 |
| 5 | CHEM-4221 | Advanced Applied Practical-I | 0 | 2 |
| 6 | CHEM-4581 | Applied Engineering Chemistry | 2 | 0 |
| 7 | CHEM-4181 | Environmental Chemistry | 2 | 0 |
| **Total Credit Hours** | | | **18** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-4125 | Advanced Applied Chemistry-V | 3 | 0 |
| 2 | CHEM-4126 | Advanced Applied Chemistry-VI | 3 | 0 |
| 3 | CHEM-4127 | Advanced Applied Chemistry-VII | 3 | 0 |
| 4 | CHEM-4222 | Advanced Applied Practical-II | 0 | 2 |
| 5 | CHEM-4621 | Research / Review Report | 3 | 0 |
| **Total Credit Hours** | | | **14** | |

# BS Biochemistry

## Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics-I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | CHEM-1162 | Organic Chemistry | 3 | 0 | 3 |
| 6 | CHEM-1262 | Organic Chemistry-Lab | 0 | 1 | 1 |
| 7 | BOCH-1101 | Introductory Biochemistry | 3 | 0 | 3 |
| 8 | BOCH-1201 | Introductory Biochemistry-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **16** | **2** | **18** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic Studies | 2 | 0 | 2 |
| 3 | CHEM-1151 | Inorganic Chemistry | 3 | 0 | 3 |
| 4 | CHEM-1251 | Inorganic Chemistry-Lab | 0 | 1 | 1 |
| 5 | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | 0 | 2 |
| 6 | MATH-1112 | Mathematics-II | 3 | 0 | 3 |
| 7 | BOCH-1103 | Carbohydrates & Lipids | 2 | 0 | 2 |
| 8 | BOCH-1203 | Carbohydrates & Lipids-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **15** | **12** | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 2 | ECON-2118 | Applied Economics | 3 | 0 | 3 |
| 3 | BOCH-2103 | Proteins & Amino Acids | 2 | 0 | 2 |
| 4 | BOCH-2203 | Proteins & Amino Acids-Lab | 0 | 1 | 1 |
| 5 | CHEM-2112 | Analytical Chemistry | 3 | 0 | 3 |
| 6 | CHEM-2212 | Analytical Chemistry-Lab | 0 | 1 | 1 |
| 7 | STAT-2104 | Probability and Statistics | 3 | 0 | 3 |
| **Total Credit Hours** | | | **14** | **2** | **16** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BIOL-2102 | Genetics | 3 | 0 | 3 |
| 2 | BOCH-2104 | Human Physiology | 3 | 0 | 3 |
| 3 | CHEM-2171 | Physical Chemistry | 3 | 0 | 3 |
| 4 | BIOL-2103 | Microbiology | 2 | 0 | 2 |
| 5 | BIOL-2203 | Microbiology-Lab | 0 | 1 | 1 |
| 6 | BOCH-2105 | Enzymology | 2 | 0 | 2 |
| 7 | BOCH-2205 | Enzymology-Lab | 0 | 1 | 1 |
| 8 | BOCH-2106 | Immunology | 3 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **2** | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-3107 | Metabolism | 4 | 0 | 4 |
| 2 | BOCH-3108 | Molecular Biochemistry | 3 | 0 | 3 |
| 3 | BOCH-3109 | Nutritional Biochemistry | 2 | 0 | 2 |
| 4 | BOCH-3110 | Environmental Biochemistry | 2 | 0 | 2 |
| 5 | BOCH-3111 | Bioenergetics | 2 | 0 | 2 |
| 6 | COSC-1105 | Introduction to ICT | 2 | 0 | 2 |
| 7 | COSC-1205 | Introduction to ICT-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **15** | **1** | **16** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-3112 | Industrial Biochemistry | 2 | 0 | 2 |
| 2 | BOCH-3212 | Industrial Biochemistry-Lab | 0 | 1 | 1 |
| 3 | BOCH-3113 | Clinical Biochemistry | 2 | 0 | 2 |
| 4 | BOCH-3213 | Clinical Biochemistry-Lab | 0 | 1 | 1 |
| 5 | BOCH-3114 | Techniques in Molecular Biology | 2 | 0 | 2 |
| 6 | BOCH-3214 | Techniques in Molecular Biology-Lab | 0 | 1 | 1 |
| 7 | MSCI-4101 | Marketing Management | 3 | 0 | 3 |
| 8 | BOCH-3115 | Plant Biochemistry | 2 | 0 | 2 |
| 9 | BOCH-3215 | Plant Biochemistry-Lab | 0 | 1 | 1 |
| 10 | BOCH-3116 | Internship | 3 | 0 | 3 |
| **Total Credit Hours** | | | **14** | **4** | **18** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-4117 | Research Projects and Scientific Writing | 3 | 0 | 3 |
| 2 | BOCH-4118 | Biomembranes & Cell | 3 | 0 | 3 |
| 3 | BIOI-2101 | Signaling | 2 | 0 | 2 |
| 4 | BIOI-2201 | Introduction to Bioinformatics | 0 | 1 | 1 |
| 5 | BOCH- | Introduction to Bioinformatics-Lab | 3 | 0 | 3 |
| 6 | BOCH- | Elective-I | 3 | 0 | 3 |
| **Total Credit Hours** | | | **14** | **1** | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-4119 | Current Trends in Biochemistry | 3 | 0 | 3 |
| 2 | BOCH-4120 | Review Report | 3 | 0 | 3 |
| 3 | BOCH-4121 | Seminar | 1 | 0 | 1 |
| 4 | BIOL-2101 | Biosafety & Ethics | 2 | 0 | 2 |
| 5 | BOCH- | Elective-III | 3 | 0 | 3 |
| 6 | BOCH- | Elective-IV | 3 | 0 | 3 |
| **Total Credit Hours** | | | **15** | **0** | **15** |

## List of Elective Courses

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-4130 | Cancer Biology | 3 | 0 | 3 |
| 2 | BIOI-3103 | Genomics | 3 | 0 | 3 |
| 3 | BIOI-3105 | Proteomics | 3 | 0 | 3 |
| 4 | BOCH-4131 | General Virology | 3 | 0 | 3 |
| 5 | BOCH-4132 | Antimicrobials & Chemotherapeutics | 3 | 0 | 3 |
| 6 | BOCH-4133 | Structural Biology | 3 | 0 | 3 |
| 7 | BIOT-4121 | Fermentation Biotechnology | 3 | 0 | 3 |
| 8 | BOCH-4134 | Toxicology | 3 | 0 | 3 |

*"Desires make slaves out of kings and patience makes kings out of slaves"*

*- Al-Ghazali*

# BS Biotechnology

## Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics-I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | CHEM 1162 | Organic Chemistry | 3 | 0 | 3 |
| 6 | CHEM 1262 | Organic Chemistry-Lab | 0 | 1 | 1 |
| 7 | BOCH-1102 | Cell Biology | 2 | 0 | 2 |
| 8 | BOCH-1202 | Cell Biology-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **15** | **2** | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic studies | 2 | 0 | 2 |
| 3 | MATH-1112 | Mathematics-II | 3 | 0 | 3 |
| 4 | CHEM-1151 | Inorganic Chemistry | 3 | 0 | 3 |
| 5 | CHEM-1251 | Inorganic Chemistry-Lab | 0 | 1 | 1 |
| 6 | BTNY-1107 | Botany | 3 | 0 | 3 |
| 7 | BIOT-1101 | Introduction to Biotechnology | 3 | 0 | 3 |
| **Total** | | | **17** | **1** | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 2 | COSC-1105 | Introduction to ICT | 2 | 0 | 2 |
| 3 | COSC-1205 | Introduction to ICT-Lab | 0 | 1 | 1 |
| 4 | STAT-2104 | Probability and Statistics | 3 | 0 | 3 |
| 5 | CHEM-2114 | Analytical chemistry & Instrumentation | 2 | 0 | 2 |
| | CHEM-2214 | Analytical chemistry & Instrumentation-Lab | 0 | 1 | 1 |
| 6 | BOCH-3107 | Metabolism | 4 | 0 | 4 |
| **Total Credit Hours** | | | **15** | **1** | **16** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CHEM-2171 | Physical Chemistry | 0 | 0 | 3 |
| 2 | ZOOL-1171 | Probability & Biostatistics | | 0 | 3 |
| 3 | SSCI-3120 | Constitution & Legal System of Pak | 0 | 0 | 2 |
| | BIOL-2102 | | | | |
| 4 | BIOL-2103 | Genetics | 0 | 0 | 3 |
| 5 | BIOL-2203 | Microbiology | 0 | 0 | 2 |
| 6 | BIOT-2101 | Microbiology | 0 | 1 | 1 |
| 7 | | Food Biotechnology | 1 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **1** | **17** |

## Semester 5

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BIOT-3101 | Principles of Biochemical Engineering | 2 | 0 | 2 |
| | BIOT-3201 | Principles of Biochemical Engineering-Lab | 0 | 1 | 1 |
| 2 | BIOT-3102 | Agricultural Biotechnology | 2 | 0 | 2 |
| 3 | BIOT-3202 | Agricultural Biotechnology-Lab | 0 | 1 | 1 |
| 4 | BIOL-2154 | Molecular Biology | 3 | 0 | 3 |
| 5 | ECON-2118 | Applied Economics | 3 | 0 | 3 |
| 6 | BIOT-3103 | Microbial Biotechnology | 3 | 0 | 3 |
| 7 | BIOT-3104 | Seminar-I | 1 | 0 | 1 |
| 8 | | | | | |
| **Total Credit Hours** | | | **14** | **2** | **16** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | MSCI-4101 | Marketing Management | 3 | 0 | 3 |
| 2 | BOCH-3114 | Immunology | 3 | 0 | 3 |
| 3 | BIOT-3105 | Genetic Resources & Conservation | 3 | 0 | 3 |
| | BOCH-3115 | Techniques in Molecular Biology | 2 | 0 | 2 |
| 4 | BOCH-3215 | Techniques in Molecular Biology-Lab | 0 | 1 | 1 |
| 5 | BIOT-3106 | Internship | 3 | 0 | 3 |
| 6 | BIOI-2101 | Introduction to Bioinformatics | 2 | 0 | 2 |
| 7 | BIOI-2201 | Introduction to Bioinformatics-Lab | 0 | 1 | 1 |
| 8 | | | | | |
| **Total Credit Hours** | | | **16** | **2** | **18** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BIOT-4101 | Genomics & Proteomics | 3 | 0 | 3 |
| 2 | BIOT-4102 | Research Projects and Scientific Writing | 3 | 0 | 3 |
| 3 | BIOT-4103 | Health Biotechnology | 3 | 0 | 3 |
| 4 | BIOT-4104 | Environmental Biotechnology | 3 | 0 | 3 |
| 5 | | | | | |
| **Total Credit Hours** | | | **15** | **0** | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BIOT-4105 | Seminar-II | 1 | 0 | 1 |
| 2 | BIOT-4106 | Industrial Biotechnology | 3 | 0 | 3 |
| 3 | BOCH-2105 | Biosafety & Ethics | 2 | 0 | 2 |
| 4 | BIOT-4107 | Research Project/Review Report | 3 | 0 | 3 |
| 5 | BIOT- | Elective-ii | 3 | 0 | 3 |
| 6 | BIOT- | Elective-III | 3 | 0 | 3 |
| **Total Credit Hours** | | | **15** | **0** | **15** |

| **GRAND TOTAL** | | **122** | **10** | **132** |
|---|---|---|---|---|

جھپٹنا، پلٹنا، پلٹ کر جھپٹنا

لہو گرم رکھنے کا ہے اِک بہانہ

حضرت علامہ محمد اقبالؒ

# List of Elective Courses

| S. No. | Course Code | Course Title | Credits |
|---|---|---|---|
| 1 | BIOT-4108 | Animal Biotechnology | 3 |
| 2 | BIOT-4109 | Nano Biotechnology | 3 |
| 3 | BIOT-4110 | Fungal  Biotechnology | 3 |
| 4 | BIOT-4111 | Pharmaceutical Biotechnology | 3 |
| 5 | BIOT-4112 | Biosensors | 3 |
| 6 | BIOT-4113 | BioFuels & Biorefineries | 3 |
| 7 | BIOT-4114 | Cell & Tissue Culture | 3 |
| 8 | BIOT-4115 | Virology | 3 |
| 9 | BIOT-4116 | Fermentation Biotechnology | 3 |
| 10 | BIOT-4117 | Glycobiology | 3 |
| 11 | FOSC-1101 | Fundamental of Forensic Science | 3 |

*"The nation will find it very hard to look up to the leaders who are keeping their ears to grounds"*

*-Sir Winston Churchill*

# BS Forensic Sciences

## Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics-I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | CHEM-1162 | Organic Chemistry | 3 | 0 | 3 |
| 6 | CHEM-1262 | Organic Chemistry-Lab | 0 | 1 | 1 |
| 7 | FOSC-1101 | Fundamentals of Forensic Science | 3 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **1** | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic studies | 2 | 0 | 2 |
| 3 | CHEM-2171 | Physical Chemistry | 3 | 0 | 3 |
| 4 | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | 0 | 2 |
| 5 | MATH-1112 | Mathematics-II | 3 | 0 | 3 |
| 6 | BOCH-1101 | Introductory Biochemistry | 3 | 0 | 3 |
| 7 | BOCH-1201 | Introductory Biochemistry-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **16** | **1** | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 2 | COSC-1105 | Introduction to ICT | 2 | 0 | 2 |
| 3 | COSC-1205 | Introduction to ICT-Lab | 0 | 1 | 1 |
| 4 | FOSC-2101 | Crime Scene Investigation | 2 | 0 | 2 |
| 5 | FOSC-2201 | Crime Scene Investigation | 0 | 1 | 1 |
| 6 | FOSC-2102 | Analytical techniques in Forensic Science | 2 | 0 | 2 |
| 7 | FOSC-2202 | Analytical techniques in Forensic Science-Lab | 0 | 1 | 1 |
| 8 | BIOL-2101 | Biosafety & Ethics | 3 | 0 | 3 |
| 9 | BIOL-2102 | Genetics | | | |
| **Total Credit Hours** | | | **14** | **3** | **17** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-2104 | Human Physiology | 3 | 0 | 3 |
| 2 | CHEM-1151 | Inorganic Chemistry | 3 | 0 | 3 |
| 3 | CHEM-1251 | Inorganic Chemistry-Lab | 0 | 1 | 1 |
| 4 | BIOL-2103 | Microbiology | 2 | 0 | 2 |
| 5 | BIOL-2203 | Microbiology-Lab | 0 | 1 | 1 |
| 6 | FOSC-2103 | Trace Evidence | 2 | 0 | 2 |
| 7 | FOSC-2203 | Trace Evidence-Lab | 0 | 1 | 1 |
| 8 | FOSC-2104 | Mammalian Pharmacology | 3 | 0 | 3 |
| **Total Credit Hours** | | | **13** | **3** | **16** |

## Semester 5

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BIOL-2154 | Molecular Biology | 3 | 0 | 3 |
| 2 | FOSC-3101 | Forensic Chemistry | 2 | 0 | 2 |
| 3 | FOSC-3201 | Forensic Chemistry-Lab | 0 | 1 | 1 |
| 4 | FOSC-3102 | Forensic serology and DNA | 2 | 0 | 2 |
| 5 | FOSC-3202 | Forensic serology and DNA-Lab | 0 | 1 | 1 |
| 6 | ECON-2118 | Applied Economics | 3 | 0 | 3 |
| 7 | FOSC-3103 | Forensic Toxicology | 2 | 0 | 2 |
| 8 | FOSC-3203 | Forensic Toxicology-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **12** | **3** | **15** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-3114 | Techniques in Molecular Biology | 2 | 0 | 2 |
| 2 | BOCH-3214 | Techniques in Molecular Biology-Lab | 0 | 1 | 1 |
| 3 | FOSC-3104 | Forensic Bioinformatics | 2 | 0 | 2 |
| 4 | FOSC-3204 | Forensic Bioinformatics-Lab | 0 | 1 | 1 |
| 5 | FOSC-3105 | Forensic Photography | 2 | 0 | 2 |
| 6 | FOSC-3205 | Forensic Photography-Lab | 0 | 1 | 1 |
| 7 | MSCI-4101 | Marketing Management | 3 | 0 | 3 |
| 8 | FOSC-3106 | Law and Criminal Procedure | 2 | 0 | 2 |
| 9 | FOSC-3107 | Internship/ Research Project | 2 | 0 | 2 |
| **Total Credit Hours** | | | **13** | **3** | **16** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | FOSC-4101 | Research Projects and Scientific Writing | 3 | 0 | 3 |
| 2 | FOSC-4102 | Finger Prints Analysis | 2 | 0 | 2 |
| 3 | FOSC-4202 | Finger Prints Analysis-Lab | 0 | 1 | 1 |
| 4 | STAT-2104 | Probability and Statistics | 3 | 0 | 3 |
| 5 | FOSC- | Elective-I | 3 | 0 | 3 |
| 6 | FOSC- | Elective-II | 3 | 0 | 3 |
| 7 | | | | | |
| **Total Credit Hours** | | | **14** | **1** | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | FOSC-4103 | Forensic Psychology | 3 | 0 | 3 |
| 2 | FOSC-4104 | Current Trends in Forensic Science | 3 | 0 | 3 |
| 3 | FOSC-4105 | Review Report | 3 | 0 | 3 |
| 4 | FOSC- | Elective-III | 3 | 0 | 3 |
| 5 | FOSC- | Elective-IV | 3 | 0 | 3 |
| **Total Credit Hours** | | | **15** | **0** | **15** |

| GRAND TOTAL | | | 115 | 15 | 130 |
|---|---|---|---|---|---|

# List of Elective Courses

| S. No. | Course Code | | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | FOSC-4107 | Criminal Profiling | 3 | 0 | 3 |
| 2 | FOSC-4108 | Digital and Documentary Evidence | 3 | 0 | 3 |
| 3 | FOSC-4109 | Forensic Analysis | 3 | 0 | 3 |
| 4 | FOSC-4110 | Death Investigation | 3 | 0 | 3 |
| 5 | FOSC-4111 | Qanun-e- Shahadat Ordinance 1984 | 3 | 0 | 3 |
| 6 | FOSC-4112 | Forensic Pathology | 3 | 0 | 3 |
| 7 | FOSC-4113 | Forensic Anthropology | 3 | 0 | 3 |
| 8 | FOSC-4114 | Nano Forensics | 3 | 0 | 3 |

# BS Botany

## Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics-I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | BTNY-1103 | Diversity of Plants | 3 | 0 | 3 |
| 6 | BTNY-1203 | Diversity of Plants-Lab | 0 | 1 | 1 |
| 7 | ZOOL-1101 | Principles in Animal Life-I | 3 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **1** | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic Studies | 2 | 0 | 2 |
| 3 | CHEM-1162 | Organic Chemistry | 3 | 0 | 3 |
| 4 | CHEM-1262 | Organic Chemistry-Lab | 0 | 1 | 1 |
| 5 | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | 0 | 2 |
| 6 | BTNY-1102 | Plant Systematics, Anatomy and Development | 3 | 0 | 3 |
| 7 | BTNY-1202 | Plant Systematics, Anatomy and Development-Lab | 0 | 1 | 1 |
| 8 | ZOOL-1102 | Principles in Animal Life-II | 3 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **2** | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 2 | COSC-1105 | Introduction to ICT | 2 | 0 | 2 |
| 3 | COSC-1205 | Introduction to ICT-Lab | 0 | 1 | 1 |
| 4 | ZOOL-2103 | Animal Diversity-I(Invertebrates) | 3 | 0 | 3 |
| 5 | STAT-2104 | Probability and Statistics | 3 | 0 | 3 |
| 6 | BTNY-2105 | Cell Biology, Genetics and Evolution | 3 | 0 | 3 |
| 7 | BTNY-2205 | Cell Biology, Genetics and Evolution-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **14** | **2** | **16** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BTNY-2104 | Plant Physiology and Ecology | 3 | 0 | 3 |
| 2 | BTNY-2204 | Plant Physiology and Ecology-Lab | 0 | 1 | 1 |
| 3 | CHEM-2113 | Analytical Chemistry & Instrumentation | 2 | 0 | 2 |
| 4 | CHEM-2213 | Analytical Chemistry & Instrumentation-Lab | 0 | 1 | 1 |
| 5 | ZOOL-2104 | Animal Diversity-II (Chordates) | 3 | 0 | 3 |
| 6 | BTNY-2106 | Biodiversity and Conservation | 3 | 0 | 3 |
| 7 | BTNY-2206 | Biodiversity and Conservation-Lab | 0 | 1 | 1 |
| 8 | BTNY-2108 | Plant Systematics | 2 | 0 | 2 |
| | BTNY-2208 | Plant Systematics-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **13** | **4** | **17** |

## Semester 5

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|--------|-------------|--------------|--------|-----|---------|
| 1 | BTNY-3107 | Bacteriology and Virology | 2 | 0 | 2 |
| 2 | BTNY-3207 | Bacteriology and Virology-Lab | 0 | 1 | 1 |
| 3 | BTNY-3109 | Phycology and Bryology | 2 | 0 | 2 |
| 4 | BTNY-3209 | Phycology and Bryology-Lab | 0 | 1 | 1 |
| 5 | BTNY-3111 | Mycology and Plant Pathology | 2 | 0 | 2 |
| 6 | BTNY-3211 | Mycology and Plant Pathology-Lab | 0 | 1 | 1 |
| 7 | BTNY-3113 | Diversity of Vascular Plants | 2 | 0 | 2 |
| 8 | BTNY-3213 | Diversity of Vascular Plants-Lab | 0 | 1 | 1 |
| 9 | BIOI-2101 | Introduction to Bioinformatics-Lab | 2 | 0 | 2 |
| 10 | BIOI-2201 | Introduction to Bioinformatics-Lab | | | 1 |
| **Total Credit Hours** | | | **10** | **4** | **14** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|--------|-------------|--------------|--------|-----|---------|
| 1 | BTNY-3110 | Plant Anatomy | 2 | 0 | 2 |
| 2 | BTNY-3210 | Plant Anatomy-Lab | 0 | 1 | 1 |
| 3 | BTNY-3112 | Plant Genetics-I | 2 | 0 | 2 |
| 4 | BTNY-3212 | Plant Genetics-I-Lab | 0 | 1 | 1 |
| 5 | BTNY-3114 | Plant Biochemistry-I | 2 | 0 | 2 |
| 6 | BTNY-3214 | Plant Biochemistry-I-Lab | 0 | 1 | 1 |
| 7 | BTNY-3116 | Plant Ecology-I | 2 | 0 | 2 |
| 8 | BTNY-3216 | Plant Ecology-I-Lab | 0 | 1 | 1 |
| 9' | BTNY-3118 | Plant Physiology-I | 2 | 0 | 2 |
| 10 | BTNY-3218 | Plant Physiology-I-Lab | 0 10 | 1 | 1 |
| **Total Credit Hours** | | | **10** | **5** | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|--------|-------------|--------------|--------|-----|---------|
| 1 | BIOL-2154 | Plant Anatomy | 3 | 0 | 3 |
| 2 | BTNY-4115 | Plant Anatomy-Lab | 2 | 0 | 2 |
| 3 | BTNY-4215 | Plant Genetics-I | 0 | 1 | 1 |
| 4 | BTNY-4117 | Plant Genetics-I-Lab | 2 | 0 | 2 |
| 5 | BTNY-4217 | Plant Biochemistry-I | 0 | 1 | 1 |
| 6 | ECON-2118 | Plant Biochemistry-I-Lab | 3 | 0 | 3 |
| 7 | | Plant Ecology-I | 3 | 0 | 3 |
| | | Plant Ecology-I-Lab | | 0 | 3 |
| **Total Credit Hours** | | | **13** | **2** | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|--------|-------------|--------------|--------|-----|---------|
| 1 | BTNY-4120 | Plant Genetics-II | 2 | 0 | 3 |
| 2 | BTNY-4220 | Plant Genetics-II-Lab | 0 | 0 | 3 |
| 3 | BTNY-4122 | Plant Physiology-II | 2 | 0 | 3 |
| 4 | BTNY-4222 | Plant Physiology-II-Lab | 0 | 0 | 3 |
| 5 | BIOL-2101 | Biosafety & Ethics | 2 | 0 | 3 |
| 6 | BTNY-4624 | Research/Review Report | 3 | | |
| 7 | | Elective-III | 3 | | |
| 8 | | Elective-IV | 3 | | |
| **Total Credit Hours** | | | **12** | **2** | **17** |

| **GRAND TOTAL** | | **113** |
|---|---|---|

## List of Elective Courses

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|--------|-------------|--------------|--------|--------|---------|
| 1 | BTNY-4119 | Ethnobotany | 3 | 0 | 3 |
| 2 | BTNY-4121 | Phytoremediation | 3 | 0 | 3 |
| 3 | BTNY-4124 | Plant Stress Physiology | 3 | 0 | 3 |
| 4 | BTNY-4125 | Conservation and Management of Plant Re-sources | 3 | 0 | 3 |
| 5 | BIOL-4126 | Plant Nutrition | 3 | 0 | 3 |
| 6 | BTNY-4127 | Phytosociology | 3 | 0 | 3 |
| 7 | BTNY-4128 | Research Projects and Scientific Writing | 3 | 0 | 3 |
| 8 | BTNY-4129 | Environmentai Bioiogy | 3 | 0 | 3 |
| 9 | BTNY-4130 | Plant Metabolism | 3 | 0 | 3 |
| 10 | BTNY-4131 | Challenges of a Changing Earth | 3 | 0 | 3 |

*"The growth and development of people is the highest calling of leadership"*

*-Harvey Firestone*

# BS Zoology

## Semester 1

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics-I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | BTNY-1103 | Diversity of Plants | 3 | 0 | 3 |
| 6 | ZOOL-1101 | Principles of Animal Life-I | 3 | 0 | 3 |
| 7 | ZOOL-1201 | Principles of Animal Life-I-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **16** | **1** | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ISLS-1112/ | Islamic Studies/ Ethics | 2 | 0 | 2 |
| 2 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 3 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 | 2 |
| 4 | BTNY-1102 | Plant Systematics, Anatomy and Development | 3 | 0 | 3 |
| 5 | CHEM-1162 | Organic Chemistry | 3 | 0 | 3 |
| 6 | CHEM-1262 | Organic Chemistry-Lab | 0 | 1 | 1 |
| 7 | ZOOL-1102 | Principles of Animal Life-II | 3 | 0 | 3 |
| 8 | ZOOL-1202 | Principles of Animal Life-II-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **16** | **2** | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | COSC-1105 | Introduction to ICT | 2 | 0 | 2 |
| 2 | COSC-1205 | Introduction to ICT-Lab | 0 | 1 | 1 |
| 3 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 4 | ECON-2118 | Applied Economics | 3 | 0 | 3 |
| 5 | ZOOL-2103 | Animal Diversity-I (Invertebrates) | 3 | 0 | 3 |
| 6 | ZOOL-2203 | Animal Diversity-I: (Invertebrates)-Lab | 0 | 1 | 1 |
| 7 | BTNY-2105 | Cell Biology, Genetics and Evolution | 3 | 0 | 3 |
| 8 | STAT-2104 | Probability and Statistics | 3 | 0 | |
| **Total Credit Hours** | | | **17** | **2** | **19** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | CHEM-2114 | Analytical Chemistry & Instrumentation | 2 | 0 | 2 |
| 2 | CHEM-2214 | Analytical Chemistry & Instrumentation | 0 | 1 | 1 |
| 3 | BTNY-2104 | Plant Physiology and Ecology | 3 | 0 | 3 |
| 4 | ZOOL-2104 | Animal Diversity-II (Chordates) | 3 | 0 | 3 |
| 5 | ZOOL-2204 | Animal Diversity-II (Chordates)-Lab | 0 | 1 | 1 |
| 6 | ZOOL-2105 | Animal Form & Function-I | 3 | 0 | 3 |
| 7 | ZOOL-2205 | Animal Form & Function-I-Lab | 0 | 1 | 1 |
| 8 | BOCH-1102 | Cell Biology | 2 | 0 | 2 |
| 9 | BOCH-1202 | Cell Biology -Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **13** | **4** | **17** |

## Semester 5

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-2105 | Biosafety and Ethics | 2 | 0 | 2 |
| 2 | ZOOL-3101 | Animal Form & Function-II | 3 | 0 | 3 |
| 3 | ZOOL-3201 | Animal Form & Function-II-Lab | 0 | 1 | 1 |
| 4 | BOCH-1101 | Introductory Biochemistry | 3 | 0 | 3 |
| 5 | BOCH-1201 | Introductory Biochemistry-Lab | 0 | 1 | 1 |
| 6 | ZOOL-3102 | Animal Physiology | 3 | 0 | 3 |
| 7 | ZOOL-3202 | Animal Physiology-Lab | 0 | 1 | 1 |
| 8 | ZOOL-3103 | Animal Behaviour | 3 | 0 | 3 |
| **Total Credit Hours** | | | **14** | **13** | **17** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ZOOL-3104 | Biological Techniques | 1 | 0 | 1 |
| 2 | ZOOL-3204 | Biological Techniques Lab | 0 | 2 | 2 |
| 3 | ZOOL-3105 | Evolution & Principles of Systematics | 3 | 0 | 3 |
| 4 | ZOOL-3205 | Evolution & Principles of Systematics Lab | 0 | 1 | 1 |
| 5 | ZOOL-3106 | Developmental Biology | 3 | 0 | 3 |
| 6 | ZOOL-3206 | Developmental Biology-Lab | 0 | 1 | 1 |
| 7 | BIOL-2102 | Genetics | 3 | 0 | 3 |
| 8 | BIOL-2202 | Genetics-Lab | 0 | 1 | 1 |
| **Total Credit Hours** | | | **10** | **5** | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ZOOL-4101 | Research Projects and Scientific Writing | 3 | 0 | 3 |
| 2 | ZOOL-4102 | Wildlife | 2 | 0 | 2 |
| 3 | ZOOL-4103 | Environmental Biology | 3 | 0 | 3 |
| 4 | ZOOL-4203 | Environmental Biology-Lab | 0 | 1 | 1 |
| 5 | ZOOL- | Elective-I | 3 | 0 | 3 |
| 6 | ZOOL- | Elective-II | 3 | 1 | 3 |
| **Total Credit Hours** | | | **14** | **2** | **16** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | BIOI-2101 | Introduction to Bioinformatics | 2 | 0 | 2 |
| 2 | BIOI -2201 | Introduction to Bioinformatics-Lab | 0 | 1 | 1 |
| 3 | ZOOL-4104 | Zoogeography & Paleontology | 2 | 0 | 2 |
| 4 | ZOOL-4204 | Zoogeography & Paleontology Lab | 0 | 1 | 1 |
| 5 | ZOOL- | Elective-III | 3 | 0 | 3 |
| 6 | ZOOL-- | Elective-IV | 3 | 0 | 3 |
| 7 | ZOOL-4601 | Research / Review Report | 3 | 0 | 3 |
| **Total Credit Hours** | | | **13** | **2** | **15** |

| **GRAND TOTAL** | | **134** |
|---|---|---|

# List of Elective Courses

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ZOOL-4105 | Entomology | 3 | 0 | 3 |
| 2 | ZOOL-4106 | Applied Microbiology | 3 | 0 | 3 |
| 3 | ZOOL-4107 | Ichthyology | 3 | 0 | 3 |
| 4 | ZOOL-4108 | Hematology | 3 | 0 | 3 |
| 5 | ZOOL-4109 | Biodiversity and Wildlife | 3 | 0 | 3 |
| 6 | ZOOL-4110 | Protozoology and Immunology | 3 | 0 | 3 |
| | | | | | |
| | | | | | |
| | | | | | |

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 7 | ZOOL-4111 | Applied Entomology and Pest Man-age-ment | 3 | 0 | 3 |
| 8 | ZOOL-4112 | Fish and Aquatic Toxicology | 3 | 0 | 3 |
| 9 | ZOOL-4113 | Economic Zoology | 3 | 0 | 3 |
| 10 | ZOOL-4114 | Biodiversity of Inland and Terrestrial | 3 | 0 | 3 |
| 11 | | Mol-luscs | | | |
| 12 | ZOOL-4115 | Neurobiology | 3 | 0 | 3 |
| | ZOOL-4116 | Hematology | 3 | 0 | 3 |

# MS Chemistry

## 1 Semester

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-5101 | Advanced Spectroscopic Techniques | Core | 3 |
| 2 | CHEM-5102 | Advanced Chromatographic Techniques | Core | 3 |
| 3 | MSCI-6102 | Research Methodology | Core | 3 |
| 4 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| **Total Credit Hours** | | | | **12** |

## 2 Semester

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| 2 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| 3 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| 4 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| **Total Credit Hours** | | | | **12** |

## Semester-III & IV

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-6600 | Thesis | Mandatory | 12 |
| **Total** | | | | **12** |
| **Total Credit Hours** | | | | **36** |

Note: Courses can be swapped according to the resources of the University

*"The only true wisdom is in knowing you know nothing"*

*-Socrates*

# List of Courses

## Analytical Chemistry

| S. No. | Course Code | Course Title | STATUS |
|---|---|---|---|
| 1 | CHEM-6101 | Green Chemistry | Elective |
| 2 | CHEM-6102 | Atomic Spectroscopy | Elective |
| 3 | CHEM-6103 | Differential Scanning Calorimetery and Thermo Gravimetry | Elective |
| 4 | CHEM-6104 | Electroanalytical Techniques | Elective |
| 5 | CHEM-6105 | Environmental Chemistry | Elective |
| 6 | CHEM-6106 | Mass Spectrometry in Analytical Chemistry | Elective |
| 7 | CHEM-6107 | Electronics & Chemistry Instrumentation | Elective |
| 8 | CHEM-6108 | Polymer Chemistry | Elective |
| 9 | CHEM-6109 | Surface Analytical Chemistryfinal | Elective |
| 10 | CHEM-6110 | Food Analytical Chemistry | Elective |
| 11 | CHEM-6111 | Bioanalytical Chemistry | Elective |

## Applied Chemistry

| S. No. | Course Code | Course Title | STATUS |
|---|---|---|---|
| 1 | CHEM-6112 | Instrumental Analysis for Process Industries | Elective |
| 2 | CHEM-6113 | Industrial Water Conditioning and Effluent Treatment | Elective |
| 3 | CHEM-6114 | Functional Food and Nutraceuticals | Elective |
| 4 | CHEM-6115 | Emulsions and Emulsification | Elective |
| 5 | CHEM-6116 | Paints and Coatings | Elective |
| 6 | CHEM-6117 | Renewable Energy Resources | Elective |
| 7 | CHEM-6118 | Agrochemicals | Elective |
| 8 | CHEM-6119 | Chemistry of Dyes and Pigments | Elective |
| 9 | CHEM-6120 | Industrial Polymers | Elective |
| 10 | CHEM-6121 | Sucrochemistry | Elective |
| 11 | CHEM-6122 | Petrochemicals | Elective |
| 12 | CHEM-6123 | Environmental Issues of Chemical Industries | Elective |
| 13 | CHEM-6124 | Plastics Recycling Industries | Elective |

## Biochemistry Chemistry

| S. No. | Course Code | Course Title | STATUS |
|---|---|---|---|
| 1 | CHEM-6125 | Advanced Cell Biology | Elective |
| 2 | CHEM-6126 | Biomaterials | Elective |
| 3 | CHEM-6127 | Regulation of Metabolism in Health and Diseases | Elective |
| 4 | CHEM-6128 | Antioxidants | Elective |
| 5 | CHEM-6129 | Gene Expression and Manipulation | Elective |
| 6 | CHEM-6130 | Recent Trends in Immunology | Elective |
| 7 | CHEM-6131 | Biochemistry of Disease and Drug Designing | Elective |
| 8 | CHEM-6132 | Enzymes- Mechanism & Kinetics | Elective |
| 9 | CHEM-6133 | Applied Biochemistry | Elective |
| 10 | CHEM-6134 | RNA Processing | Elective |
| 11 | CHEM-6135 | Proteomics and Protein Engineering | Elective |

## Inorganic Chemistry

| S. No. | Course Code | Course Title | STATUS |
|---|---|---|---|
| 1 | CHEM-6136 | Solid State Chemistry | Elective |
| 2 | CHEM-6137 | Photochemical Reactions of Transition Metals | Elective |
| 3 | CHEM-6138 | Applied Transition Metal Catalytic Chemistry | Elective |
| 4 | CHEM-6139 | Chemistry of Organometallic Compounds | Elective |
| 5 | CHEM-6140 | Inorganic Electronic Spectroscopy | Elective |
| 6 | CHEM-6141 | Kinetics and Mechanisms of Inorganic Reactions | Elective |
| 7 | CHEM-6142 | Bio-Inorganic Chemistry | Elective |
| 8 | CHEM-6143 | Extractive Metallurgy | Elective |
| 9 | CHEM-6144 | Medicinal Inorganic Chemistry | Elective |
| 10 | CHEM-6145 | Nano Chemistry | Elective |
| 11 | CHEM-6146 | Metal Complexes in Cancer Chemotherapy | Elective |
| 12 | CHEM-6147 | Inorganic Cage Compounds | Elective |

## Physical Chemistry

| S. No. | Course Code | Course Title | STATUS |
|---|---|---|---|
| 1 | CHEM-6162 | Photochemistry | Elective |
| 2 | CHEM-6163 | Polymers and Advanced Composite Materials | Elective |
| 3 | CHEM-6164 | Advanced Chemical Kinetics | Elective |
| 4 | CHEM-6165 | Group Theory and Symmetry | Elective |
| 5 | CHEM-6166 | Advanced Quantum Chemistry | Elective |
| 6 | CHEM-6167 | Luminescence Spectroscopy | Elective |
| 7 | CHEM-6168 | Radio and Nuclear Chemistry | Elective |
| 8 | CHEM-6169 | Computational Chemistry | Elective |
| 9 | CHEM-6170 | Colloidal Chemistry | Elective |
| 10 | CHEM-6171 | Chemistry of Supramolecules in Physical Chemistry | Elective |

## Organic Chemistry

| S. No. | Course Code | Course Title | STATUS |
|---|---|---|---|
| 1 | CHEM-6148 | Modern Name Reactions in Organic Synthesis | Elective |
| 2 | CHEM-6149 | A programmed introduction to the synthon approach | Elective |
| 3 | CHEM-6150 | Protecting Groups in Organic Synthesis | Elective |
| 4 | CHEM-6151 | Advanced Stereochemistry | Elective |
| 5 | CHEM-6152 | Nuclear magnetic resonance in organic chemistry | Elective |
| 6 | CHEM-6153 | Chemistry of Isoprenoids, Steroids and Glycosides | Elective |
| 7 | CHEM-6154 | Computational Chemistry/Molecular Modeling in Organic Chemistry | Elective |
| 8 | CHEM-6155 | Chemistry of Organometallic Compounds | Elective |
| 9 | CHEM-6156 | Reactive Intermediates in Organic Chemistry | Elective |
| 10 | CHEM-6157 | Pericyclic Reactions | Elective |
| 11 | CHEM-6158 | Special Topics in Organic Chemistry | Elective |
| 12 | CHEM-6159 | Medicinal Chemistry | Elective |

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# PhD Chemistry

### Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| 2 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| 3 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| **Total Credit Hours** | | | **09** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| 2 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| 3 | CHEM- | Graduate Level Chemistry Course | Elective | 3 |
| **Total Credit Hours** | | | **09** | |

### Semester  III, IV, V & VI

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-8600 | Thesis | Mandatory | 30 |
| **Total Credit Hours** | | | **48** | |

# List of Courses

## Analytical Chemistry Courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-6101 | Green Chemistry | Elective | |
| 2 | CHEM-6102 | Atomic Spectroscopy | Elective | |
| 3 | CHEM-6103 | Differential Scanning Calorimetery and Thermo Gra-vimetry | Elective | |
| 4 | CHEM-6104 | | Elective | |
| 5 | CHEM-6105 | Electroanalytical Techniques | Elective | |
| 6 | CHEM-6106 | Environmental Chemistry | Elective | |
| 7 | CHEM-6107 | Mass Spectrometry in Analytical Chemistry | Elective | |
| 8 | CHEM-6108 | Electronics & Chemistry Instrumentation | Elective | |
| 9 | CHEM-6109 | Polymer Chemistry | Elective | |
| 10 | CHEM-6110 | Surface Analytical Chemistry | Elective | |
| 11 | CHEM-6111 | Food Analytical Chemistry | Elective | |
| 12 | CHEM-7101 | Bioanalytical Chemistry | Elective | |
| 13 | CHEM-7102 | Advanced Chemometrics in Analytical Chemistry | | |

## Applied Chemistry Courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-6112 | Instrumental Analysis for Process Industries | Elective | |
| 2 | CHEM-6113 | Industrial Water Conditioning and Effluent Treatment | Elective | |
| 3 | CHEM-6114 | Functional Food and Nutraceuticals | Elective | |
| 4 | CHEM-6115 | Emulsions and Emulsification | Elective | |
| 5 | CHEM-6116 | Paints and Coatings | Elective | |
| 6 | CHEM-6117 | Renewable Energy Resources | Elective | |
| 7 | CHEM-6118 | Agrochemicals | Elective | |
| 8 | CHEM-6119 | Chemistry of Dyes and Pigments | Elective | |
| 9 | CHEM-6120 | Industrial Polymers | Elective | |
| 10 | CHEM-6121 | Sucrochemistry | Elective | |
| 11 | CHEM-6122 | Petrochemicals | Elective | |
| 12 | CHEM-6123 | Environmental Issues of Chemical Industries | Elective | |
| 13 | CHEM-6124 | Plastics Recycling Industries | Elective | |
| 14 | CHEM-7103 | Pharmaceutical Chemistry | Elective | |
| 15 | CHEM-7104 | Industrial Catalysis | Elective | |

## Biochemistry Courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-6125 | Advanced Cell Biology | Elective | |
| 2 | CHEM-6126 | Biomaterials | Elective | |
| 3 | CHEM-6127 | Regulation of Metabolism in Health and Diseases | Elective | |
| 4 | CHEM-6128 | Antioxidants | Elective | |
| 5 | CHEM-6129 | Gene Expression and Manipulation | Elective | |
| 6 | CHEM-6130 | Recent Trends in Immunology | Elective | |
| 7 | CHEM-6131 | Biochemistry of Disease and Drug Designing | Elective | |
| 8 | CHEM-6132 | Enzymes- Mechanism & Kinetics | Elective | |
| 9 | CHEM-6133 | Applied Biochemistry | Elective | |
| 10 | CHEM-6134 | RNA Processing | Elective | |
| 11 | CHEM-6135 | Proteomics and Protein Engineering | Elective | |
| 12 | CHEM-7105 | Advanced Fermentation and Biochemical Engineering | Elective | |
| 13 | CHEM-7106 | Forensic Biochemistry | Elective | |

## Applied Chemistry Courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-6136 | Solid State Chemistry | Elective | |
| 2 | CHEM-6137 | Photochemical Reactions of Transition Metals | Elective | |
| 3 | CHEM-6138 | Applied Transition Metal Catalytic Chemistry | Elective | |
| 4 | CHEM-6139 | Chemistry of Organometallic Compounds | Elective | |
| 5 | CHEM-6140 | Inorganic Electronic Spectroscopy | Elective | |
| 6 | CHEM-6141 | Kinetics and Mechanisms of Inorganic Reactions | Elective | |
| 7 | CHEM-6142 | Bio-Inorganic Chemistry | Elective | |
| 8 | CHEM-6143 | Extractive Metallurgy | Elective | |
| 9 | CHEM-6144 | Medicinal Inorganic Chemistry | Elective | |
| 10 | CHEM-6145 | Nano Chemistry | Elective | |
| 11 | CHEM-6146 | Metal Complexes in Cancer Chemotherapy | Elective | |
| 12 | CHEM-6147 | Inorganic Cage Compounds | Elective | |
| 13 | CHEM-7107 | Advanced Thermal Analysis | Elective | |
| 14 | CHEM-7108 | Metal Based Drugs | Elective | |

## Organic Chemistry Courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-6148 | Modern Name Reactions in Organic Synthesis | Elective | |
| 2 | CHEM-6149 | A programmed introduction to the synthon approach | Elective | |
| 3 | CHEM-6150 | | Elective | |
| 4 | CHEM-6151 | Protecting Groups in Organic Synthesis | Elective | |
| 5 | CHEM-6152 | Advanced Stereochemistry | Elective | |
| 6 | CHEM-6153 | Nuclear magnetic resonance in organic chemistry | Elective | |
| 7 | CHEM-6154 | Chemistry of isoprenoids, Steroids and Glycosides | Elective | |
| 8 | CHEM-6155 | Computational Chemistry/Molecular Modeling in Or-ganic Chemistry | Elective | |
| 9 | CHEM-6156 | Chemistry of Organometallic Compounds | Elective | |
| 10 | CHEM-6157 | Reactive Intermediates in Organic Chemistry | Elective | |
| 11 | CHEM-6158 | Pericyclic Reactions | Elective | |
| 12 | CHEM-6159 | Special Topics in Organic Chemistry | Elective | |
| 13 | CHEM-6160 | Medicinal Chemistry | Elective | |
| 14 | CHEM-6161 | Biosynthesis of Natural Products | Elective | |
| 15 | CHEM-7109 | Supramolecular Chemistry | Elective | |
| 16 | CHEM-7110 | | Elective | |

## Physical Chemistry Courses

| S. No. | Course Code | Course Title | Credit Hrs. Th+Lab | Contact Hrs. Th+Lab |
|---|---|---|---|---|
| 1 | CHEM-6162 | Photochemistry | Elective | |
| 2 | CHEM-6163 | Polymers and Advanced Composite Materials | Elective | |
| 3 | CHEM-6164 | Advanced Chemical Kinetics | Elective | |
| 4 | CHEM-6165 | Group Theory and Symmetry | Elective | |
| 5 | CHEM-6166 | Advanced Quantum Chemistry | Elective | |
| 6 | CHEM-6167 | Luminescence Spectroscopy | Elective | |
| 7 | CHEM-6168 | Radio and Nuclear Chemistry | Elective | |
| 8 | CHEM-6169 | Computational Chemistry | Elective | |
| 9 | CHEM-6170 | Colloidal Chemistry | Elective | |
| 10 | CHEM-6171 | Chemistry of Supramolecules in Physical Chemistry | Elective | |
| 11 | CHEM-7111 | Advanced Surface Chemistry | Elective | |
| 12 | CHEM-7112 | Statistical Thermodynamics and Mechanics | Elective | |

*"The best way to predict the future is to invent it"*

*-Alan Kay*



*Faculty Members Engaging Students in Lab Work (Department of Chemistry)*

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*Head of Department of Chemistry Preciding over BoS Meeting*

## Department of
# Food Science & Technology

## Introduction and Overview

Food Science is a multidisciplinary approach that deals with various aspects of food. The basic structure of Food Science and Technology comprises of Food Sciences, Food Technology, Food Processing, Analysis, Nutrition, Research & Development, Product Development, Food Laws & Regulations, Food Safety, Food Quality, etc.

## Vision

The Department of Food Science and Technology at KFUEIT would like to be recognized nationally and globally as a high seminary of learning pertinent to Food and Nutrition, Food Quality and Safety, Food Analysis, Food Microbiology, other novel and emerging trends of 21st century. The professionals (teachers/researchers) are aimed to excel imparting education and trainings contributing to local and national development of the country in an efficient manner.

## Mission

Our mission is to provide high quality education in Food Science and Technology;

- To provide an outstanding educational experience and unique research and training opportunities in Food Safety and Nutritional Sciences, and to develop multidisciplinary and quality-oriented leaders to solve important national and global health problems.
- To provide a cost-effective processing and storage technology to curtail post-harvest losses and to achieve maximum value addition
- To provide a value addition to agricultural products, Food Bioprocessing and Technology, Food Nutrition and Dietetics, Food Safety and Quality and Natural Resource Sciences in order to realize sustainable and secure livelihoods.

## Key Features / Facilities

Department of Food Science and Technology has laboratories equipped with latest facilities and equipment. Following mentioned laboratories are operational catering the needs of different degree programs at under graduate and post graduate level:

- Food Analysis Laboratory
- Dairy & Meat Technology Laboratory
- Food Microbiology Laboratory
- Food Processing Hall

## Programs being offered

| BS Food Science and Technology (BS-FDST) |
| BS Human Nutrition and Dietetics (BS-HNAD) |
| MS Food Technology |
| MS Human Nutrition and Dietetics * |
| MS Food Safety and Quality Management * |



* Subject to Approval / NOC from HEC / Competent Authority / Accreditation Body



*Faculty & Administration with VCs of KFUEIT & MNSUAM after Seminar*

# Scheme of Study

## BS Food Science and Technology

### Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 |
| 2 | MATH-1111/ BTNY-1107 | Mathematics-I /Botany | 3 | 0 |
| 3 | PAKS-1113 | Pakistan Studies | 2 | 0 |
| 4 | FDST-1101/ FDST-1201 | Introduction to Food Science and Technology | 2 | 1 |
| 5 | AGRI-1101/ AGRI-1201 | Basic Agriculture | 2 | 1 |
| 6 | STAT-1101 STAT-1201 | Statistical Theory- I | 2 | 1 |
| 7 | HLTH-1113 | Basic Health Awareness | 2 | 0 |
| **Credit Hours** | | | **19** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | ISLS-1112/ ETIC-1112 | Islamic Studies / Ethics | 2 | 0 |
| 2 | ENGL-1119 | Communication Skills | 3 | 0 |
| 3 | MATH-1112/ ZOOL-1171 | Mathematics-II (Calculus) / Zoology | 3 | 0 |
| 4 | FDST-1102/ FDST-1202 | Food Processing and Preservation | 2 | 1 |
| 5 | STAT-1102/ STAT-1202 | Statistical Theory- II | 2 | 1 |
| 6 | AGEN-1102/ AGEN-1202 | Fluid Mechanics | 2 | 1 |
| 7 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 |
| **Credit Hours** | | | **19** | |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | INFT-1102/ INFT-1202 | Introduction to Computing | 2 | 1 |
| 2 | BOCH-1101 | Introductory Biochemistry | 3 | 0 |
| 3 | FDST-2101/ FDST-2201 | Food Analysis | 1 | 2 |
| 4 | FDST-2102/ FDST-2202 | Unit Operation in Food Processing | 2 | 1 |
| 5 | FDST-2103 | Food Plant Layout and Design | 2 | 0 |
| 6 | FDST-2104 | Food Safety | 3 | 0 |
| 7 | FDST-2105 FDST-2205 | Food Microbiology | 2 | 1 |
| **Credit Hours** | | | **20** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | FDST-2106/ FDST-2206 | Food Process Engineering | 2 | 1 |
| 2 | FDST-2107 | Food Chemistry | 3 | 0 |
| 3 | FDST-2108/ FDST-2208 | Dairy Technology | 2 | 1 |
| 4 | FDST-2109/ FDST-2209 | Fruits and Vegetables Processing | 2 | 1 |
| 5 | FDST-2110 FDST-2210 | Fish, poultry and egg processing | 2 | 1 |
| 6 | HNAD-1101 | Fundamentals of Human Nutrition | 3 | 0 |
| **Credit Hours** | | | **18** | |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | FDST-3101/ FDST-3201 | Meat Technology | 2 | 1 |
| 2 | FDST-3102/ FDST-3202 | Cereal Technology | 2 | 1 |
| 3 | FDST-3103/ FDST-3203 | Sugar Technology | 2 | 1 |
| 4 | AGRI-3101/ AGRI-3201 | Stored Grain Pest Management | 2 | 1 |
| 5 | FDST-3104/ FDST-3204 | Instrumental Techniques in Food Analysis | 1 | 2 |
| 6 | MSCI-4165 | Agricultural Marketing | 3 | 0 |
| **Credit Hours** | | | **18** | |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | FDST-3105/ FDST-3205 | Bakery Products Technology | 2 | 1 |
| 2 | FDST-3106 | Community Nutrition | 2 | 0 |
| 3 | FDST-3107/ FDST3207 | Confectionery and Snack Foods | 2 | 1 |
| 4 | FDST-3108/ FDST-3208 | Food Packaging | 2 | 1 |
| 5 | FDST-3109/ FDST-3209 | Sensory Evaluation of Foods | 2 | 1 |
| 6 | FDST-3110/ FDST-3210 | Technology of Fats and Oils | 2 | 1 |
| 7 | FDST-3111/ FDST-3211 | Postharvest Technology | 2 | 1 |
| **Credit Hours** | | | **20** | |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | FDST-4101/ FDST-4201 | Food Product Development | 2 | 1 |
| 2 | FDST-4102/ FDST-4202 | Food Biotechnology | 2 | 1 |
| 3 | FDST-4103 | Food Laws and Regulations | 3 | 0 |
| 4 | FDST-4104 | Food Quality management | 3 | 0 |
| 5 | FDST-4105/ FDST-4205 | Beverage Technology | 2 | 1 |
| 6 | FDST-4106/ FDST-4206 | Extrusion Technology | 2 | 1 |
| 7 | FDST-4107/ FDST-4207 | Research Project and Scientific writing | 1 | 1 |
| **Credit Hours** | | | **20** | |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Credit Hrs. Lab |
|---|---|---|---|---|
| 1 | FDST-4400 | Internship | 0 | 04 |
| **Credit Hours** | | | **04** | |

| **GRAND TOTAL** | | **138** |
|---|---|---|

# BS Human Nutrition & Dietetics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 |
| 2 | MATH-1111 | Mathematics (Algebra)-I | 3 | 0 |
| 3 | PAKS-1113 | Pakistan Studies | 2 | 0 |
| 4 | HNAD-1101 | Fundamentals of Human Nutrition | 3 | 0 |
| 5 | AGRI-1101/ AGRI-1201 | Basic Agriculture | 2 | 1 |
| 6 | FDST-1101/ FDST-1201 | Introduction to Food Science & Technology | 2 | 1 |
| 7 | HLTH-1113 | Basic Health Awareness | 2 | 0 |
| **Credit Hours** | | | **19** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | ISLS-1112/ ETIC-1112 | Islamic Studies / Ethics * | 2 | 0 |
| 2 | ENGL-1119 | Communication Skills | 3 | 0 |
| 3 | HNAD-1102 | Macronutrients in Human Nutrition | 3 | 0 |
| 4 | BOCH-1101 | Introductory Biochemistry | 3 | 0 |
| 5 | STAT-1101/ STAT-1201 | Statistical Theory-I | 2 | 1 |
| 6 | INFT-1102/ INFT-1202 | Introduction to Computing | 2 | 1 |
| 7 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 | 0 |
| **Credit Hours** | | | **19** | |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | HNAD-2101 | Micronutrients in Human Nutrition | 3 | 0 |
| 2 | HNAD-2102 HNAD-2202 | Human Anatomy | 2 | 1 |
| 3 | HNAD-2103 HNAD-2203 | Human Physiology-I | 2 | 1 |
| 4 | FDST-2104 | Food Safety | 3 | 0 |
| 5 | FDST-2105/ FDST-2205 | Food Microbiology | 2 | 1 |
| 6 | FDST-2107 | Food Chemistry | 3 | 0 |
| 7 | FDST-4102 FDST-4203 | Food Biotechnology | 2 | 1 |
| **Credit Hours** | | | **21** | |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | HNAD-2104 HNAD-2204 | Human Physiology – II | 2 | 1 |
| 2 | HNAD-2105/ HNAD-2205 | Assessment of Nutritional Status | 2 | 1 |
| 3 | HNAD-2106 | Nutrition Through the Life Cycle | 3 | 0 |
| 4 | HNAD-2107/ HNAD-2207 | General Pathology | 2 | 1 |
| 5 | FDST-2101/ FDST-2201 | Food Analysis | 1 | 2 |
| 6 | FDST-2109/ FDST-2209 | Dairy Technology | 2 | 1 |
| **Credit Hours** | | | **18** | |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | HNAD-3101/ HNAD-3201 | Dietetics-I | 2 | 1 |
| 2 | HNAD-3102/ HNAD-3202 | Public Health Nutrition | 2 | 1 |
| 3 | HNAD-3103/ HNAD-3203 | Meal Planning and Management | 2 | 1 |
| 4 | HNAD-3104/ HNAD-3204 | Nutritional Education and Awareness | 2 | 1 |
| 5 | FDST-4103 | Food Laws and Regulations | 3 | 0 |
| 6 | HNAD-3105/ HNAD-3205 | Sports Nutrition | 2 | 1 |
| **Credit Hours** | | | **18** | |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | HNAD-3106 | Nutritional Disorders | 3 | 0 |
| | HNAD-3107 | Dietetics-II | | |
| 2 | HNAD-3207 | | 2 | 1 |
| | HNAD-3108 | Nutrition in Emergencies | | |
| 3 | HNAD-3109 | Global Food Issues | 3 | 0 |
| 4 | HNAD-3110/ | Infant and Young Child Feeding | 3 | 0 |
| 5 | HNAD-3210 | | 2 | |
| 6 | FDST-4104 | Food Quality Management | 3 | 1 |
| 7 | FDST-2103 | Food Plant Layout and Design | 2 | |
| **Credit Hours** | | | **20** | |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | HNAD-4101/ HNAD-4201 | Nutritional Practices in Clinical Care | 2 | 1 |
| 2 | HNAD-4102/ HNAD-4202 | Dietetics-III | 2 | 1 |
| 3 | HNAD-4103 | Drug & Nutrient Interactions | 2 | 0 |
| 4 | HNAD-4104 | Research Methods in Nutrition | 3 | 0 |
| 5 | HNAD-4105 | Nutrition Policies and Programs | 3 | 0 |
| 6 | BOCH-3114/ BOCH-3214 | Clinical Biochemistry | 2 | 1 |
| 7 | FDST-4107/ FDST-4207 | Research Project and Scientific Writing | 1 | 1 |
| **Credit Hours** | | | **19** | |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Lab |
|---|---|---|---|---|
| 1 | HNAD-4400 | Internship | 0 | 04 |
| **Credit Hours** | | | **04** | |

| **GRAND TOTAL** | | | **138** |
|---|---|---|---|

# MS Food Technology

## List of Core Courses

| S. No. | Course Code | Course Title | Theory | Credit Hrs. Lab. |
|--------|-------------|--------------|--------|------------------|
| 1 | FDST-5101 | Food Quality Assurance Management | 3 | 0 |
| 2 | FDST-5102 | Recent Advances in Food Science & Tech | 3 | 0 |
| 3 | FDST-5103/ FDST-5203 | Research Methodology | 2 | 1 |
| 4 | FDST-5104 | Seminar and Special Problem | 3 | 0 |

## List of Elective Courses (i)

| S. No. | Course Code | Course Title | Theory | Lab. |
|--------|-------------|--------------|--------|------|
| 1 | FDST-6101 | Food Additive | 3 | 0 |
| 2 | FDST-6102/ FDST-6202 | Baking Science and Technology | 2 | 1 |
| 3 | FDST-6103/ FDST-6203 | Technology of Processed Meat | 2 | 1 |
| 4 | FDST-6104/ FDST-6204 | Dairy Processing-I | 2 | 1 |

## List of Elective Courses (ii)

| S. No. | Course Code | Course Title | Theory | Lab. |
|--------|-------------|--------------|--------|------|
| 5 | FDST-6105/ FDST-6205 | Dairy Processing-II | 2 | 1 |
| 6 | FDST-6106/ FDST-6206 | Advanced Food Biotechnology | 2 | 1 |
| 7 | FDST-6107/ FDST-6207 | Milling of Cereals | 2 | 1 |
| 8 | FDST-6108/ FDST-6208 | Advanced Beverage Technology | 2 | 1 |
| 9 | FDST-6109/ FDST-6209 | Nutraceuticals and Functional Foods | 2 | 1 |
| 10 | FDST-6110 | Food Supply Chain Management | 3 | 0 |
| 11 | FDST-6111/ FDST-6212 | Food Enzymology | 2 | 1 |

## List of Elective Courses (iii)

| S. No. | Course Code | Course Title | Theory | Lab. |
|--------|-------------|--------------|--------|------|
| 12 | FDST-6112 | Food Toxicology | 3 | 0 |
| 13 | FDST-6113 | Starch Chemistry and Technology | 3 | 0 |
| 14 | FDST-6114/ FDST-6214 | Advanced Food Chemistry | 2 | 1 |
| 15 | FDST-6115/ FDST-6215 | Chemistry of Edible Oils and Fats | 2 | 1 |
| 16 | FDST-6116/ FDST-6216 | Ind. Processing Technol. of Edible Oils & Fats Products | 2 | 1 |
| 17 | FDST-6117/ | Meat Science | 2 | 1 |
| 18 | FDST-6217 | Food Industrial Waste Management | | |
| 19 | FDST-6118 | Post-Harvest Management | 3 | 0 |
| 20 | FDST-6119 | Food Packaging | 3 | 0 |
| 21 | FDST-6120/ FDST-6220 | Advanced Food Microbiology | 2 | 1 |
| 22 | FDST-6121/ FDST-6221 | | 2 | 1 |

# MS Human Nutrition and Dietetics

## List of Core Courses

| S. No. | Course Code | Course Title | Theory | Credit Hrs. Lab. |
|--------|-------------|--------------|--------|------------------|
| 1 | HNAD-5101 | Maternal and Child Nutrition | 3 | 0 |
| 2 | HNAD-5102 | Recent Advances in Nutrition and Dietetics | 3 | 0 |
| 3 | HNAD-5103 HNAD-5203 | Nutrigenomics and Proteomics | 2 | 1 |
| 4 | HNAD-5104 | Seminar and Special Problem | 3 | 0 |

## List of Elective Courses (i)

| S. No. | Course Code | Course Title | Theory | Lab. |
|--------|-------------|--------------|--------|------|
| 1 | HNAD-6101 | Nutritional Controversies | 3 | 0 |
| 2 | HNAD-6102/ HNAD-6202 | Clinical Nutrition and Dietetics | 2 | 1 |
| 3 | HNAD-6103/ HNAD-6203 | Therapeutic and Complementary Nutrition | 2 | 1 |
| 4 | HNAD-6104 | Personalized Nutrition | 3 | 0 |
| 5 | HNAD-6105/ HNAD-6205 | Nutrition in Institutions | 2 | 1 |

## List of Elective Courses (ii)

| S. No. | Course Code | Course Title | Theory | Lab. |
|--------|-------------|--------------|--------|------|
| 6 | HNAD-6106/ HNAD-6206 | Sports and Exercise Nutrition | 2 | 1 |
| 7 | HNAD-6107/ HNAD-6207 | Applied Dietetics | 2 | 1 |
| 8 | HNAD-6108 | Pediatric and Geriatric Nutrition | 3 | 0 |
| 9 | HNAD-6109 | Professional Dietetics Practices | 3 | 0 |
| 10 | HNAD-6110 | Diet Diversification and Health Promotion | 3 | 0 |
| 11 | HNAD-6111/ HNAD-6211 | Public Health Nutrition | 2 | 1 |
| 12 | HNAD-6112 | Vegetarian Nutrition | 3 | 0 |
| 13 | HNAD-6113 HNAD-6213 | Bioactive Components and Health | 2` | 1 |
| 14 | HNAD-6114/ HNAD-6214 | Physiology of Digestion and Metabolism | 2 | 1 |

## List of Elective Courses (iii)

| S. No. | Course Code | Course Title | Theory | Lab. |
|--------|-------------|--------------|--------|------|
| 15 | HNAD-6115 | Food and Nutritional Security: Policy to Practice | 3 | 0 |
| 16 | HNAD-6116/ HNAD-6216 | Nutritional Epidemiology and Research Methods | 2 | 1 |
| 17 | HNAD-6117 | International Nutrition | 3 | 0 |
| 18 | HNAD-6118/ HNAD-6218 | Public Health Microbiology | 2 | 1 |

# MS Food Safety and Quality Management

## List of Core Courses

| S. No. | Course Code | Course Title | Theory | Credit Hrs. Lab. |
|---|---|---|---|---|
| 1 | FSQM-5101 | Food Auditing and Inspections | 3 | 0 |
| 2 | FSQM-5102 FSQM-5202 | Food Traceability and Authenticity | 3 | 0 |
| 3 | FSQM-5103 | Research Methodology | 2 | 1 |
| 4 | FSQM-5104 | Seminar and Special Problem | 3 | 0 |

## List of Elective Courses

| S. No. | Course Code | Course Title | Theory | Lab. |
|---|---|---|---|---|
| 1 | FSQM-6101 FSQM-6202 | Food Safety and Quality | 2 | 1 |
| 2 | FSQM-6102 | Food Quality Management | 3 | 0 |
| 3 | FSQM-6103 FSQM-6203 | Food Safety and Quality Control Systems | 2 | 1 |
| 4 | FSQM-6104 | Food laws and Regulations | 3 | 0 |

| S. No. | Course Code | Course Title | Theory | Lab. |
|---|---|---|---|---|
| 5 | FSQM-6105 | Public Health | 3 | 0 |
| 6 | FSQM-6106 | Hygiene and Food Plant Sanitation | 3 | 0 |
| 7 | FSQM-6107 | Food Labeling | 3 | 0 |
| 8 | FSQM-6108 | Safe Handling of Foods | 3 | 0 |
| 9 | FSQM-6109 | Preharvest and Postharvest Food Safety | 3 | 0 |
| 10 | FSQM-6110 | Consumer Behavior & Preferences- | 3 | 0 |
| 11 | FSQM-6111 FSQM-6211 | Food of Animal Origin | 2 | 1 |

| S. No. | Course Code | Course Title | Theory | Lab. |
|---|---|---|---|---|
| 12 | FSQM-6112 FSQM-6212 | Food Sampling Techniques and Analysis | 1 | 2 |
| 13 | FSQM-6113 | Food Related Legal System in Pakistan | 3 | 0 |
| 14 | FSQM-6114 FSQM-6214 | Food Inspection, Investigation and Judgment | 2` | 1 |
| 15 | FSQM-6115 | Food Safety Standards and Trades | 3 | 0 |
| 16 | FSQM-6116 | Compliance Strategies and Effective | 3 | 0 |
| 17 | FDST-6101 | Food Additive | 3 | 0 |
| 18 | FDST-6109/ FDST-6209 | Nutraceuticals and Functional Foods | 2 | 1 |
| 19 | FDST-6110 | Food Supply Chain Management | 3 | 0 |
| 20 | FDST-6112 | Food Toxicology | 3 | 0 |
| 21 | FDST-6118 | Food Industrial Waste Management | 3 | 0 |

| S. No. | Course Code | Course Title | Theory | Lab. |
|---|---|---|---|---|
| 21 | FDST-6119 | Post-Harvest Management | 3 | 0 |
| 22 | FDST-6120/ FDST-6220 | Food Packaging | 2 | 1 |
| 23 | FDST-6121/ FDST-6221 | Advanced Food Microbiology | 2 | 1 |



*Health Awareness Seminar Group Photo (Department of Food Sciences)*

*World Food Day (2018)*


*BOS (Department of Food Sciences)*


*Students in Lab*


*Health Awareness Seminar by Executive Director*

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*Spring Fiesta  2019*

# Department of

# Health Sciences

## Introduction and Overview

The newly established Department of Health Sciences of KFUEIT is committed to deliver dynamic sharing of knowledge, research and services beyond the walls of KFUEIT by offering exceptional learning opportunities of professional education and encourages its staff, students to contribute their knowledge and expertise in public domains nationally and internationally.

There's an exciting future ahead in health sciences and the department is ready to play a leading role in it by finding cure to behavioral diseases, introducing new laboratory and imaging interventions, vision sciences, pharmaceuticals and improving quality of life through vast research based resources being developed on continuous basis at KFUEIT. Amongst its degree programs are; BS Clinical Psychology, BS Medical Laboratory Technology, BS Radiology, BS Optometry, BS Cosmetology and Dermatological Sciences and Pharm-D.

With highly qualified and internationally engaged faculty, well-equipped laboratories and resource rich library facilities, the Department of Health Sciences is striving to provide education, research and service facilities and consultancy in the health science disciplines of the highest quality to produce competent healthcare professionals. The programs curriculum incorporate theory, practice and research based components to develop core skills, knowledge and professionalism. The focus is given to various subjects as per the guidelines of the Higher Education Commission and their respective Councils.

*"The Strongest among you is the one who controls his anger"*

*-Prophet Muhammad (PBUH)*

## Vision

As a national premier health sciences education, research and service provider in public sector, we are recognized for our strategic partnerships and collaboration initiatives, our commitment to diversity, and innovative approaches to health education, research and services excellence.

*"The difference between ordinary and extraordinary is that little extra"*

*-Jimmy Johnson*



**MS Health Care Management:**

The objective of the programme is to provide a unique opportunity to healthcare professionals, thus enabling them to develop and enhance their leadership potential and specific skill-sets which are seen to be a top priority in health care management, particularly in today's highly charged competitive business environment. Healthcare professionals with requisite business management skills and knowledge are increasingly in demand to meet newly emerging industry standards and the growing needs of the healthcare industry. These healthcare specialists are empowered to create and deliver value in highly performing healthcare organizations.

Participants embarking on this MS program will go through an integrated learning experience that will broaden their leadership style and strategic management skill-sets, ultimately laying the foundation for strategic innovative thinking that is germane in creating competitive edge for the organizations they are engaged.

**Career Perspective:**

- Health Care Manager/Administrator
- Health Care Supplier
- Insurance Company Executive
- Pharmaceutical Business Experts
- Nursing Home/Rehabilitation Center Director
- Project Management Executive in the Ministry of Health
- Policy Maker in Regulatory bodies/Councils
- Hospital/Healthcare Service Administrator
- Epidemiology and Research Officer

## Mission

We empower, engage, and educate health professionals and researchers who will lead their fields to best serve the health and well-being of people in South Punjab and beyond to the development of regional economy and uplift of the local community by becoming powerhouse of intellectual and human capital generation.

## Programs being offered

| |
|---|
| **BS Clinical Psychology** |
| **BS Medical Laboratory Technology** |
| **BS Radiology** |
| **BS Optometry** |
| **BS Cosmetology and Dermatological Sciences** |
| **MS Health Care Management** |

## BS Medical Laboratory Technology

The BS Medical Laboratory Technology program takes an integrated approach to learning across the curriculum. Self grooming and enhancement are given a lot of importance in the institution. The courses which would be studied in the program will enhance the knowledge and skills to the next level. The study program and courses have been designed as to fulfil the current needs with regard to professionalism, marketability, employability and entrepreneurship.

Medical Laboratory Technologists are equally a part of healthcare Industry and the task of a Medical Laboratory Technologist is quite important as they are also known as Clinical Laboratory Technologist. They are in charge of doing tests which include analysing blood, body fluids, body tissues, cell counting amongst other tests. These tests are required for preliminary treatment of a patient.

BS (4 years degree program) in Medical Laboratory Technology being Offered:

- To prepare a team of health technologists who can effectively assist senior health professionals in the delivery of quality health services.
- To prepare graduate Medical Technologist with the knowledge and abilities needed for certification by nationally recognized professional agencies.
- To prepare paramedical workers for all levels of the health care delivery system from the primary to the tertiary level.
- To introduce and impart standard technical education with advanced techniques by replacing the conventional methods of pre service training.
- To provide paramedical workers a status and recognition in the health care delivery system through improving their capacity along with increasing awareness of their responsibilities, authority and job description.
- To facilitate paramedical staff with modern skills and techniques and latest technical knowledge of international level.

## BS Clinical Psychology

BS Clinical Psychology is the first program being offered which will help to fulfil the urgent demand for trained clinical psychologists across the country taking into consideration the growth, development and awareness of clinical psychology during the last few years. The aim of this program is to educate and train healthcare professionals who have the knowledge and expertise to fulfil their roles in healthcare and beyond.

Professionals in this field are called as clinical psychologists. Clinical psychologists work for medical organizations. Clinical psychologists provide psychotherapy, psychological testing, and diagnosis of mental illness. Psychologists are generally trained within four primary theoretical orientations, psychodynamic, humanistic, cognitive-behavioral (CBT), and systems or family therapy. The subject offers wide range of career opportunities. Clinical psychologists usually work in hospitals, academic institutions, counselling and rehabilitation centres. They can also establish private consultation firms.

## BS Radiology

A radiographer produces radiography of patients with the help of X-ray to find the exact medical condition of the patient. In addition to X-ray, a radiographer also considers CT scans, ultrasounds and MRI for producing radiography. The need of educated and professional radiology technologists in hospitals, clinics, and physicians' offices are increasing continuously. The field of radiography will be continued to show higher than average job growth into the future. After completing your degree in this field you will become Radiology Technologists/ Radiographer, Radiology Technicians, Ultrasound Technician/ Diagnostic Medical Sonographer, MRI Technician, CT Tech/ CAT Scan Technologist/ CT Scan Technologist.

The program is designed to attain the following objectives:

- To train radiological professionals with sufficient and relevant scientific and technological skills with high degree of competence and safety in the practice of radiography in health care delivery system.
- To train radiological professionals with sufficient interdisciplinary skills to perform their role as members in healthcare teams.
- Course work typically focuses on patient care, patient positioning, radiation safety and protection in addition to radiation physics, pathology and other advanced topics.

## BS Optometry

Optometry is a professional discipline based on the optical and vision sciences. Optometry graduates are considered to be qualified professionals who are able to practice in the public as well as private institutions. Presently quite a few institutions run the BS program of optometry in Pakistan although the demand for optometrists is on the increase not only within the country but also in other parts of the World.

The first two semesters offer foundation courses. The students will develop clinical skills through in depth understanding of Anatomy, Physiology and Pathology of the visual system in the conducive classroom teaching as well as working in the clinical skills center during the first 2 years of education.

During the next semesters the students will develop the knowledge and achieve the clinical skills required for modern optometrist practice. They will also work under the supervision of team of experts working in Eye Clinic. The students will carry out full eye examinations and will gain specialist skills such as in ocular vision, contact lens and dispensing. In addition, they will examine patients with a range of eye diseases and gain experience in dispensing spectacles.

Being a newly introduced program in Optometry and Visionary Science, it has tremendous job opportunities in public and private sector hospitals of the country. The graduates will have opportunity for employment in Pharmaceutical Industry as well. They can also run an independent optometrist clinic that will prove as a novel option and fruitful experience.

## BS Cosmetology and Dermatological Sciences

BS Cosmetology and Dermatological Sciences has a vision of Skin Care for all ages to achieve excellence in skincare by educating skin care experts having relevant knowledge, skills and attitudes to take care of skin in all age groups though interactive teaching, hands on practice on modern equipment and activates for intellectual development. At the end of this four year program, graduates will be able to perform their role as:

- Cosmetic scientist: Consultants and team leader in pharmaceutical and cosmetics industry regarding production, quality assurance, marketing and research of skin care products.
- Cosmetologist: Guide clients regarding skin care and perform non-invasive cosmetics procedures independently.
- Physician associate: Work with Dermatologist as part of a skin care team, in patient management and invasive procedures
- Academician: pursuit an academic career in allied health sciences undergraduate program

# Scheme of Study

## MS Health Care Management

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-5101 | Theory and Practices of Management | 3 | Core |
| 2 | MATH-5121 | Business Mathematics and Statistics | 3 | Core |
| 3 | ECON-5103 | Health Economics | 3 | Core |
| 4 | ENGL-5121 | Speech Communication | 3 | Core |
| 5 | MSCI-5109 | Financial Accounting | 3 | Core |
| **Total Credit Hours** | | | **15** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-5102 | Financial Management | 3 | Core |
| 2 | MHLT-5102 | Introduction to Health Policy | 3 | Core |
| 3 | MSCI-5106 | Human Resource Management | 3 | Core |
| 4 | MSCI-5108 | Marketing Management | 3 | Core |
| 5 | COSC-5121 | Health Management Information Systems | 3 | Core |
| **Total Credit Hours** | | | **15** | |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | HLMG-6101 | Strategic Management of Health Services | 3 | Core |
| 2 | HLMG-6103 | Health Service Delivery and Operation | 3 | Core |
| 3 | MSCI-6105 | Strategic Marketing | 3 | Core |
| 4 | HLMG-6107 | Healthcare Leadership | 3 | Core |
| **Total Credit Hours** | | | **12** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | HLMG-6108 | Managing Professional Health Care Organa | 3 | Core |
| 2 | MSCI-6159 | Total Quality Management | 3 | Core |
| 3 | HLMG | Elective 1 | 3 | Core |
| 4 | HLMG | Elective 2 | 3 | Core |
| | | | | Core |
| **Total Credit Hours** | | | **12** | |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | HLMG-6301/HLMG-6601 | Project/Thesis | 12 | Mandatory |
| | | | **12** | |

| **Grand Total** | **66** |
|---|---|

## BS Clinical Psychology

### Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics I | 3 | | |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 3 |
| 5 | CPSY-1101 | Fundamentals of Biology | 3 | 0 | 2 |
| 6 | CPSY-1102 | Introduction to Psychology | 3 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **0** | **16** |

### Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic studies | 2 | 0 | 3 |
| 3 | CPSY-1103 | Social Psychology | 3 | 0 | 3 |
| 4 | CPSY-1104 | History and School of Psychology | 3 | 0 | 3 |
| 5 | HLSC-1101 | Introduction to Health Care Management | 3 | 0 | 3 |
| **Total Credit Hours** | | | **14** | **0** | **14** |

### Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing | 3 | 0 | 3 |
| 2 | INFT-1102 | Introduction to Computing | 2 | 0 | 2 |
| 3 | INFT-1202 | Introduction to Computing | 0 | 1 | 1 |
| 4 | CPSY-2101 | Theories of Personality I | 3 | 0 | 3 |
| 5 | CPSY-2102 | Counselling | 3 | 0 | 3 |
| 6 | CPSY-2103 | Experimental Psychology I | 2 | 1 | 3 |
| 7 | CPSY-2104 | Child Psychology | 3 | | 3 |
| **Total Credit Hours** | | | **16** | **2** | **18** |

### Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CPSY-2105 | Theories of Personality II | 3 | 0 | 3 |
| 2 | CPSY-2105 | Psychology of life span | 3 | 0 | 3 |
| 3 | CPSY-2106 | Experimental Psychology II | 3 | 0 | 3 |
| 4 | CPSY-2107 | Positive psychology | 3 | 0 | 3 |
| 5 | CPSY-2108 | Psychology of Leadership | 3 | 0 | 3 |
| **Total Credit Hours** | | | **15** | **0** | **15** |

## Semester 5

| S. No. | Course Code | | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-3108 | Bio Statistics | 2 | 1 | 3 |
| 2 | CPSY-3101 | Mental Health and Psychopathology I | 3 | 0 | 3 |
| 3 | CPSY-3102 | Cognitive Psychology | 3 | 0 | 3 |
| 4 | CPSY-3401 | Psychological Practicum | 0 | 3 | 3 |
| 5 | CPSY-3104 | Psychological Testing I | 3 | 0 | 3 |
| **Total Credit Hours** | | | **11** | **4** | **15** |

## Semester 6

| S. No. | Course Code | | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | BOCH-3114 | Statistical tools for social sciences | 3 | 0 | 3 |
| 2 | CPSY-3105 | Mental Health and Psychology II | 3 | 0 | 3 |
| 3 | CPSY-3106 | Neurological Basis of Behavior | 3 | 0 | 3 |
| 4 | CPSY-3107 | Clinical Psychology | 2 | 0 | 2 |
| 5 | CPSY-3108 | Psychological Testing II | 3 | 0 | 3 |
| 6 | CPSY-3109 | Environmental Psychology | 3 | 0 | 3 |
| **Total Credit Hours** | | | **17** | **0** | **17** |

## Semester 7

| S. No. | Course Code | | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CPSY-4401 | Clinical Internship | 0 | 2 | 2 |
| 2 | CPSY-4101 | Psychology of Cross Cultural differences | 3 | 0 | 3 |
| 3 | CPSY-4102 | Clinical pharmacology | 3 | 0 | 3 |
| 4 | CPSY-4103 | Educational Psychology | 2 | 0 | 2 |
| 5 | CPSY-4104 | Counselling for HIV/STIs | 3 | 0 | 3 |
| 6 | CPSY-4105 | Psychology of Special Children | 3 | 0 | 3 |
| 7 | CPSY-4106 | Psychology of Motivation | 2 | 0 | 2 |
| **Total Credit Hours** | | | **16** | **2** | **18** |

## Semester 8

| S. No. | Course Code | | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CPSY-4107 | Community Psychology | 3 | 0 | 3 |
| 2 | BOCH-4601 | Research Project | 0 | 6 | 6 |
| 3 | CPSY-4108 | Organizational Psychology | 2 | 0 | 2 |
| 4 | CPSY-4109 | Applied Behavior Analysis | 3 | 0 | 3 |
| 5 | CPSY-4402 | Clinical Internship | | 3 | 3 |
| **Total Credit Hours** | | | **8** | **9** | **17** |

| **Grand Total** | **130** |
|---|---|

# BS Cosmetology and Dermatological Sciences

## Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | CDMS-1101 | Anatomy I | 2 | 1 | 3 |
| 6 | CDMS-1102 | Physiology I | 2 | 1 | 3 |
| 7 | CDMS-1103 | Biochemistry I | 2 | 1 | 3 |
| **Total Credit Hours** | | | **16** | **3** | **19** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic studies | 2 | 0 | 2 |
| 3 | CDMS-1104 | Physiology II (Physiology of Cutaneous System) | 2 | 1 | 3 |
| 4 | CDMS-1105 | Anatomy II (Anatomy of Cutane | 2 | 1 | 3 |
| 5 | CDMS-1106 | Cosmetic Sciences I (Fundamentals) | 2 | 0 | 2 |
| 6 | CDMS-1107 | Biochemistry II | 2 | 1 | 3 |
| 7 | HLSC-1101 | Introduction to HealthCare Management | 3 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **3** | **19** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Introduction to Computing | 3 | 0 | 3 |
| 2 | INFT-1102 | Introduction to Computing | 2 | 0 | 2 |
| 3 | INFT-1202 | Pathology I (General Pathology) | 0 | 1 | 1 |
| 4 | CDMS-2101 | Cosmetic Sciences II (Manufacturing cosmetic formulations, labeling and packaging) | 2 | 1 | 3 |
| 5 | CDMS-2102 | | 2 | 1 | 3 |
| 6 | CDMS-2103 | | 2 | 0 | 2 |
| 7 | CDMS-2104 | Regulation/Legislation of Cosmetic Products | 2 | 1 | 3 |
| 8 | CDMS-2105 | Pharmacology | 2 | 0 | 2 |
| **Total Credit Hours** | | | **15** | **4** | **19** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CDMS-2106 | Pathology II (Patho physiology of Skin Diseases) | 2 | 1 | 3 |
| 2 | CDMS-2107 | Cosmetic Sciences III (Dispensing of Manufactured Formulations) | 2 | 1 | 3 |
| 3 | CDMS-2108 | Community Dermatology | 2 | 1 | 3 |
| 4 | CDMS-2109 | Nutritional Deficiencies | 3 | 0 | 3 |
| 5 | CDMS-2110 | Therapeutics | 3 | 0 | 3 |
| 6 | CDMS-2111 | Cross Infections and Control | 1 | 1 | 2 |
| **Total Credit Hours** | | | **13** | **4** | **17** |

*"Do not dispute with anyone in any matter as far as possible. For in argumentation lies much harm and its evil is greater than its benefit"*

*- Al-Ghazali*

## Semester 5

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CDMS-3101 | Cosmetic Sciences IV (Chemical Analysis and Stability) | 2 | 1 | 3 |
| 2 | CDMS-3102 | Quality Control of Cosmetics | 2 | 1 | 3 |
| 3 | CDMS-3103 | Approach to a patient with skin problem | 2 | 1 | 3 |
| 4 | CDMS-3104 | Adverse effects of cosmetics and drugs | 3 | 0 | 3 |
| 5 | CDMS-3105 | Inflammatory Skin Diseases | 3 | 0 | 3 |
| 6 | CDMS-3106 | Skin Assessment Techniques | 2 | 1 | 3 |
| | | **Total Credit Hour** | **14** | **4** | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CDMS-3107 | Dermatology and Internal Medicine I | 3 | 0 | 3 |
| 2 | CDMS-3108 | Skin Care of the pediatric and Young population | 3 | 0 | 3 |
| 3 | BIOI-2101 | Biostatistics | 2 | 1 | 3 |
| 4 | BIOI-2201 | Research Methodology | 2 | 1 | 3 |
| 5 | CDMS-3109 | Aging and Geriatrics | 2 | 1 | 3 |
| | | **Total Credit Hour** | **12** | **3** | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CDMS-4101 | Disorder of Pigmentation | 2 | 1 | 3 |
| 2 | CDMS-4401 | Supervised Skin Care Practice I | 0 | 2 | 2 |
| 3 | CDMS-4102 | Photobiology and phototherapy | 2 | 1 | 3 |
| 4 | CDMS-4103 | Infections and Infestations | 2 | 1 | 3 |
| 5 | CDMS-4104 | Hair Nail and Mucosal Disorders | 3 | 0 | 3 |
| | | **Total Credit Hour** | **9** | **5** | **14** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | CDMS-4105 | Lasers in Aesthetics | 2 | 1 | 3 |
| 2 | CDMS-4106 | Management of Common Dermatoses and Cosmetic Procedures | 2 | 1 | 3 |
| 3 | CDMS-4601 | Research Project | 0 | 6 | 6 |
| 4 | CDMS-4402 | Supervised Skin Care Practice II | 0 | 3 | 3 |
| | | **Total Credit Hour** | **4** | **11** | **15** |

| **GRAND TOTAL** | | | | | **136** |
|---|---|---|---|---|---|

# BS Medical Laboratory Technology

## Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | MLTG-1101 | Human Physiology i | 2 | 1 | 3 |
| 6 | MLTG-1102 | Biochemistry I | 2 | 1 | 3 |
| 7 | MLTG-1103 | Human Anatomy I | 2 | 1 | 3 |
| | | **Total Credit Hour** | **16** | **3** | **19** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic studies | 2 | 0 | 2 |
| 3 | MLTG-1103 | Biochemistry II | 3 | 1 | 4 |
| 4 | MLTG-1104 | Human Physiology II | 3 | 1 | 4 |
| 5 | MLTG-1105 | Human Anatomy II | 3 | 1 | 4 |
| 6 | HLSC-1101 | Introduction to Health Care Managem | 3 | 0 | 3 |
| | | **Total Credit Hour** | **17** | **3** | **20** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 2 | INFT-1102 | Introduction to Computing | 2 | 0 | 2 |
| 3 | INFT-1202 | Introduction to Computing | 0 | 1 | 1 |
| 4 | MLTG-2101 | Human Genetics | 2 | 1 | 3 |
| 5 | MLTG-2102 | Hematology I | 2 | 1 | 3 |
| 6 | MLTG-2103 | General Pathology I | 2 | 1 | 3 |
| 7 | MLTG-2104 | General Pharmacology I | 2 | 1 | 3 |
| 8 | MLTG-2105 | Medical Microbiology | 2 | 1 | 3 |
| | | **Total Credit Hour** | **15** | **6** | **21** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | MLTG-2106 | General Pathology II | 2 | 1 | 3 |
| 2 | MLTG-2107 | General Pharmacology II | 2 | 1 | 3 |
| 3 | MLTG-2108 | Clinical Virology and Mycology | 2 | 1 | 3 |
| 4 | MLTG-2109 | Medical Microbiology II | 2 | 1 | 3 |
| 5 | MLTG-2110 | Hematology II | 2 | 1 | 3 |
| 6 | MLTG-2111 | Chemical Pathology | 2 | 1 | 3 |
| | | **Total Credit Hour** | **12** | **6** | **18** |

*"Knowledge without action is wastefulness and action without knowledge is foolishness"*

*- Al-Ghazali*

## Semester 5

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | MLTG-3101 | WBCs and Platelets Disorders | 2 | 1 | 3 |
| 2 | MLTG-3102 | Histopathology | 2 | 1 | 3 |
| 3 | MLTG-3103 | Bioinformatics | 2 | 1 | 3 |
| 4 | MLTG-3104 | Clinical parasitology | 2 | 1 | 3 |
| 5 | MLTG-3105 | Clinical Pathology | 2 | 1 | 3 |
| 6 | MLTG-3106 | Biotechnology | 1 | 1 | 2 |
| **Total Credit Hours** | | | **11** | **6** | **17** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | MLTG-3107 | Medical Laboratory Instrumentation | 2 | 1 | 3 |
| 2 | MLTG-3108 | Immunology and serology | 2 | 1 | 3 |
| 3 | MLTG-3109 | Blood Banking | 2 | 1 | 3 |
| 4 | BIOI-2101 | Biostatistics | 2 | 1 | 3 |
| 5 | BIOI-2201 | Research Methodology | 2 | 1 | 3 |
| **Total Credit Hours** | | | **10** | **5** | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | MLTG-4101 | Medical Laboratory management skills | 2 | 1 | 3 |
| 2 | MLTG-4102 | Fundamentals of infection control | 1 | 1 | 2 |
| 3 | MLTG-4103 | Molecular Biology | 2 | 1 | 3 |
| 4 | MLTG-4104 | Epidemiology | 2 | 0 | 2 |
| 5 | MLTG-4105 | Diagnostic Bacteriology | 2 | 1 | 3 |
| 6 | MLTG-4106 | Cytology and Cytogenetics | 2 | 1 | 3 |
| **Total Credit Hours** | | | **11** | **5** | **16** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | MLTG-4107 | Bio Ethics | 2 | 0 | 2 |
| 2 | MLTG-4601 | Research Project | 0 | 6 | 6 |
| 3 | MLTG-4108 | Medical Sociology | 2 | 0 | 2 |
| **Total Credit Hours** | | | **4** | **6** | **10** |

| **GRAND TOTAL** | | **136** |
|---|---|---|

# BS Radiology

## Semester 1

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | RDGY-1101 | Human Physiology i | 2 | 1 | 3 |
| 6 | CHEM-1252 | Biochemistry I | 2 | 1 | 3 |
| 7 | RDGY-1102 | Human Anatomy I | 2 | 1 | 3 |
| **Total Credit Hours** | | | **16** | **3** | **19** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic studies | 2 | 0 | 2 |
| 3 | CHEM-1163 | Biochemistry II | 2 | 1 | 3 |
| 4 | RDGY-1103 | Human Physiology II | 2 | 1 | 3 |
| 5 | RDGY-1104 | Human Anatomy II | 2 | 1 | 3 |
| 6 | HLSC-1101 | Introduction to Health Care Management | 3 | 0 | 3 |
| **Total Credit Hours** | | | **14** | **3** | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 2 | INFT-1102 | Introduction to Computing | 2 | 0 | 2 |
| 3 | INFT-1202 | Introduction to Computing | 0 | 1 | 1 |
| 4 | RDGY-2101 | Regional and Radiological Anatomy I | 2 | 1 | 3 |
| 5 | RDGY-2102 | General Radiology | 2 | 1 | 3 |
| 6 | RDGY-2103 | General Pathology | 2 | 1 | 3 |
| 7 | RDGY-2104 | General Pharmacology | 2 | 1 | 3 |
| **Total Credit Hours** | | | **13** | **5** | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | MLTG-2106 | Clinical Medicine I | 2 | 0 | 2 |
| 2 | MLTG-2107 | Regional and Radiological Anatomy II | 2 | 1 | 3 |
| 3 | MLTG-2108 | Conventional Radiology and clinical practice | 2 | 1 | 3 |
| 4 | MLTG-2109 | Radiological positioning | 2 | 1 | 3 |
| 5 | MLTG-2110 | Computed and Digital Radiography | 1 | 1 | 2 |
| 6 | MLTG-2111 | Radiobiology and Radiation Protection | 2 | 0 | 2 |
| **Total Credit Hours** | | | **11** | **4** | **15** |

## Semester 5

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | RDGY-3101 | Clinical Medicine II | 1 | 1 | 2 |
| 2 | RDGY-3102 | Computed Tomography | 2 | 1 | 3 |
| 3 | RDGY-3103 | Mammography and Special Radiological Techniques | 2 | 1 | 3 |
| 4 | RDGY-3104 | Magnetic Resonance Imaging | 2 | 1 | 3 |
| 5 | RDGY-3105 | General Surgery | 2 | 0 | 2 |
| 6 | RDGY-3106 | Interventional Radiology | 1 | 1 | 2 |
| **Total Credit Hours** | | | **10** | **5** | **15** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Lab | Credits |
|---|---|---|---|---|---|
| 1 | RDGY-3107 | Radiological and Cross sectional anatomy | 2 | 1 | 3 |
| 2 | RDGY-3108 | Computed tomography procedures and clinical practice | 2 | 1 | 3 |
| 3 | RDGY-3109 | Magnetic resonance Imaging procedures and clinical practice | 2 | 1 | 3 |
| 4 | RDGY-3110 | Therapeutic Radiology | 2 | 1 | 3 |
| 5 | BIOI-2101 | Biostatistics | 2 | 1 | 3 |
| **Total Credit Hours** | | | **10** | **5** | **15** |

## Semester 7

| S. No. | Course Code | | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | RDGY-4101 | Clinical Sonography | 2 | 2 | 4 |
| 2 | RDGY-4102 | Angiography and Cardiac Imaging | 2 | 2 | 4 |
| 3 | RDGY-4103 | Nuclear Medicine | 2 | 1 | 3 |
| 4 | RDGY-4104 | Echocardiography | 1 | 1 | 2 |
| 5 | RDGY-4105 | Clinical Pathology and Radiological Presentation | 1 | 1 | 2 |
| 6 | RDGY-4106 | Electrocardiography | 1 | 1 | 2 |
| **Total Credit Hours** | | | **9** | **8** | **17** |

## Semester 8

| S. No. | Course Code | | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | RDGY-4107 | Patient Care Management | 2 | 1 | 3 |
| 2 | RDGY-4601 | Research Project | 0 | 6 | 6 |
| 3 | RDGY-4108 | Medical Sociology | 2 | 0 | 2 |
| **Total Credit Hours** | | | **4** | **7** | **11** |

| **GRAND TOTAL** | **127** |
|---|---|

# BS Optometry

## Semester 1

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 | 0 | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 | 0 | 2 |
| 3 | MATH-1111 | Mathematics I | 3 | 0 | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 | 0 | 2 |
| 5 | OPTM-1101 | Ocular Anatomy | 2 | 1 | 3 |
| 6 | OPTM-1102 | Introduction to optometry | 2 | 1 | 3 |
| 7 | OPTM-1103 | Human Anatomy (Head & Neck) | 2 | 1 | 3 |
| **Total Credit Hours** | | | **16** | **3** | **19** |

## Semester 2

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 | 0 | 3 |
| 2 | ISLS-1112 | Islamic studies | 2 | 0 | 2 |
| 3 | OPTM-1104 | Physical and Geometric Optics | 2 | 1 | 3 |
| 4 | OPTM-1105 | Neuro Anatomy | 2 | 1 | 3 |
| 5 | OPTM-1106 | Neuro Physiology | 2 | 1 | 3 |
| 6 | OPTM-1107 | Ocular Physiology | 2 | 1 | 3 |
| 7 | HLSC-1101 | Introduction to Health Care Management | 3 | 0 | 3 |
| **Total Credit Hours** | | | **16** | **4** | **20** |

## Semester 3

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 | 0 | 3 |
| 2 | INFT-1102 | Introduction to Computing | 2 | 0 | 2 |
| 3 | INFT-1202 | Introduction to Computing | 0 | 1 | 1 |
| 4 | OPTM-2101 | Optics of the visual system I | 2 | 1 | 3 |
| 5 | OPTM-2102 | Foundation of Ocular and systemic disease Management | 2 | 1 | 3 |
| 6 | OPTM-2103 | Orthoptics | 2 | 1 | 3 |
| 7 | OPTM-2104 | Clinical Topics in Binocular Vision and Pediatric Optics | 2 | 1 | 3 |
| 8 | OPTM-2105 | Management of Refractive Errors | 2 | 1 | 3 |
| **Total Credit Hours** | | | **15** | **6** | **21** |

## Semester 4

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | OPTM-2106 | Optics of the visual system II | 2 | 1 | 3 |
| 2 | OPTM-2107 | Community Medicine and Public Health | 3 | 0 | 3 |
| 3 | OPTM-2108 | Binocular vision Anomalies | 2 | 1 | 3 |
| 4 | OPTM-2109 | Low Vision | 2 | 1 | 3 |
| 5 | OPTM-2110 | Clinical and Geriatric Optometry | 3 | 0 | 3 |
| **Total Credit Hours** | | | **12** | **3** | **15** |

## Semester 5

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | OPTM-3101 | Environmental Vision | 2 | 0 | 2 |
| 2 | OPTM-3102 | Contact Lens | 2 | 1 | 3 |
| 3 | OPTM-3103 | Pediatric Optometry | 2 | 0 | 2 |
| 4 | OPTM-3104 | Occupational Optometry and ophthalmic dispensing | 2 | 1 | 3 |
| 5 | OPTM-3106 | Ethical Practice in Optometry | 2 | 1 | 3 |
| 6 | OPTM-3107 | Ocular Pharmacology | 2 | 1 | 3 |
| **Total Credit Hours** | | | **12** | **4** | **16** |

## Semester 6

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | OPTM-3108 | Preventive Ophthalmology | 2 | 1 | 3 |
| 2 | OPTM-3109 | Eye Health Management Patient Care | 2 | 1 | 3 |
| 3 | BIOI-2101 | Biostatistics | 2 | 1 | 3 |
| 4 | BIOI-2201 | Research Methodology | 2 | 1 | 3 |
| 5 | OPTM-3110 | Ophthalmic Instruments | 2 | 1 | 3 |
| **Total Credit Hours** | | | **10** | **5** | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | OPTM-4401 | Clinical rotations I (Refraction, Screening and Paediatric Care) | 0 | 3 | 3 |
| 2 | OPTM-4402 | Clinical Rotations II (Diagnostic & Pediatric & Ophthalmology Clinic) | 0 | 3 | 3 |
| 3 | OPTM-4101 | Epidemiology | 3 | 0 | 3 |
| 4 | OPTM-4102 | Ophthalmic Lasers | 2 | 1 | 3 |
| **Total Credit Hours** | | | **5** | **7** | **12** |

## Semester 8

| S. No. | Course Code | Course Title | Theory | Pract. | Credits |
|---|---|---|---|---|---|
| 1 | OPTM-4403 | Clinical rotations III (Vireo-Retina Clinic & Glaucoma Clinic) | 0 | 3 | 3 |
| 2 | OPTM-4601 | Research Project | 0 | 6 | 6 |
| 3 | OPTM-4404 | Clinical Rotations IV (Contact Lens, Dispensing and Low Version) | 0 | 3 | 3 |
| **Total Credit Hours** | | | **0** | **12** | **12** |

| **GRAND TOTAL** | **130** |
|---|---|

# Faculty Profile

**AHMAD BILAL ARIF**
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**MS** Health Care Management, PGC Ortho Rehab.
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*BoS of Department of Health Sciences with Vice Chancellor & Senior Dean of all faculties*

# Department of

# Mathematics

## Introduction and Overview

The Department of Mathematics is one of the inaugural and pioneer departments in the radius of 200 km in Rahim Yar Khan, established in September 2017. The philosophy of department is to educate mathematics in much more interactive and conceptual point of view. Investigations and conceptual learning allow one to see mathematics being created by oneself. Our aim is to provide a new generation of innovative researchers and quality teachers to the nation. We provide mathematical instructions to students in a broad range of undergraduate and graduate academic programs in Mathematics, Engineering, Information Technology, Physics, Chemistry, Business and many other disciplines.

## Vision

To become a hub of Mathematics in the region that revives and nourishes the mathematics culture and generates high caliber individuals who are pivotal to the development of regional economy.

## Mission

The mission of the Mathematics department is to graduate qualified cadres who are equipped with insight and research skills in the field of mathematics. Providing learning opportunities of unmatched breadth and depth in an environment where students can learn and become competent users of mathematics and mathematical applications. Moreover, the department aims to contribute to the development of students as mathematical thinkers, enabling them to become lifelong learners, to continue to grow in their chosen professions and to function as productive citizens.

## Scope and Associated Career

Our graduates will find numerous opportunities of working at research and teaching institutes in Pakistan and abroad. Depending upon the concentration that a student selects during study, various job opportunities are available after degree completion. Some of most visible ones are top academic and industrial research positions, Software Development, Education Sector, Consultants and many more.

## Key Facts

- 19 faculty members
- 12 PhDs
- 6 Lectures
- 1 Teaching Assistant
- International & National PhD Qualified faculty

## Programs being offered

| BS Mathematics |
| --- |
| MSc Mathematics |
| MS Mathematics |
| PhD Mathematics * |

* Subject to approval / NOC from HEC / Competent Authority / Accreditation Body



*Students Studying (Department of Mathematics)*

# Scheme of Study

## BS Mathematics

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-1101 | Calculus-I | 3 | Core |
| 2 | MATH-1103 | Elements of Set Theory and Mathematical logic | 3 | Compulsory |
| 3 | ENGL-1118 | Functional English | 3 | Compulsory |
| 4 | PHYS-1126 | Applied Physics-I | 3 | General |
| 5 | COSC-1207 | ICT Lab | 3 | Compulsory |
| 6 | PAKS-1113/ ISLS-1112/ ETIC-1112 | Pakistan Studies/ Islamic Studies/ Ethics | 2 | Compulsory |
| **Total Credit Hours** | | | **17** | |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-1102 | Calculus-II | 3 | Core |
| 2 | MATH-1104 | Discrete Mathematics | 3 | Compulsory |
| 3 | STAT-2131 | Introduction to Statistics | 3 | General |
| 4 | ENGL-1119 | Communication Skills | 3 | Compulsory |
| 5 | PHYS-1127 | Applied Physics-II | 3 | General |
| 6 | ISLS-1112/ ETIC-1112/ PAKS-1113 | Islamic Studies/ Ethics/ Pakistan Studies | 2 | Compulsory |
| **Total Credit Hours** | | | **17** | |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-2101 | Calculus-III | 3 | Core |
| 2 | MATH-2103 | Linear Algebra | 3 | Core |
| 3 | MSCI-2115 | Principal of Management | 3 | General |
| 4 | MATH-2105 | Introduction to Mechanics | 3 | Core |
| 5 | ENGL-2111 | Technical Writing & Presentation Skills | 3 | Compulsory |
| 6 | HLTH-1113 | Basic Health Awareness | 2 | Compulsory |
| **Total Credit Hours** | | | **17** | |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-2104 | Affine & Euclidean Geometry | 3 | Core |
| 2 | MATH-2106 | Number Theory | 3 | Core |
| 3 | MATH-2108 | Introduction to Probability Theory | 3 | Core |
| 4 | SSCI-1111 | Introduction to Sociology | 3 | General |
| 5 | COSC-1101 COSC-1201 | Programming Fundamentals + Lab | 3 | General |
| 6 | SSCI-3120 | Constitution & Legal System of Pakistan | 2 | Compulsory |
| **Total Credit Hours** | | | **17** | |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-3116 | Numerical Analysis | 3 | Core |
| 2 | MATH-3131 | Software Packages for Mathematics | 3 | General |
| 3 | MATH-3105 | Ordinary Differential Equations | 3 | Core |
| 4 | MATH-3107 | Real Analysis-I | 3 | Core |
| 5 | MATH-3121 | Algebra-I | 3 | Core |
| 6 | MATH-3119 | Complex Analysis | 3 | Core |
| **Total Credit Hours** | | | **18** | |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-3126 | Analytical Mechanics | 3 | Core |
| 2 | MATH-3104 | Partial Differential Equations | 3 | Core |
| 3 | MATH-3124 | Algebra-II | 3 | Core |
| 4 | MATH-3117 | Topology | 3 | Core |
| 5 | MATH-3110 | Real Analysis-II | 3 | Core |
| 6 | MATH-3118 | Differential Geometry | 3 | Core |
| **Total Credit Hours** | | | **18** | |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-4101 | Introduction to Vectors & Tensor Analysis | 3 | Core |
| 2 | MATH-4103 | Functional Analysis | 3 | Core |
| 3 | MATH-4105 | Operation Research | 3 | Core |
| 4 | MATH-XXXX | E-1 | 3 | Core |
| 5 | MATH-XXXX | E-2 | 3 | Core |
| **Total Credit Hours** | | | **15** | |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-4102 | Mathematical Statistics | 3 | Core |
| 2 | MATH-4104 | Integral Equations | 3 | Core |
| 3 | MATH-XXXX | E-3 | 3 | Core |
| 4 | MATH-XXXX | E-4 | 3 | Core |
| 5 | MATH-XXXX | Project | 3 | Core |
| **Total Credit Hours** | | | **15** | |

*"Listen with ears of Tolerance!  See through the eyes of Compassion! Speak with language of Love!"*

*- Rumi*

# MSc Mathematics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MATH-3116 | Numerical Analysis | 3 |
| 2 | MATH-3131 | Software Packages for Mathematics | 3 |
| 3 | MATH-3105 | Ordinary Differential Equations | 3 |
| 4 | MATH-3107 | Real Analysis-I | 3 |
| 5 | MATH-3121 | Algebra-I | 3 |
| 6 | MATH-3119 | Complex Analysis | 3 |
| **Total Credit Hours** | | | **18** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MATH-3126 | Analytical Mechanics | 3 |
| 2 | MATH-3104 | Partial Differential Equations | 3 |
| 3 | MATH-3124 | Algebra-II | 3 |
| 4 | MATH-3117 | Topology | 3 |
| 5 | MATH-3110 | Real Analysis-II | 3 |
| 6 | MATH-3118 | Differential Geometry | 3 |
| **Total Credit Hours** | | | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MATH-4101 | Introduction to Vectors & Tensor Analysis | 3 |
| 2 | MATH-4103 | Functional Analysis | 3 |
| 3 | MATH-4105 | Operation Research | 3 |
| 4 | MATH-XXXX | E-1 | 3 |
| 5 | MATH-XXXX | E-2 | 3 |
| **Total Credit Hours** | | | **15** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MATH-4102 | Mathematical Statistics | 3 |
| 2 | MATH-4104 | Integral Equations | 3 |
| 3 | MATH-XXXX | E-3 | 3 |
| 4 | MATH-XXXX | E-4 | 3 |
| 5 | MATH-XXXX | E-5 | 3 |
| **Total Credit Hours** | | | **15** |

# MS Mathematics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-5101 | Advanced Algebra | 3 | Core |
| 2 | MATH-5102 | Advanced Mathematical Analysis | 3 | Core |
| 3 | MATH-5103 | Advance Partial Differential Equations | 3 | Core |
| 4 | MATH-5104 | Advanced Integral Equations | 3 | Core |
| **Total Credit Hours** | | | **12** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH- | Elective-1 | 3 | Optional |
| 2 | MATH- | Elective-2 | 3 | Optional |
| 3 | MATH- | Elective-3 | 3 | Optional |
| 4 | MATH- | Elective-4 | 3 | Optional |
| **Total Credit Hours** | | | **12** | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-6601 | Thesis | 12 | Mandatory |
| **Total Credit Hours** | | | **12** | |

# PhD Mathematics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH- | Elective I | 3 | Optional |
| 2 | MATH- | Elective II | 3 | Optional |
| 3 | MATH- | Elective III | 3 | Optional |
| **Total Credit Hours** | | | **9** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH- | Elective IV | 3 | Optional |
| 2 | MATH- | Elective V | 3 | Optional |
| 3 | MATH- | Elective VI | 3 | Optional |
| **Total Credit Hours** | | | **9** | |

## Semester – 3 and onward

| S. No. | Course Code | Course Title | Credit Hours | Remarks |
|---|---|---|---|---|
| 1 | MATH-8601 | Thesis | 30 | Compulsory |

# Elective / Optional Courses and Specialization

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | MATH-4151 | Mathematical Spaces | 3 | 17 | MATH-4168 | Quantum Mechanics-I | 3 |
| 2 | MATH-4152 | Modelling and Simulation | 3 | 18 | MATH-4169 | Quantum Mechanics-II | 3 |
| 3 | MATH-5153 | Advanced Complex Analysis | 3 | 19 | MATH-4170 | Relativity-I (Special Theory) | 3 |
| 4 | MATH-4155 | History of Mathematics | 3 | 20 | MATH-4171 | Relativity-II (General Theory) | 3 |
| 5 | MATH-4156 | Graph Theory | 3 | 21 | MATH-4122 | Mathematical Methods | 3 |
| 6 | MATH-4157 | Measure Theory-I | 3 | 22 | MATH-4173 | Solid Mechanics | 3 |
| 7 | MATH-4158 | Measure Theory-II | 3 | 23 | MATH-4174 | Heat Transfer | 3 |
| 8 | MATH-4159 | Abstract Algebra | 3 | 24 | MATH-4175 | Analytical Dynamics | 3 |
| 9 | MATH-4160 | Theory of Modules | 3 | 25 | MATH-4176 | Control Theory | 3 |
| 10 | MATH-4161 | Category Theory-I | 3 | 26 | MATH-4177 | Calculus of Variations and Optimal Control | 3 |
| 11 | MATH-4162 | Algebraic Topology | 3 | 27 | MATH-4178 | Matrix Computation | 3 |
| 12 | MATH-4163 | Analytical Number Theory | 3 | 28 | MATH-4179 | Theory of Automata | 3 |
| 13 | MATH-4164 | Astronomy-I (Spherical Astronomy) | 3 | 29 | MATH-4180 | Advanced Numerical Analysis | 3 |
| 14 | MATH-4165 | Astronomy-II (Celestial observation and corrections) | 3 | 30 | MATH-4181 | Special Function | 3 |
| 15 | MATH-4166 | Fluid Mechanics-I | 3 | 31 | MATH-4182 | Optimization Theory | 3 |
| 16 | MATH-4167 | Fluid Mechanics-II | 3 | 32 | MATH-4183 | Numerical Methods | 3 |

# List of Elective Courses for MSc Mathematics Program

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | MATH-4151 | Mathematical Spaces | 3 | 17 | MATH-4168 | Quantum Mechanics-I | 3 |
| 2 | MATH-4152 | Modelling and Simulation | 3 | 18 | MATH-4169 | Quantum Mechanics-II | 3 |
| 3 | MATH-5153 | Advanced Complex Analysis | 3 | 19 | MATH-4170 | Relativity-I (Special Theory) | 3 |
| 4 | MATH-4155 | History of Mathematics | 3 | 20 | MATH-4171 | Relativity-II (General Theory) | 3 |
| 5 | MATH-4156 | Graph Theory | 3 | 21 | MATH-4122 | Mathematical Methods | 3 |
| 6 | MATH-4157 | Measure Theory-I | 3 | 22 | MATH-4173 | Solid Mechanics | 3 |
| 7 | MATH-4158 | Measure Theory-II | 3 | 23 | MATH-4174 | Heat Transfer | 3 |
| 8 | MATH-4159 | Abstract Algebra | 3 | 24 | MATH-4175 | Analytical Dynamics | 3 |
| 9 | MATH-4160 | Theory of Modules | 3 | 25 | MATH-4176 | Control Theory | 3 |
| 10 | MATH-4161 | Category Theory-I | 3 | 26 | MATH-4177 | Calculus of Variations and Optimal Control | 3 |
| 11 | MATH-4162 | Algebraic Topology | 3 | 27 | MATH-4178 | Matrix Computation | 3 |
| 12 | MATH-4163 | Analytical Number Theory | 3 | 28 | MATH-4179 | Theory of Automata | 3 |
| 13 | MATH-4164 | Astronomy-I (Spherical Astronomy) | 3 | 29 | MATH-4180 | Advanced Numerical Analysis | 3 |
| 14 | MATH-4165 | Astronomy-II (Celestial observation and corrections) | 3 | 30 | MATH-4181 | Special Function | 3 |
| 15 | MATH-4166 | Fluid Mechanics-I | 3 | 31 | MATH-4182 | Optimization Theory | 3 |
| 16 | MATH-4167 | Fluid Mechanics-II | 3 | 32 | MATH-4183 | Numerical Methods | 3 |

# List of all MS Mathematics Courses

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | MATH-5101 | Advanced Algebra | 3(3-0) | 20 | MATH-6135 | Math Techniques for Boundary Value Problems | 3(3-0) |
| 2 | MATH-5102 | Advanced Mathematical Analysis | 3(3-0) | 21 | MATH-6136 | Sampling Techniques | 3(3-0) |
| 3 | MATH-5103 | Advance Partial Differential Equations | 3(3-0) | 22 | MATH-6137 | Multivariate Analysis | 3(3-0) |
| 4 | MATH-5104 | Advanced Integral Equations | 3(3-0) | 23 | MATH-6138 | Finite Mixture Distributions | 3(3-0) |
| 5 | MATH-6121 | Advanced Measure Theory | 3(3-0) | 24 | MATH-6139 | Computer Aided Geometric Design | 3(3-0) |
| 6 | MATH-6122 | Advanced Topology | 3(3-0) | 25 | MATH-6140 | Advanced Complex Analysis | 3(3-0) |
| 7 | MATH-6123 | Lie Algebra | 3(3-0) | 26 | MATH-6141 | Topics in Functional Analysis | 3(3-0) |
| 8 | MATH-6124 | Topological Groups | 3(3-0) | 27 | MATH-6142 | Topics in Measure Theory | 3(3-0) |
| 9 | MATH-6125 | Theory of Group Graphs | 3(3-0) | 28 | MATH-6143 | Topics in Topology | 3(3-0) |
| 10 | MATH-6126 | Theory of Group Actions | 3(3-0) | 29 | MATH-6144 | Banach Algebras | 3(3-0) |
| 11 | MATH-6127 | Approximation Theory | 3(3-0) | 30 | MATH-6145 | Lie Groups | 3(3-0) |
| 12 | MATH-6128 | Complex Analysis of Several Variables | 3(3-0) | 31 | MATH-6146 | C* -Algebras | 3(3-0) |
| 13 | MATH-6129 | Advanced Functional Analysis | 3(3-0) | 32 | MATH-6147 | Topological Algebras | 3(3-0) |
| 14 | MATH-6130 | Magneto-hydrodynamics | 3(3-0) | 33 | MATH-6148 | Geometric Function Theory | 3(3-0) |
| 15 | MATH-6131 | Advanced Analytical Dynamics | 3(3-0) | 34 | MATH-6149 | Heat and Mass Transfer | 3(3-0) |
| 16 | MATH-6132 | Advanced General Relativity | 3(3-0) | 35 | MATH-6150 | Cosmology | 3(3-0) |
| 17 | MATH-6133 | Astrophysics | 3(3-0) | 36 | MATH-6151 | Advanced Numerical Analysis | 3(3-0) |
| 18 | MATH-6134 | The Classical Theory of Fields | 3(3-0) | 37 | MATH-6152 | Rings and Modules | 3(3-0) |
| 19 | MATH-6153 | Linear Groups and Group Representations | 3(3-0) | 38 | MATH-6154 | Lattice Theory | 3(3-0) |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 40 | MATH-6155 | Representation Theory | 3(3-0) |
| 41 | MATH-6156 | Numerical Optimization | 3(3-0) |
| 42 | MATH-6157 | Random Number Generation and Monte Carlo Methods | 3(3-0) |
| 43 | MATH-6158 | Mathematical Statistics | 3(3-0) |
| 44 | MATH-6159 | Topological Vector Spaces | 3(3-0) |
| 45 | MATH-6160 | Numerical Solutions of Ordinary Differential Equations | 3(3-0) |
| 46 | MATH-6161 | Newtonian Fluid Mechanics | 3(3-0) |
| 47 | MATH-6162 | Fixed Point Theory | 3(3-0) |

# List of PhD Mathematics Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MATH-6121 | Advanced Measure Theory | 3(3-0) |
| 2 | MATH-6122 | Advanced Topology | 3(3-0) |
| 3 | MATH-6123 | Lie Algebra | 3(3-0) |
| 4 | MATH-6124 | Topological Groups | 3(3-0) |
| 5 | MATH-6125 | Theory of Group Graphs | 3(3-0) |
| 6 | MATH-6126 | Theory of Group Actions | 3(3-0) |
| 7 | MATH-6127 | Approximation Theory | 3(3-0) |
| 8 | MATH-6128 | Complex Analysis of Several Variables | 3(3-0) |
| 9 | MATH-6129 | Advanced Functional Analysis | 3(3-0) |
| 10 | MATH-6130 | Magneto-hydrodynamics | 3(3-0) |
| 11 | MATH-6131 | Advanced Analytical Dynamics | 3(3-0) |
| 12 | MATH-6132 | Advanced General Relativity | 3(3-0) |
| 13 | MATH-6133 | Astrophysics | 3(3-0) |
| 14 | MATH-6134 | The Classical Theory of Fields | 3(3-0) |
| 15 | MATH-6135 | Math Techniques for Boundary Value Problems | 3(3-0) |
| 16 | MATH-6136 | Sampling Techniques | 3(3-0) |
| 17 | MATH-6137 | Multivariate Analysis | 3(3-0) |
| 18 | MATH-6138 | Finite Mixture Distributions | 3(3-0) |
| 19 | MATH-6139 | Computer Aided Geometric Design | 3(3-0) |
| 20 | MATH-6140 | Advanced Complex Analysis | 3(3-0) |
| 21 | MATH-6141 | Topics in Functional Analysis | 3(3-0) |
| 22 | MATH-6142 | Topics in Measure Theory | 3(3-0) |
| 23 | MATH-6143 | Topics in Topology | 3(3-0) |
| 24 | MATH-6144 | Banach Algebras | 3(3-0) |
| 25 | MATH-6145 | Lie Groups | 3(3-0) |
| 26 | MATH-6146 | C* - Algebras | 3(3-0) |
| 27 | MATH-6147 | Topological Algebras | 3(3-0) |
| 28 | MATH-6148 | Geometric Function Theory | 3(3-0) |
| 29 | MATH-6149 | Heat and Mass Transfer | 3(3-0) |
| 30 | MATH-6150 | Cosmology | 3(3-0) |
| 31 | MATH-6151 | Advanced Numerical Analysis | 3(3-0) |
| 32 | MATH-6152 | Rings and Modules | 3(3-0) |
| 33 | MATH-6153 | Linear Groups and Group Representations | 3(3-0) |
| 34 | MATH-6154 | Lattice Theory | 3(3-0) |
| 35 | MATH-6155 | Representation Theory | 3(3-0) |
| 36 | MATH-6156 | Numerical optimization | 3(3-0) |
| 37 | MATH-6157 | Random Number Generation and Monte Carlo Methods | 3(3-0) |
| 38 | MATH-6158 | Mathematical Statistics | 3(3-0) |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 39 | MATH-6159 | Topological Vector Spaces | 3(3-0) |
| 40 | MATH-6160 | Numerical Solutions of Ordinary Differential Equations | 3(3-0) |
| 41 | MATH-6161 | Newtonian Fluid Mechanics | 3(3-0) |
| 42 | MATH-6162 | Fixed Point Theory | 3(3-0) |
| 43 | MATH-7101 | Fuzzy Analysis | 3(3-0) |
| 44 | MATH-7102 | Numerical Solution of Partial Differential Equations | 3(3-0) |
| 45 | MATH-7103 | Non-Newtonian Fluid Mechanics | 3(3-0) |
| 46 | MATH-7104 | Calculus of Finite Differences | 3(3-0) |
| 47 | MATH-7121 | Advanced Magneto Hydrodynamics | 3(3-0) |
| 48 | MATH-7122 | Advanced Electrodynamics | 3(3-0) |
| 49 | MATH-7123 | Topics in Analytical Dynamics | 3(3-0) |
| 50 | MATH-7124 | Group Methods for Differential Equations | 3(3-0) |
| 51 | MATH-7125 | Advanced Sampling Techniques | 3(3-0) |
| 52 | MATH-7126 | Advanced Multivariate Analysis | 3(3-0) |
| 53 | MATH-7127 | Advanced Finite Mixture Distributions | 3(3-0) |
| 54 | MATH-7128 | Fractional Differential Equations | 3(3-0) |
| 55 | MATH-7129 | Advances in Discrete Mathematics and Applications | 3(3-0) |
| 56 | MATH-7130 | Strict Convexity | 3(3-0) |
| 57 | MATH-7131 | Theory of Differential Equations | 3(3-0) |
| 59 | MATH-7132 | Advanced Fluid Dynamics | 3(3-0) |
| 60 | MATH-7133 | Advanced Computer Aided Geometric Design | 3(3-0) |
| 61 | MATH-7134 | Advanced Analytical Methods | 3(3-0) |
| 62 | MATH-7135 | Elasto-dynamics | 3(3-0) |
| 63 | MATH-7136 | Convex Analysis | 3(3-0) |
| 64 | MATH-7137 | BCK Algebra | 3(3-0) |
| 65 | MATH-7138 | Computer Graphics | 3(3-0) |
| 66 | MATH-7139 | Lie Group Analysis of Difference Equations | 3(3-0) |
| 67 | MATH-7140 | Theory of Complex Manifolds | 3(3-0) |
| 68 | MATH-7141 | BCI Algebra | 3(3-0) |
| 69 | MATH-7142 | Advanced Theory of Rings and Modules | 3(3-0) |

*"Raise your words, not voice. It is rain that grows flowers, not thunder"*

*- Rumi*

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ارادے جن کے پختہ ہوں، نِظر جن کی خدا پر ہو
طلاطم خیز موجوں سے وہ گھبرایا نہیں کرتے

حضرت علامہ محمد اقبالؒ

## Department of

# Physics

## Introduction

The Department of Physics at Khwaja Fareed University of Engineering and Information Technology is privileged to have highly enriched faculty. Most of the faculty members are PhDs with more than half having international qualification and experience. The department has well-equipped laboratories, advanced learning facilities, technology equipped class rooms and lecture theatres. The courses offered by the department of physics constitute an integrated series of basic and advanced physics topics in different fields of physics.

## Vision & Mission

To become the centre of excellence in physics by providing high quality education through rigorous course work, cutting-edge interdisciplinary, multi- disciplinary research and collaboration with industry.

The department seeks to deliver the best scientific methods in teaching the principles of physics theoretically and experimentally, and focuses to maintain the level of education, scientific research and community services.
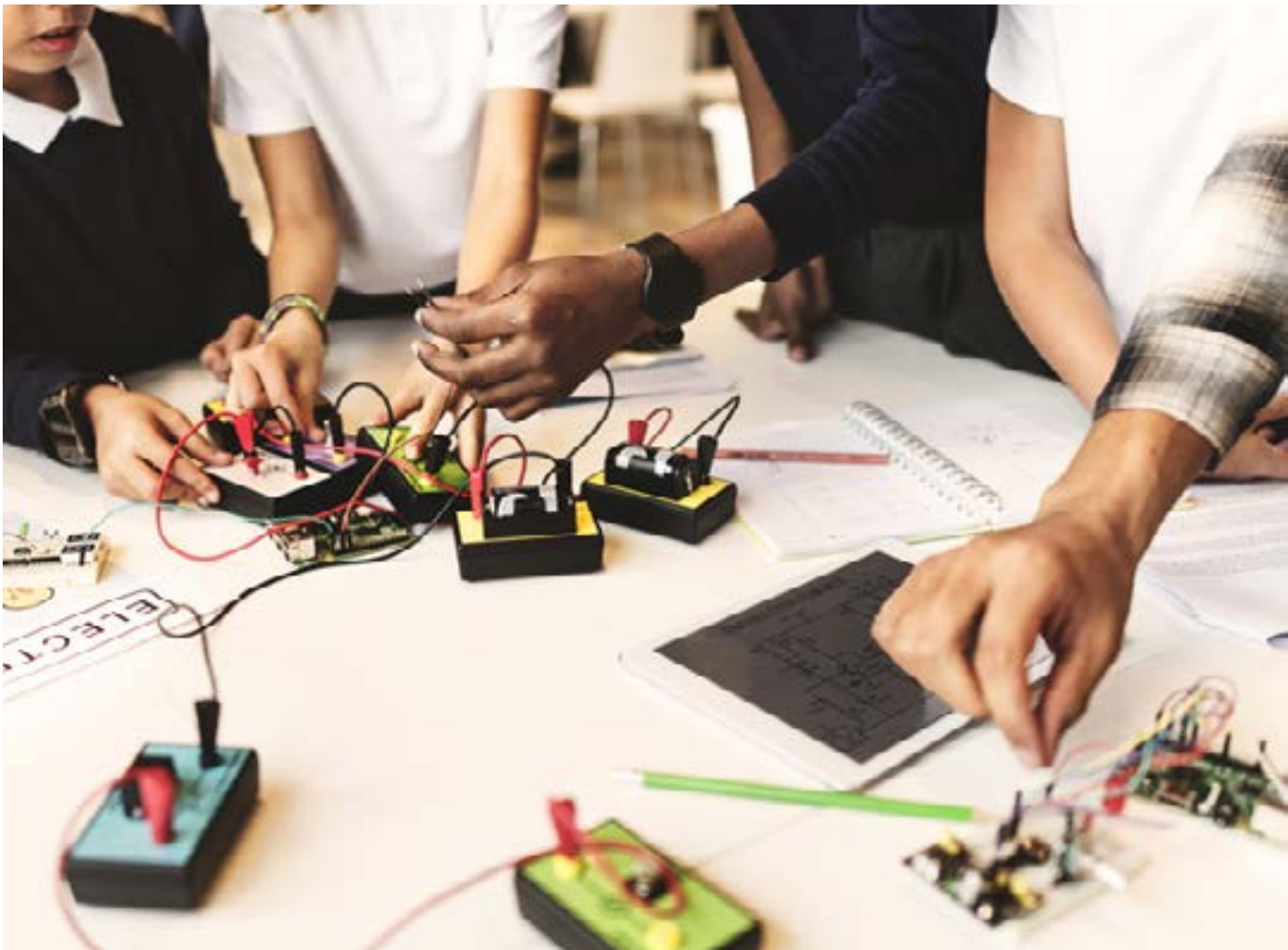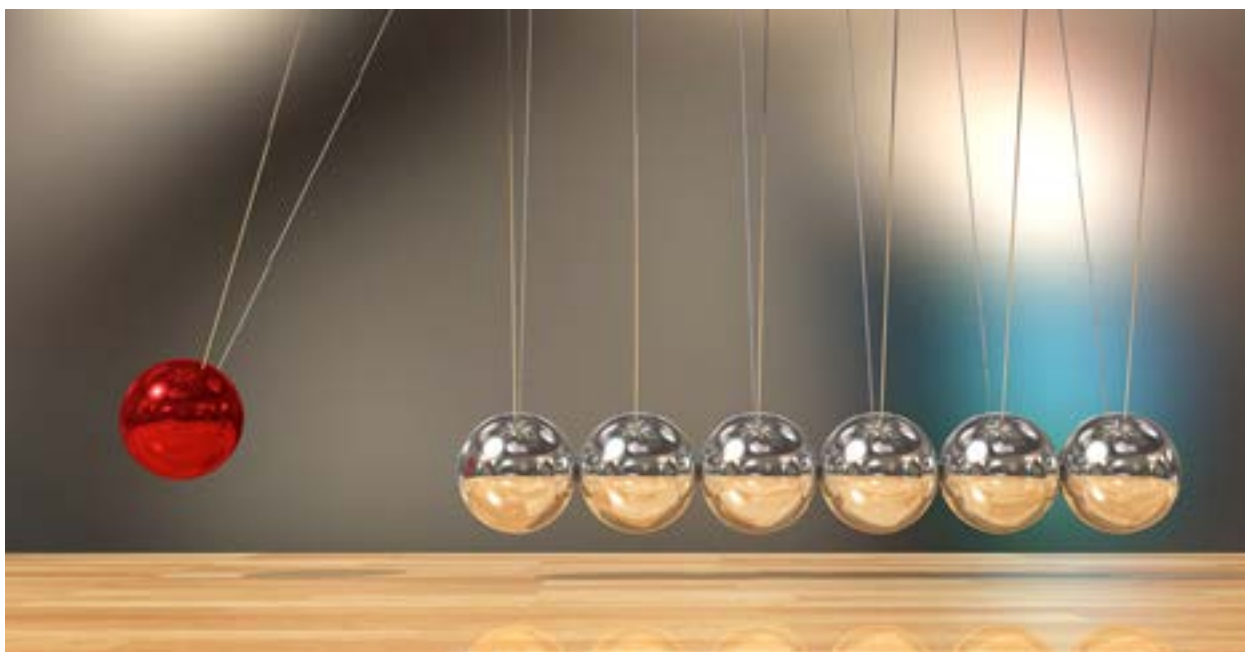
## Key Features / Facilities

- The Physics department has an honour of hiring more than 12 PhD qualified faculty members graduated locally and from various foreign universities.
- Deliver excellent education to nascent scientist and engineers.
- Providing a lively intellectual atmosphere to its under-graduate and graduate students.
- Special attention in teaching and training the students to be at the forefront of the next generation of physicists.
- Department of Physics is equipped with various labs such as:

  o Mechanics Lab
  o Thermodynamics and Electromagnetism Lab
  o Waves and Optics Lab
  o Advance Physics Lab
  o Electronics Lab
  o Modern Physics and Spectroscopy Lab

- Department of Physics has also established a research Lab to fulfil the needs of undergraduate and graduate research projects
- Necessary equipment for materials synthesis is already present the lab, e.g.,
  o Muffle Furnace
  o Magnetic Stirrer
  o Oven Universal Memmert Digital PID control
  o Centrifuge Machine
  o Microscope Trinocular Research Antimould Treated Stand with Camera
- Moreover, Department is in process of purchasing state of the art latest equipment to fulfil the need of material characterization at micro and nano meter scales.
  o X-ray Diffractometer
  o Field Emission Scanning Electron Microscope

## Programs being offered

| BS Physics |
|---|
| MSc Physics |
| MS Physics |
| PhD Physics |

# BS Physics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | COSC-1105 | Introduction to ICT | 2 |
| 2 | COSC-1205 | Introduction to ICT Lab | 1 |
| 3 | ENGL-1118 | Functional English | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 |
| 5 | MATH-1101 | Calculus-I | 3 |
| 6 | PAKS-1113 | Pakistan Studies | 2 |
| 7 | PHYS-1101 | Mechanics-I | 3 |
| **Total Credit Hours** | | | **16** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ISLS-1112 | Islamic Studies | 2 |
| 3 | MATH-1102 | Calculus-II | 3 |
| 4 | PHYS-1108 | Heat and Thermodynamics | 3 |
| 5 | PHYS-1102 | Mechanics-II | 3 |
| 6 | PHYS-1104 | Electricity and Magnetism-I | 3 |
| 7 | PHYS-1201 | Mechanics Lab | 1 |
| **Total Credit Hours** | | | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 2 | MATH-2103 | Linear Algebra | 3 |
| 3 | PHYS-2101 | Waves and Oscillations | 3 |
| 4 | PHYS-2210 | Thermodynamics and Electromagnetism Lab | 1 |
| 5 | PHYS-2105 | Electricity and Magnetism-II | 3 |
| 6 | STAT-2104 | Probability and Statistics | 3 |
| **Total Credit Hours** | | | **16** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | CHEM-1108 | Introduction to Chemistry | 3 |
| 2 | COSC-2115 | Introduction to Computer Program and Applications | 2 |
| 3 | COSC-2215 | Introduction to Computer Program and Applications Lab | 1 |
| 4 | MATH-2122 | Differential equations | 3 |
| 5 | PHYS-2102 | Optics | 3 |
| 6 | PHYS-2108 | Modern Physics | 3 |
| 7 | PHYS-2202 | Waves and Optics Lab | 1 |
| 8 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 |
| **Total Credit Hours** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHYS-3101 | Mathematical Methods of Physics-I | 3 |
| 2 | PHYS-3103 | Electrodynamics-I | 3 |
| 3 | PHYS-3105 | Classical Mechanics-I | 3 |
| 4 | PHYS-3113 | Introduction to Computational Physics | 3 |
| 5 | PHYS-3211 | Modern Physics & Spectroscopy Lab | 2 |
| 6 | PHYS-3109 | Circuits and Devices | 3 |
| **Total Credit Hours** | | | **17** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHYS-3102 | Mathematical Methods of Physics-II | 3 |
| 2 | PHYS-3104 | Electrodynamics-II | 3 |
| 3 | PHYS-3106 | Classical Mechanics-II | 3 |
| 4 | PHYS-3110 | Quantum Mechanics-I | 3 |
| 5 | PHYS-3116 | Digital Electronics | 3 |
| 6 | PHYS-3215 | Electronics Lab | 2 |
| **Total Credit Hours** | | | **17** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHYS-3112 | Nuclear Physics | 3 |
| 2 | PHYS-4105 | Solid State Physics-I | 3 |
| 3 | PHYS-4109 | Quantum Mechanics-II | 3 |
| 4 | PHYS-4111 | Statistical Physics | 3 |
| 5 | PHYS-4211 | Advanced Physics Lab | 2 |
| 6 | PHYS-XXXX | Elective-I | 3 |
| **Total Credit Hours** | | | **17** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHYS-4106 | Solid State Physics-II | 3 |
| 2 | PHYS-4108 | Atomic and Molecular Physics | 3 |
| 3 | PHYS-XXXX | Elective-II | 3 |
| 4 | PHYS-XXXX | Elective-III | 3 |
| 5 | PHYS-4360 | Project | 3 |
| **Total Credit Hours** | | | **15** |

| **Program Total Credit Hours** | | | **134** |
|--------|--|--|--------|

# MSc Physics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHYS-3101 | Mathematical Methods of Physics-I | 3 |
| 2 | PHYS-3103 | Electrodynamics-I | 3 |
| 3 | PHYS-3105 | Classical Mechanics-I | 3 |
| 4 | PHYS-3113 | Introduction to Computational Physics | 3 |
| 5 | PHYS-3211 | Modern Physics & Spectroscopy Lab | 2 |
| 6 | PHYS-3109 | Circuits and Devices | 3 |
| **Total Credit Hours** | | | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHYS-3102 | Mathematical Methods of Physics-II | 3 |
| 2 | PHYS-3104 | Electrodynamics-II | 3 |
| 3 | PHYS-3106 | Classical Mechanics-II | 3 |
| 4 | PHYS-3110 | Quantum Mechanics-I | 3 |
| 5 | PHYS-3116 | Digital Electronics | 3 |
| 6 | PHYS-3215 | Electronics Lab | 2 |
| **Total Credit Hours** | | | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PHYS-3112 | Nuclear Physics | 3 |
| 2 | PHYS-4105 | Solid State Physics-I | 3 |
| 3 | PHYS-4109 | Quantum Mechanics-II | 3 |
| 4 | PHYS-4111 | Statistical Physics | 3 |
| 5 | PHYS-4211 | Advanced Physics Lab | 2 |
| 6 | PHYS-XXXX | Elective-I | 3 |
| **Total Credit Hours** | | | **17** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PHYS-4106 | Solid State Physics-II | 3 |
| 2 | PHYS-4108 | Atomic and Molecular Physics | 3 |
| 3 | PHYS-XXXX | Elective-II | 3 |
| 4 | PHYS-XXXX | Elective-III | 3 |
| 5 | PHYS-XXXX | Elective-IV / Project | 3 |
| **Total Credit Hours** | | | **15** |

| **Program Total Credit Hours** | **66** |
|---|---|

# MS Physics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Remarks |
|---|---|---|---|---|
| 1 | PHYS-5101 | Mathematical Methods of Physics | 3 | Compulsory |
| 2 | PHYS-5103 | Advanced Electrodynamics | 3 | Compulsory |
| 3 | PHYS-6105 | Advanced Quantum Mechanics | 3 | Compulsory |
| 4 | PHYS-6107 | Advanced Classical Mechanics | 3 | Compulsory |
| **Total Credit Hours** | | | **12** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Remarks |
|---|---|---|---|---|
| 1 | PHYS-6108 | Statistical Physics | 3 | Compulsory |
| 2 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-I |
| 3 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-II |
| 4 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-III |
| **Total Credit Hours** | | | **12** | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Remarks |
|---|---|---|---|---|
| 1 | PHYS-6601 | Thesis | 12 | Mandatory |
| **Total Credit Hours** | | | **12** | |

| **Program Total Credit Hours** | **36** |
|---|---|

# PhD Physics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Remarks |
|---|---|---|---|---|
| 1 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-I |
| 2 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-II |
| 3 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-III |
| **Total Credit Hours** | | | **9** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Remarks |
|---|---|---|---|---|
| 1 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-IV |
| 2 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-V |
| 3 | PHYS-XXXX | Graduate Level Physics Course | 3 | Elective-VI |
| **Total Credit Hours** | | | **9** | |

## Semester 3 and onwards

| S. No. | Course Code | Course Title | Credit Hrs. Theory | Remarks |
|---|---|---|---|---|
| 1 | PHYS-8601 | Thesis | 30 | Mandatory |
| **Total Credit Hours** | | | **30** | |

| **Program Total Credit Hours** | **48** |
|---|---|



*The Participants of 7th ICSMAND International Conference with VC of KFUEIT*

# List of Elective Courses

## Elective Courses (BS / MSc Program)

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|--------|-------------|--------------|--------------|
| 1 | PHYS-4110 | Plasma Physics | 3 | 15 | PHYS-4138 | Computational Physics | 3 |
| 2 | PHYS-4112 | Methods of Experimental Physics | 3 | 16 | PHYS-4140 | Solid State Electronic Devices | 3 |
| 3 | PHYS-4114 | Introduction to Quantum Computing | 3 | 17 | PHYS-4142 | Environmental Physics | 3 |
| 4 | PHYS-4116 | Quantum Information Theory | 3 | 18 | PHYS-4144 | Characterization Techniques for Nano-materials | 3 |
| 5 | PHYS-4118 | Introduction to optoelectronics | 3 | 19 | PHYS-4146 | Chemical and Physical Synthesis of Nanomaterials | 3 |
| 6 | PHYS-4120 | Experimental Techniques in Particle and Nuclear Physics | 3 | 20 | PHYS-4148 | Laser and Quantum optics | 3 |
| 7 | PHYS-4122 | Electronic Materials and Devices | 3 | 21 | PHYS-4150 | Quantum Field Theory | 3 |
| 8 | PHYS-4124 | Fluid Dynamics | 3 | 22 | PHYS-4152 | Physical and Geometrical Optics | 3 |
| 9 | PHYS-4126 | Introduction to Photonics | 3 | 23 | PHYS-4154 | Introduction to Laser Physics | 3 |
| 10 | PHYS-4128 | Introduction to Material Science | 3 | 24 | PHYS-4156 | Sub-Atomic Physics-I | 3 |
| 11 | PHYS-4130 | Introduction to Nano Science and Nano-technologies | 3 | 25 | PHYS-4158 | Sub-Atomic Physics-II | 3 |
| 12 | PHYS-4132 | Introduction to Particle Physics | 3 | 26 | PHYS-4160 | Introduction to Quantum Information and Computation | 3 |
| 13 | PHYS-4134 | Computer Simulations in Physics | 3 | | | | |
| 14 | PHYS-4136 | Surface Science | 3 | | | | |

## Elective Courses (MS Physics Program)

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|--------|-------------|--------------|--------------|
| 1 | MSCI-6102 | Research Methodology | 3 | 26 | PHYS-6171 | Atomic and Electron Physics | 3 |
| 2 | PHYS-6113 | Semiconductor Theory | 3 | 27 | PHYS-6172 | Advanced Atomic and Electron Physics | 3 |
| 3 | PHYS-6114 | Magnetism in Condensed Matter | 3 | 28 | PHYS-6173 | Nuclear Theory | 3 |
| 4 | PHYS-6115 | Methods and Techniques of Experimental Physics | 3 | 29 | PHYS-6174 | Advanced Nuclear Theory | 3 |
| 5 | PHYS-6116 | Optical Properties of Solids | 3 | 30 | PHYS-6141 | Quantum Field Theory | 3 |
| 6 | PHYS-6117 | Nanophysics and Nanotechnology | 3 | 31 | PHYS-6142 | Advanced Quantum Field Theory | 3 |
| 7 | PHYS-6118 | Advanced Nanophysics and Nanotechnology | 3 | 32 | PHYS-6143 | Laser Physics | 3 |
| 8 | PHYS-6162 | Quantum Optics | 3 | 33 | PHYS-6144 | Advanced Laser Physics | 3 |
| 9 | PHYS-6164 | Condensed Matter Theory | 3 | 34 | PHYS-6145 | Computational Physics | 3 |
| 10 | PHYS-6166 | Quantum Information Theory | 3 | 35 | PHYS-6146 | Advanced Computational Physics | 3 |
| 11 | PHYS-6125 | Materials Science | 3 | 36 | PHYS-6147 | Physics of Non-linear Systems | 3 |
| 12 | PHYS-6126 | Plasma Physics | 3 | 37 | PHYS-6148 | Advanced Techniques of Experimental Physics | 3 |
| 13 | PHYS-6160 | Group Theory | 3 | 38 | PHYS-6149 | Applied Nuclear Physics | 3 |
| 14 | PHYS-6129 | Superconductivity | 3 | 39 | PHYS-6150 | Magnetic Materials | 3 |
| 15 | PHYS-6130 | Particle Physics | 3 | 40 | PHYS-6151 | Renewable Energy Resources | 3 |
| 16 | PHYS-6127 | Advanced Plasma Physics | 3 | 41 | PHYS-6152 | Conduction in Solids | 3 |
| 17 | PHYS-6131 | General Relativity and Cosmology | 3 | 42 | PHYS-6153 | Soil Physics | 3 |
| 18 | PHYS-6165 | Advanced Condensed Matter Theory | 3 | 43 | PHYS-6154 | Environmental and Atmospheric Physics | 3 |
| 19 | PHYS-6168 | Experimental Plasma Physics | 3 | 44 | PHYS-6155 | Microelectronics and Semiconductor Devices | 3 |
| 20 | PHYS-6163 | Advanced Quantum Optics | 3 | 45 | PHYS-6156 | Optoelectronics | 3 |
| 21 | PHYS-6133 | Atomic Physics | 3 | 46 | PHYS-6157 | Thin Films Technology | 3 |
| 22 | PHYS-6167 | Advanced Quantum Information Theory | 3 | 47 | PHYS-6158 | X-Ray and Electron Diffraction | 3 |
| 23 | PHYS-6169 | Accelerator Techniques for Materials | 3 | 48 | PHYS-6159 | Defects in Solids | 3 |
| 24 | PHYS-6135 | Solid State Physics | 3 | 49 | PHYS-6161 | Structure and Properties of Materials | 3 |
| 25 | PHYS-6170 | Solid State Theory | 3 | 50 | PHYS-6175 | Nano magnetism | 3 |

*Champions of Sports (Department of Physics)*

## Elective Courses (PhD Physics)

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|--------|-------------|--------------|--------------|
| 1 | PHYS-6105 | Advanced Quantum Mechanics | 3 | 26 | PHYS-6169 | Accelerator Techniques for Materials | 3 |
| 2 | PHYS-6107 | Advanced Classical Mechanics | 3 | 27 | PHYS-6135 | Solid State Physics | 3 |
| 3 | PHYS-6108 | Statistical Physics | 3 | 28 | PHYS-6170 | Solid State Theory | 3 |
| 4 | MSCI-6102 | Research Methodology | 3 | 29 | PHYS-6171 | Atomic and Electron Physics | 3 |
| 5 | PHYS-6113 | Semiconductor Theory | 3 | 30 | PHYS-6172 | Advanced Atomic and Electron Physics | 3 |
| 6 | PHYS-6114 | Magnetism in Condensed Matter | 3 | 31 | PHYS-6173 | Nuclear Theory | 3 |
| 7 | PHYS-6115 | Methods and Techniques of Experimental Physics | 3 | 32 | PHYS-6174 | Advanced Nuclear Theory | 3 |
| 8 | PHYS-6116 | Optical Properties of Solids | 3 | 33 | PHYS-6141 | Quantum Field Theory | 3 |
| 9 | PHYS-6117 | Nanophysics and Nanotechnology | 3 | 34 | PHYS-6142 | Advanced Quantum Field Theory | 3 |
| 10 | PHYS-6118 | Advanced Nanophysics and Nanotechnology | 3 | 35 | PHYS-6143 | Laser Physics | 3 |
| 11 | PHYS-6162 | Quantum Optics | 3 | 36 | PHYS-6144 | Advanced Laser Physics | 3 |
| 12 | PHYS-6164 | Condensed Matter Theory | 3 | 37 | PHYS-6145 | Computational Physics | 3 |
| 13 | PHYS-6166 | Quantum Information Theory | 3 | 38 | PHYS-6146 | Advanced Computational Physics | 3 |
| 14 | PHYS-6125 | Materials Science | 3 | 39 | PHYS-6147 | Physics of Non-linear Systems | 3 |
| 15 | PHYS-6126 | Plasma Physics | 3 | 40 | PHYS-6148 | Advanced Techniques of Experimental Physics | 3 |
| 16 | PHYS-6160 | Group Theory | 3 | 41 | PHYS-6149 | Applied Nuclear Physics | 3 |
| 17 | PHYS-6129 | Superconductivity | 3 | 42 | PHYS-6150 | Magnetic Materials | 3 |
| 18 | PHYS-6130 | Particle Physics | 3 | 43 | PHYS-6151 | Renewable Energy Resources | 3 |
| 19 | PHYS-6127 | Advanced Plasma Physics | 3 | 44 | PHYS-6152 | Conduction in Solids | 3 |
| 20 | PHYS-6131 | General Relativity and Cosmology | 3 | 45 | PHYS-6153 | Soil Physics | 3 |
| 21 | PHYS-6165 | Advanced Condensed Matter Theory | 3 | 46 | PHYS-6154 | Environmental and Atmospheric Physics | 3 |
| 22 | PHYS-6168 | Experimental Plasma Physics | 3 | 47 | PHYS-6155 | Microelectronics and Semiconductor Devices | 3 |
| 23 | PHYS-6163 | Advanced Quantum Optics | 3 | 48 | PHYS-6156 | Optoelectronics | 3 |
| 24 | PHYS-6133 | Atomic Physics | 3 | 49 | PHYS-6157 | Thin Films Technology | 3 |
| 25 | PHYS-6167 | Advanced Quantum Information Theory | 3 | 50 | PHYS-6158 | X-Ray and Electron Diffraction | 3 |
| | | | | 51 | PHYS-6159 | Defects in Solids | 3 |
| | | | | 52 | PHYS-6161 | Structure and Properties of Materials | 3 |
| | | | | 53 | PHYS-6175 | Nano-magnetism | 3 |



*Spring Fiesta 2019*

*7th ICMAND 2019 International Conference (Department of Physics)*

*Faculty Group Photo with Vice Chancellor, Senior Dean & External Delegates (Department of Physics)*



*Annual Dinner 2018 (Department of Physics)*

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# Faculty of
## Management Sciences & Humanities

## Department of
# Management Sciences

## Introduction and Overview

Realizing the importance and growing need of business and management related education; Department of Management Sciences was established in March, 2017 at KFUEIT. In order to delivers innovative, relevant and forward looking education, training, consultancy and research, the Department of Management Sciences is offering various programs including BBA, BS Public Administration, BS Economics, MBA, MS Management Sciences and MS Engineering Management. The programs offered have reputation for excellence in professional education. These programs are rigorous and intensive offering participants the opportunity to think strategically, tackle complex issues regarding marketing, finance, human resource management, public administration, economy and engineering management. For wholesome development of its students, Department of Management Sciences strongly believes in close coordination and interaction between academia and industry through frequent liaison, joint field projects, research activities, workshops, seminars and lectures by experts of various industries located locally as well as at national level. If you want to work as a professional administrator in top notch organizations or you want to be an entrepreneur, it is the best place to join and move towards excellence.

## Programs being offered

| | |
|---|---|
| BBA | MBA (2 years) |
| BS Economics | MBA (2.5 years) |
| BS Public Administration | MS Management Sciences |
| * Subject to approval / NOC from HEC / Competent Authority / Accreditation Body | MS Engineering Management |

## Vision

We seek to be a leading Management Sciences Department in the region with national prospective and to be recognized for teaching and knowledge creation excellence.

## Mission

To develop knowledgeable and socially responsible individuals with intellectual ability to assume leadership roles in the society and organizations.



*Skit Play (24-11-2018)*



*Opening Ceremony of Business Profile EXPO'19 (25-04-2019)*



*Champions of Spring Fiesta (04-04-2019)*

# Scheme of Study

## BBA (4 Years)

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | COSC-1105 & 1205 | Introduction to ICT (Theory + Lab) | 2+1 |
| 3 | PAKS-1114 | Pakistan Studies | 2 |
| 4 | MATH-1105 | Fundamentals of Mathematics | 3 |
| 5 | MSCI-1101 | Introduction to Business | 3 |
| 6 | HLTH-1113 | Basic Health Awareness | 2 |
| **Semester Credit Hours** | | | **16** |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | MSCI-1102 | Principles of Management | 3 |
| 3 | ECON-2112 | Micro Economics | 3 |
| 4 | STAT-1103 | Introduction to Statistics | 3 |
| 5 | ISLS-1113 | Islamic Studies | 2 |
| 6 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 |
| **Semester Credit Hours** | | | **16** |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | SSCI-1110 | Contemporary World | 3 |
| 2 | ECON-2113 | Macro Economics | 3 |
| 3 | STAT-3113 | Inferential Statistics | 3 |
| 4 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 5 | MSCI-2116 | Principles of Accounting | 3 |
| 6 | MSCI-2101 | Human Resource Management | 3 |
| **Semester Credit Hours** | | | **18** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENSC-1101 | Introduction to Environmental Sciences | 3 |
| 2 | MSCI-2102 | Financial Accounting | 3 |
| 3 | LNNG-1111 | Language Course (Chinese/Arabic/French) | 3 |
| 4 | ECON-2111 | Economy of Pakistan | 3 |
| 5 | SSCI-4101 | Principles of Psychology | 3 |
| 6 | MSCI-2104 | Principles of Marketing | 3 |
| **Semester Credit Hours** | | | **18** |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-3101 | Marketing Management | 3 |
| 2 | MSCI-3103 | Business Finance | 3 |
| 3 | MSCI-3105 | Professional Ethics and Corporate Social Responsibility | 3 |
| 4 | COSC-2121 | Management Information Systems | 3 |
| 5 | MSCI-3107 | Managerial Accounting | 3 |
| 6 | SSCI-1111 | | 3 |
| **Semester Credit Hours** | | | **18** |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-3114 | Research Methods & Techniques | 3 |
| 2 | MSCI-3104 | Financial Management | 3 |
| 3 | MSCI-3106 | Production and Operations Management | 3 |
| 4 | MSCI-3108 | Financial Institutions and Markets | 3 |
| 5 | MSCI-3110 | Organizational Behavior | 3 |
| 6 | MSCI-3112 | Consumer Behavior | 3 |
| **Semester Credit Hours** | | | **18** |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-3111 | Entrepreneurship | 3 |
| 2 | MSCI-4101 | Business Law | 3 |
| 3 | MSCI-4155 | Total Quality Management | 3 |
| 4 | MSCI-XXXX | Elective – I | 3 |
| 5 | MSCI-XXXX | Elective – II | 3 |
| **Semester Credit Hours** | | | **15** |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-4102 | International Business Management | 3 |
| 2 | MSCI-4104 | Money and Banking | 3 |
| 3 | MSCI-XXXX | Elective – III | 3 |
| 4 | MSCI-XXXX | Elective – IV | 3 |
| 5 | MSCI-4301 | Research Project | 3 |
| **Semester Credit Hours** | | | **15** |

## List of Elective Courses

### Specialization 1: Human Resource Management (HRM)

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4121 | Human Resource Development |
| 2. | MSCI-4122 | Workforce Diversity Management |
| 3. | MSCI-4123 | Workforce Planning and Management |
| 4. | MSCI-4124 | Employee Relations Management |
| 5. | MSCI-4125 | Performance Management |
| 6. | MSCI-4126 | Compensation Management |
| 7. | MSCI-4127 | Organizational Change and Development |
| 8. | MSCI-4128 | Labour Economics |
| 9. | MSCI-4129 | International Human Resource Management |

### Specialization 2: Finance

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4130 | Financial Markets and Institutions |
| 2. | MSCI-4131 | Investment Analysis |
| 3. | MSCI-4132 | Financial Statement Analysis |
| 4. | MSCI-4133 | Capital Budgeting |
| 5. | MSCI-4134 | Islamic Finance |
| 6. | MSCI-4135 | International Finance |
| 7. | MSCI-4136 | Commercial Banking |
| 8. | MSCI-4137 | Principle of Risk Management |
| 9. | MSCI-4138 | Valuation |
| 10. | MSCI-4139 | Risk and Corporate Governance |

## Specialization 3: Supply Chain Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4153 | Logistics and Transportation Management |
| 2. | MSCI-4154 | Global Supply Chain Management |
| 3. | MSCI-4155 | Total Quality Management |
| 4. | MSCI-4156 | Production Planning and Inventory Control |

## Specialization 4: Project Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4149 | Project Management Process |
| 2. | MSCI-4150 | Project Management Leadership |
| 3. | MSCI-4151 | Project Risk Management |
| 4. | MSCI-4152 | Project Management Scheduling |

## Specialization 5: Marketing Specialization

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4140 | Advertising and Promotion |
| 2. | MSCI-4141 | Service Marketing |
| 3. | MSCI-4142 | Marketing Research Design and Analysis |
| 4. | MSCI-4143 | Selling and Sales Management |
| 5. | MSCI-4144 | Customer Loyalty Management |
| 6. | MSCI-4145 | Global Marketing |
| 7. | MSCI-4146 | New Product Development |
| 8. | MSCI-4147 | Internet Marketing |
| 9. | MSCI-4148 | Retail Marketing |

*"In an effective classroom, students should not only know what they are doing, they should also know why and how"*

*-Harry Wong*

# BS Economics (4 Years)

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | ECON-1101 | Principles of Micro Economics | 3 |
| 3 | PAKS-1114 | Pakistan Studies | 2 |
| 4 | MATH-1111 | Mathematics-I | 3 |
| 5 | COSC-1105 & 1205 | Introduction to ICT (Theory + Lab) | 2+1 |
| 6 | HLTH-1113 | Basic Health Awareness | 2 |
| **Semester Credit Hours** | | | **16** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ECON-1102 | Principles of Macro Economics | 3 |
| 3 | MATH-1112 | Mathematics-II | 3 |
| 4 | SSCI-3120 | Constitution and Legal system of Pakistan | 3 |
| 5 | MSCI-1102 | Principles of Management | 3 |
| 6 | ISLS-1113 | Islamic Studies | 2 |
| **Semester Credit Hours** | | | **16** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 2 | ECON-2101 | Intermediate Microeconomics | 3 |
| 3 | ECON-2105 | Development Economics | 3 |
| 4 | STAT-1103 | Introduction to Statistics | 3 |
| 5 | MSCI-2102 | Financial Accounting | 3 |
| 6 | SSCI-4101 | Principles of Psychology | 3 |
| **Semester Credit Hours** | | | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LNNG-1111 | Language Course (Chinese/Arabic/French) | 3 |
| 2 | ECON-2102 | Intermediate Macroeconomics | 3 |
| 3 | STAT-3113 | Inferential Statistics | 3 |
| 4 | ECON-2104 | World Economic History | 3 |
| 5 | MSCI-2104 | Principles of Marketing | 3 |
| 6 | MSCI-3105 | Professional Ethics and CSR | 3 |
| **Semester Credit Hours** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ECON-3102 | Economic Growth | 3 |
| 2 | ECON-2112 | Micro Economics | 3 |
| 3 | MATH-2111 | Mathematical Economics-I | 3 |
| 4 | ECON-2111 | Economy of Pakistan | 3 |
| 5 | MSCI-3104 | Financial Management | 3 |
| **Semester Credit Hours** | | | **15** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ECON-2113 | Macro Economics | 3 |
| 2 | ECON-3104 | Econometrics-I | 3 |
| 3 | MATH-3101 | Mathematical Economics-II | 3 |
| 4 | MSCI-3114 | Research Methods and Techniques | 3 |
| 5 | MSCI-3111 | Entrepreneurship | 3 |
| **Semester Credit Hours** | | | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ECON-4001 | International Trade Theory | 3 |
| 2 | ECON-4101 | Public Sector Economics | 3 |
| 3 | ECON-4103 | Econometrics-II | 3 |
| 4 | ECON-XXXX | Area of Specialization Course – I | 3 |
| 5 | ECON-XXXX | Area of Specialization Course – II | 3 |
| **Semester Credit Hours** | | | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ECON-4102 | Islamic Economics | 3 |
| 2 | ECON-4104 | Monetary Economics | 3 |
| 3 | ECON-XXXX | Area of Specialization Course – III | 3 |
| 4 | ECON-XXXX | Area of Specialization Course – IV | 3 |
| 5 | ECON-4301 | Research Project | 3 |
| **Semester Credit Hours** | | | **15** |

# List of Elective Courses

## Specialization 1: Development Economics

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ECON-4111 | Institutional Economics | 3 |
| 2 | ECON-4112 | Welfare and Happiness Economics | 3 |
| 3 | ECON-4113 | Labor Economics | 3 |
| 4 | ECON-4114 | Population Economics | 3 |
| 5 | ECON-4115 | Comparative Economic System | 3 |
| 6 | ECON-4116 | Environmental and Natural Resource Economics | 3 |
| 7 | ECON-4117 | Rural Development | 3 |
| 8 | ECON-4118 | Public Policies | 3 |
| 9 | ECON-4119 | Ethics in Economics | 3 |
| 10 | ECON-4120 | Development Policy | 3 |
| 11 | ECON-4121 | Managerial Economics | 3 |

## Specialization 2: Economics and Finance

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-4130 | Financial Markets and Institutions | 3 |
| 2 | MSCI-4131 | Investment Analysis | 3 |
| 3 | MSCI-4132 | Financial Statement Analysis | 3 |
| 4 | MSCI-4133 | Capital Budgeting | 3 |
| 5 | MSCI-4134 | Islamic Finance | 3 |
| 6 | MSCI-4135 | International Finance | 3 |
| 7 | MSCI-4136 | Commercial Banking | 3 |
| 8 | MSCI-4137 | Principle of Risk Management | 3 |
| 9 | MSCI-4139 | Ethics, Risk and Corporate Governance | 3 |

# BS Public Administration

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | COSC-1105 & 1205 | Introduction to ICT (Theory + Lab) | 2+1 |
| 3 | PAKS-1114 | Pakistan Studies | 2 |
| 4 | PADM-1101 | Introduction to Public Administration | 3 |
| 5 | HLTH-1113 | Basic Health Awareness | 2 |
| 6 | MATH-1105 | Fundamentals of Mathematics | 3 |
| | | **Semester Credit Hours** | **16** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ISLS-1113 | Islamic Studies | 2 |
| 3 | ECON-2112 | Micro Economics | 3 |
| 4 | MSCI-1102 | Principles of Management | 3 |
| 5 | PADM-1102 | Administrative Ethics | 3 |
| 6 | STAT-1110 | Introduction to Statistics | 3 |
| | | **Semester Credit Hours** | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | STAT-3113 | Inferential Statistics | 3 |
| 2 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 3 | MSCI-2101 | Human Resource Management | 3 |
| 4 | SSCI-1111 | Introduction to Sociology | 3 |
| 5 | ECON-2113 | Macro Economics | 3 |
| 6 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 |
| | | **Semester Credit Hours** | **17** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LNNG-1111 | Language Course (Chinese/Arabic/French) | 3 |
| 2 | PADM-2102 | World Civilization | 3 |
| 3 | PADM-2104 | Introduction to Public Policy | 3 |
| 4 | MSCI-2104 | Principles of Marketing | 3 |
| 5 | SSCI-4101 | Principles of Psychology | 3 |
| 6 | MSCI-2102 | Financial Accounting | 3 |
| | | **Semester Credit Hours** | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PADM-3101 | Government & Society in Pakistan | 3 |
| 2 | PADM-3103 | Principles of Public Finance | 3 |
| 3 | PADM-3105 | Introduction to Development Economics | 3 |
| 4 | PADM-3107 | Logic & Critical Thinking | 3 |
| 5 | LEDU-4124 | Constitutional Development in Pakistan | 3 |
| 6 | MSCI-3110 | Organizational Behavior | 3 |
| | | **Semester Credit Hours** | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-3114 | Research Methods & Techniques | 3 |
| 2 | LEDU-5142 | Administrative Law | 3 |
| 3 | SSCI-3112 | International Relations | 3 |
| 4 | PADM-3101 | Decentralization & Governance | 3 |
| 5 | MSCI-3111 | Entrepreneurship | 3 |
| 6 | MSCI-3104 | Financial Management | 3 |
| | | **Semester Credit Hours** | **18** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-XXXX | Area of Specialization Course – I | 3 |
| 2 | MSCI-XXXX | Area of Specialization Course – II | 3 |
| 3 | MSCI-4102 | International Business Management | 3 |
| 4 | PADM-4101 | Managing Public & Non-Profit Organizations | 3 |
| 5 | PADM-4103 | Contemporary Issues of Public Administration in Pakistan | 3 |
| 6 | PADM-4105 | Public Policy Analysis | 3 |
| | | **Semester Credit Hours** | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MSCI-XXXX | Area of Specialization Course – III | 3 |
| 2 | MSCI-XXXX | Area of Specialization Course – IV | 3 |
| 3 | MSCI-2110 | Project Management | 3 |
| 4 | PADM-4302 | Research Project | 6 |
| | | **Semester Credit Hours** | **15** |

# List of Elective Courses

## Specialization 1: Development Studies

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | PADM-4111 | Community and Rural Development |
| 2. | PADM-4112 | Human Rights and Development |
| 3. | PADM-4113 | Sustainable Development |
| 4. | PADM-4114 | Development Planning and Administration |

## Specialization 2: E-Governance

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | PADM-4111 | E- Management and Public Administration |
| 2. | PADM-4112 | Service Innovation |
| 3. | PADM-4113 | Implementing e-Government Projects |
| 4. | PADM-4114 | ICTs Management |

## Specialization 3: Human Resource Management (HRM)

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4121 | Human Resource Development |
| 2. | MSCI-4122 | Workforce Diversity Management |
| 3. | MSCI-4123 | Workforce Planning and Management |
| 4. | MSCI-4124 | Employee Relations Management |
| 5. | MSCI-4125 | Performance Management |
| 6. | MSCI-4126 | Compensation Management |
| 7. | MSCI-4127 | Organizational Change and Development |
| 8. | MSCI-4128 | Labor Economics |
| 9. | MSCI-4129 | International Human Resource Management |

## Specialization 4: Finance

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4130 | Financial Markets and Institutions |
| 2. | MSCI-4131 | Investment Analysis |
| 3. | MSCI-4132 | Financial Statement Analysis |
| 4. | MSCI-4133 | Capital Budgeting |
| 5. | MSCI-4134 | Islamic Finance |
| 6. | MSCI-4135 | International Finance |
| 7. | MSCI-4136 | Commercial Banking |
| 8. | MSCI-4137 | Principle of Risk Management |
| 9. | MSCI-4139 | Ethics, Risk and Corporate Governanc |

## Specialization 5: Marketing

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-4140 | Advertising and Promotion |
| 2. | MSCI-4141 | Service Marketing |
| 3. | MSCI-4142 | Marketing Research Design and Analysis |
| 4. | MSCI-4143 | Selling and Sales Management |
| 5. | MSCI-4144 | Customer Loyalty Management |
| 6. | MSCI-4145 | Global Marketing |
| 7. | MSCI-4146 | New Product Development |
| 8. | MSCI-4147 | Internet Marketing |
| 9. | MSCI-4148 | Retail Marketing |

## Specialization 6: Public Health Administration

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | PADM-4119 | Essential of Public Health |
| 2. | PADM-4120 | Hospital Management |
| 3. | PADM-4121 | Disaster Management |
| 4. | PADM-4122 | Public Health Policy Analysis |

## Specialization 7: Public Policy

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | PADM-4123 | Theories of Public Policies |
| 2. | PADM-4124 | Theories and Actors of Policy Process |
| 3. | PADM-4125 | Media, Politics and Public Policy |
| 4. | PADM-4126 | Economics for Public Policy |

*"Never give up – Today is hard, tomorrow is worse, but the day after tomorrow will be sunshine"*

*- Jack MA*

# MBA (2 Years)

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-6101 | Strategic Management | 3 | Core |
| 2 | MSCI-6103 | Strategic Finance | 3 | Core |
| 3 | MSCI-6105 | Strategic Marketing | 3 | Core |
| 4 | MSCI-6107 | Strategic Human Resource Management | 3 | Core |
| **Semester Credit Hours** | | | **12** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-6102 | Research Methodology | 3 | Core |
| 2 | MSCI-6104 | Leadership and Organizational Behavior | 3 | Core |
| 3 | MSCI-XXXX | Elective 1 | 3 | Elective |
| 4 | MSCI-XXXX | Elective 2 | 3 | Elective |
| **Semester Credit Hours** | | | **12** | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-6301/ MSCI-6601 | Project /Thesis | 12 | Mandatory |
| **Semester Credit Hours** | | | **12** | |

# List of Elective Courses

## Specialization 1: Supply Chain Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-6110 | Logistics Management |
| 2. | MSCI-6111 | Procurement and Supply Chain Management |
| 3. | MSCI-6112 | Marketing Channels |
| 4. | MSCI-6113 | Enterprise Systems and Supply Chain Management |
| 5. | MSCI-6114 | Applied Time Series Analysis for Forecasting |
| 6. | MSCI-6115 | Strategic Outsourcing |
| 7. | MSCI-6136 | Supply Chain Management |

## Specialization 2: Finance

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-6116 | Corporate Finance |
| 2. | MSCI-6117 | International Financial Management |
| 3. | MSCI-6118 | Investment & Portfolio Management |
| 4. | MSCI-6119 | Banking and Credit Markets |
| 5. | MSCI-6120 | Topics in Capital Budgeting |
| 6. | MSCI-6121 | Risk Management and Insurance |
| 7. | MSCI-6122 | Alternative Investments and Funds Management |
| 8. | MSCI-6123 | Enterprise Risk Management |
| 9. | MSCI-6124 | Financial Reporting and Analysis |

## Specialization 3: Human Resource Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-6125 | Current Issues in Human Resource Management |
| 2. | MSCI-6126 | Strategies in Human Resource Management |
| 3. | MSCI-6127 | Introduction to Corporate Human Resource Management |
| 4. | MSCI-6128 | Labor Laws and Industrial Relations |
| 5. | MSCI-6129 | Work and Organizational Psychology |
| 6. | MSCI-6130 | Organization Staffing |
| 7. | MSCI-6131 | Leadership and Executive Development |
| 8. | MSCI-6132 | Performance Management and Motivation |
| 9. | MSCI-6133 | Compensation, Incentives and Governance |
| 10. | MSCI-6115 | Strategic Outsourcing |

## Specialization 4: Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-6134 | Cases in Small Business & Entrepreneurship |
| 2. | MSCI-6135 | Topics in Quality Management |
| 3. | MSCI-6136 | Supply Chain Management |
| 4. | MSCI-6137 | Technology Management |
| 5. | MSCI-6138 | Current Issues in Management |
| 6. | MSCI-6139 | Business Process Management |
| 7. | MSCI-6140 | Innovation Management |

## Specialization 5: Marketing

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-6141 | International Marketing |
| 2. | MSCI-6142 | Advanced Topics in Consumer Behavior |
| 3. | MSCI-6143 | Products Management |
| 4. | MSCI-6144 | Current Issues in Marketing |
| 5. | MSCI-6145 | Brand Management |
| 6. | MSCI-6146 | Pricing Strategy |
| 7. | MSCI-6147 | Service Marketing Strategy |

## Specialization 6: Project Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-6148 | Contract Management |
| 2. | MSCI-6149 | Project Management |
| 3. | MSCI-6150 | Project Manager Competency Development |
| 4. | MSCI-6151 | Project Planning & Management |



*Spring Fiesta (04-04-2019)*

*Students Participating in KIET Business Intellect Contest (31-03-2019)*

# MBA (2.5 Years)

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-5101 | Theory and Practices of Management | 3 | Core |
| 2 | MATH-5121 | Business Mathematics and Statistics | 3 | Core |
| 3 | ECON-5101 | Business Economics | 3 | Core |
| 4 | ENGL-5121 | Speech Communication | 3 | Core |
| 5 | MSCI-5109 | Financial Accounting | 3 | Core |
| Semester Credit Hours | | | 15 | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-5102 | Financial Management | 3 | Core |
| 2 | MSCI-5104 | Business Law | 3 | Core |
| 3 | MSCI-5106 | Human Resource Management | 3 | Core |
| 4 | MSCI-5108 | Marketing Management | 3 | Core |
| 5 | MSCI-5110 | Production and Operation Management | 3 | Core |
| Semester Credit Hours | | | 15 | |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-6101 | Strategic Management | 3 | Core |
| 2 | MSCI-6103 | Strategic Finance | 3 | Core |
| 3 | MSCI-6105 | Strategic Marketing | 3 | Core |
| 4 | MSCI-6107 | Strategic Human Resource Management | 3 | Core |
| Semester Credit Hours | | | 12 | |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-6102 | Research Methodology | 3 | Core |
| 2 | MSCI-6104 | Leadership and Organizational Behavior | 3 | Core |
| 3 | MSCI-XXXX | Elective 1 | 3 | Core |
| 4 | MSCI-XXXX | Elective 2 | 3 | Core |
| Semester Credit Hours | | | 12 | |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-6301/ MSCI- 6601 | Project /Thesis | 12 | Mandatory |
| Semester Credit Hours | | | 12 | |

# MS Management Sciences

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-6101 | Strategic Management | 3 | Core |
| 2 | MSCI-6103 | Strategic Finance | 3 | Core |
| 3 | MSCI-6105 | Strategic Marketing | 3 | Core |
| 4 | MSCI-6102 | Research Methodology | 3 | Core |
| Semester Credit Hours | | | 12 | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 1 | MSCI-XXXX | Elective 1 | 3 | Elective |
| 2 | MSCI-XXXX | Elective 2 | 3 | Elective |
| 3 | MSCI-XXXX | Elective 3 | 3 | Elective |
| 4 | MSCI-XXXX | Elective 4 | 3 | Elective |
| Semester Credit Hours | | | 12 | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|---|---|---|---|---|
| 3 | MSCI-6601 | Project /Thesis | 12 | Mandatory |
| Semester Credit Hours | | | 12 | |

# List of Elective Courses

## Specialization 1: Supply Chain Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 27. | MSCI-6110 | Logistics Management |
| 28. | MSCI-6111 | Procurement and Supply Chain Management |
| 29. | MSCI-6112 | Marketing Channels |
| 30. | MSCI-6113 | Enterprise Systems and Supply Chain Management |
| 7. | MSCI-6114 | Applied Time Series Analysis for Forecasting |
| 8. | MSCI-6115 | Strategic Outsourcing |
| 31. | MSCI-6136 | Supply Chain Management |

## Specialization 2: Finance

| S. No. | Core Courses | Course Title |
|---|---|---|
| 14. | MSCI-6116 | Corporate Finance |
| 15. | MSCI-6117 | International Financial Management |
| 16. | MSCI-6118 | Investment & Portfolio Management |
| 17. | MSCI-6119 | Banking and Credit Markets |
| 18. | MSCI-6120 | Topics in Capital Budgeting |
| 19. | MSCI-6121 | Risk Management and Insurance |
| 20. | MSCI-6122 | Alternative Investments and Funds Management |
| 21. | MSCI-6123 | Enterprise Risk Management |
| 22. | MSCI-6124 | Financial Reporting and Analysis |

## Specialization 3: Human Resource Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 15. | MSCI-6125 | Current Issues in Human Resource Management |
| 16. | MSCI-6126 | Strategies in Human Resource Management |
| 17. | MSCI-6127 | Introduction to Corporate Human Resource Management |
| 18. | MSCI-6128 | |
| 19. | MSCI-6129 | Labor Laws and Industrial Relations |
| 20. | MSCI-6130 | Work and Organizational Psychology |
| 21. | MSCI-6131 | Organization Staffing |
| 22. | MSCI-6132 | Leadership and Executive Development |
| 23. | MSCI-6133 | Performance Management and Motivation |
| 24. | MSCI-6115 | Compensation, Incentives and Governance |
| 25. | MSCI-6107 | Strategic Outsourcing |

## Specialization 4: Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 8. | MSCI-6134 | Cases in Small Business & Entrepreneurship |
| 9. | MSCI-6135 | Topics in Quality Management |
| 10. | MSCI-6136 | Supply Chain Management |
| 11. | MSCI-6137 | Technology Management |
| 12. | MSCI-6138 | Current Issues in Management |
| 13. | MSCI-6139 | Business Process Management |
| 14. | MSCI-6140 | Innovation Management |

## Specialization 5: Marketing

| S. No. | Core Courses | Course Title |
|---|---|---|
| 8. | MSCI-6141 | International Marketing |
| 9. | MSCI-6142 | Advanced Topics in Consumer Behavior |
| 10. | MSCI-6143 | Products Management |
| 11. | MSCI-6144 | Current Issues in Marketing |
| 12. | MSCI-6145 | Brand Management |
| 13. | MSCI-6146 | Pricing Strategy |
| 14. | MSCI-6147 | Service Marketing Strategy |

## Specialization 6: Project Management

| S. No. | Core Courses | Course Title |
|---|---|---|
| 1. | MSCI-6148 | Contract Management |
| 2. | MSCI-6149 | Project Management |
| 3. | MSCI-6150 | Project Manager Competency Development |
| 4. | MSCI-6151 | Project Planning & Management |

*"If you want something new, you have to stop doing something old"*

-Peter Drucker

# MS Engineering Management

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|--------|-------------|--------------|--------------|-----------------|
| 1 | ENMG-6101 | Management of Technical Organization | 3 | Core |
| 2 | MSCI-6109 | Leadership & Motivation | 3 | Core |
| 3 | MSCI-6108 | Organization Behavior Dynamics | 3 | Core |
| 4 | MSCI-6102 | Research Methodology | 3 | Core |
| **Semester Credit Hours** | | | **12** | |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|--------|-------------|--------------|--------------|-----------------|
| 1 | ENMG-XXXX | Elective 1 | 3 | Elective |
| 2 | ENMG XXXX | Elective 2 | 3 | Elective |
| 3 | ENMG-XXXX | Elective 3 | 3 | Elective |
| 4 | ENMG-XXXX | Elective 4 | 3 | Elective |
| **Semester Credit Hours** | | | **12** | |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours | Course Category |
|--------|-------------|--------------|--------------|-----------------|
| 1 | ENMG-6601 / ENMG-6301 | Project /Thesis | 12 | Mandatory |
| **Semester Credit Hours** | | | **12** | |

# List of Elective Courses

## Specialization 1: Engineering Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 16. | ENMG-6110 | Engineering Economics |
| 17. | ENMGI-6111 | Productivity Engineering and Management |
| 18. | ENMG-6112 | Entrepreneurship for Technical managers |
| 19. | ENMG-6113 | Procurement and Contract Management |
| 20. | ENMG-6114 | Problem Solving and Decision Making |

## Specialization 2: Quality Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 10. | MSCI-6158 | Statistical Process Control |
| 11. | MSCI-6159 | Total Quality Management |
| 12. | MSCI-6160 | Design of Experiment |
| 13. | MSCI-6161 | Seminars in Quality Management |

## Specialization 3: Construction Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 11. | ENMG-6115 | Construction Management |
| 12. | ENMG-6116 | Construction Technology |
| 13. | MSCI-6117 | Emerging Technologies in Construction |
| 14. | ENMG-6113 | Procurement and Contract Management |

## Specialization 4: Information Management Knowledge Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 1. | ENMG-6118 | Data Warehousing |
| 2. | ENMG-6119 | Knowledge Management |
| 3. | ENMG-6120 | Business Intelligence |
| 4. | ENMG-6121 | Data Mining and Big Data |

## Specialization 5: Telecom Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 3. | ENMG-6122 | Telecom Laws & Regulations |
| 4. | ENMG-6123 | Telecom Business Management |
| 5. | ENMG-6124 | Emerging Technologies in Telecom Sector |
| 6. | ENMG-6125 | Program Management in Telecom Organizations |

## Specialization 6: Manufacturing Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 3. | ENMG-6126 | Manufacturing Systems |
| 4. | ENMG-6127 | Manufacturing Strategies |
| 5. | ENMG-6128 | Emerging Technologies in Manufacturing |
| 6. | ENMG-6129 | Concurrent Engineering Management |

## Specialization 7: Supply Chain Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 21. | MSCI-6110 | Logistics Management |
| 22. | MSCI-6111 | Procurement and Supply Chain Management |
| 23. | MSCI-6112 | Marketing Channels |
| 24. | MSCI-6113 | Enterprise Systems and Supply Chain Management |
| 25. | MSCI-6114 | Applied Time Series Analysis for Forecasting |
| 26. | MSCI-6115 | Strategic Outsourcing |

## Specialization 8: Project Management

| S. No. | Core Courses | Course Title |
|--------|--------------|--------------|
| 1. | MSCI-6148 | Contract Management |
| 2. | MSCI-6149 | Project Management |
| 3. | MSCI-6150 | Project Manager Competency Development |
| 4. | MSCI-6151 | Project Planning & Management |

*"No man will make a great leader who wants to do it all himself, or to get all the credit for doing it"*

*-Andrew Carnegie*

*MS/MBA Get Together (28-11-2018)*



*PAF Base Karachi (31-03-2019)*



*Spring Fiesta (04-04-2019)*

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## Department of
# Humanities and Social Sciences

## Introduction and Overview

The department of Humanities and Social Sciences is a vibrant department comprising of professionally skilled, highly qualified PhD and MPhil and energetically motivated faculty in English (Linguistics and Literature), History, Pakistan Studies, Islamic Studies and Law. We also offer a variety of need-based courses to provide the most effective and up-to-date skills to the undergraduate and graduate students of other departments of the university including Engineering, Information Technology and Basic Sciences. The department ensures reinforcement of classroom teaching through modern teaching techniques and state of the art technology available in the university.

The primary goal of the department is personal, academic and professional grooming of the students inspired by the values of humanism – intended as a guiding principle combined with innovation through cultural, social, political and economic processes. Personal education is entrusted to the effective functioning of structures and services, within a perspective of exemplarity; academic and professional education on the other hand, is based on the effective organization of the courses, and in the competency of the teaching faculty who are continuously engaged in research based activities for their own development. The department also takes initiatives in organizing research oriented seminars, talks, trainings and workshops for the professional and skill-based development of its faculty as well as students.

## Vision & Mission

- The establishment of the Department as the premier social sciences program at the BS, MS, MPhil and PhD levels in Pakistan, at least in the public sector.
- The Vision and Mission of Department of Humanities and Social Sciences "to impart, create and disseminate knowledge" is best encapsulated in the oldest of disciplines: Literature, History and Religious Studies.

*"Protect yourself. . . from your own thoughts"*

*- Rumi*

*"Education breeds confidence.*
*Confidence breeds hope.*
*Hope breeds Peace"*

*-Confucius*

## Programs being offered

| |
|---|
| **BS Pakistan Studies** |
| **BS History** |
| **BS Heritage Studies (Archaeology)** |
| **BS English** |
| **BS Islamic Studies with IT** |
| **BS Physical Education** |
| **B.Ed (Hons) 4 Years Elementary *** |
| **B.Ed 1.5 Year Secondary** |
| **LLB (5 Years)** |
| **M.Phil. English Linguistics** |
| **MS Pakistan Studies *** |
| **MS History *** |
| **MS Islamic Studies *** |
| **BS Urdu** |
| **MS Urdu *** |
| **BS Media & Communication** |
| **BS International Relations** |
| **BS Political Science** |
| **BS Fine Arts** |

## Key Features / Facilities

- Highly Qualified and Experienced Faculty
- Facility of library stocked with useful books on English literature & linguistics, history, Pakistan movement, research methodology, philosophy, anthropology, culture, heritage, basic health awareness, ICT, mathematics and various research journals.
- Workshops, Seminars, Conferences, Extension lectures, Students' discussions & debates, field trips and study tours.

*BoS (Department of Humanities & Social Sciences )*

# Scheme of Study

## BS Pakistan Studies

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | MATH-1111 | Mathematics-I | 3 |
| 3 | SSCI-1111 | Introduction of Sociology | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 |
| 5 | COSC-1105 | Introduction to ICT | 2 |
| 6 | COSC-1205 | Introduction to ICT-Lab | 1 |
| 7 | PAKS-1113 | Pakistan Studies (Compulsory) | 2 |
| **Total** | | | **16** |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ISLS-1112 | Islamic Studies (Compulsory) | 2 |
| 3 | PHED-1110 | Trauma and Rehabilitation | 3 |
| 4 | MATH-1112 | Mathematics-II | 3 |
| 5 | ENSC-1101 | Introduction to Environmental Science | 3 |
| 6 | PAKS-1122 | International Relations | 3 |
| **Total** | | | **17** |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 2 | ISIS-4107 | History of World Religions | 3 |
| 3 | PAKS-2119 | Muslim Struggle for Pakistan (1857-1947) | 3 |
| 4 | PAKS-2120 | Geography of Pakistan | 3 |
| 5 | PAKS-2121 | Economic Development of Pakistan | 3 |
| **Total** | | | **15** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-2122 | Political History of Pakistan | 3 |
| 2 | MSCI-2101 | Human Resource Management | 2 |
| 3 | PAKS-2124 | Geo Politics of Pakistan | 3 |
| 4 | PAKS-2125 | Pakistan's Foreign Policy | 3 |
| 5 | PAKS-2126 | Mass Media and Communication in Pakistan | 3 |
| 6 | PAKS-3131 | Muslim Rule in the Sub-Continent (712-1526) | 3 |
| **Total** | | | **17** |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-3127 | Pakistani Society and Culture | 3 |
| 2 | PAKS-3128 | Human Rights in Pakistan | 3 |
| 3 | PAKS-3129 | Social Change and Development in Pakistan | 3 |
| 4 | PAKS-3130 | Ancient Civilizations: Mehargarh, Indus Valley and Gandhara Civilizations | 3 |
| 5 | PAKS-3132 | Muslim Rule in the Subcontinent (1526-1857) | 3 |
| **Total** | | | **15** |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-3133 | History of the Region/Bahawalpur | 3 |
| 2 | PAKS-3134 | The Rise and Fall of British Raj in Subcontinent | 3 |
| 3 | PAKS-3135 | Muslim Revivalist Movements in the Subcontinent | 3 |
| 4 | PAKS-3136 | Constitutional and Political Developments in Pakistan (1947-1973) | 3 |
| 5 | SSCI-3120 | Constitutional and Legal System of Pakistan | 3 |
| 6 | PAKS-3137 | Pak-China Relation | 3 |
| **Total** | | | **18** |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-4138 | Cultural Heritage in Pakistan | 3 |
| 2 | PAKS-4147 | Research Methodology | 3 |
| 3 | PAKS-4141 | Environmental Problems of Pakistan | 3 |
| 4 | PAKS-4142 | Political Parties and Pressure Groups in Pakistan. | 3 |
| 5 | PAKS-4143 | Constitutional and Political Developments in Pakistan (1973- to-date) | 3 |
| **Total** | | | **15** |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-4145 | Pakistan and SAARC Countries. | 3 |
| 2 | PAKS-4146 | Pakistan's Relations with Muslim World. | 3 |
| 3 | PAKS-4439 | Social Issues in Pakistan (Child labor, forced labor, illiteracy, corruption, drug addiction,Wani (swara), Karo-kari and Honor-Killing). | 3 |
| 4 | PAKS-4144 | Women Empowerment in Pakistan | 3 |
| 5 | PAKS-4348 | Research Report/Viva Voce | 6 |
| **Total** | | | **18** |

| Total Number of Credit Hours | 131 |
|---|---|

# BS History

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | MATH-1111 | Mathematics-1 | 3 |
| 3 | SSCI-1111 | Introduction of Sociology | 3 |
| 4 | PAKS-1113 | Pakistan Studies (Compulsory) | 2 |
| 5 | HLTH-1113 | Basic Health Awareness | 2 |
| 6 | COSC-1105 | Introduction to ICT | 2 |
| 7 | COSC-1205 | Introduction to ICT-Lab | 1 |
| Total | | | 16 |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ISLS-1112 | Islamic Studies (Compulsory) | 2 |
| 3 | PHED-1110 | Trauma and Rehabilitation | 3 |
| 4 | MATH-1112 | Mathematics-II | 3 |
| 5 | ENSC-1101 | Introduction to Environmental Science | 3 |
| 6 | PAKS-1122 | International Relations | 3 |
| Total | | | 17 |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and presentation Skills | 3 |
| 2 | HIST-2121 | Introduction to History | 3 |
| 3 | HIST-2122 | History of Ancient Civilizations | 3 |
| 4 | ISST - 4107 | History of Islamic Art & Architecture | 3 |
| 5 | HIST-2113 | Islamic History (517-661) (Prophet Muhammad S.A.W& Pious Caliphate) | 3 |
| Total | | | 15 |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | HIST-2114 | Life & Teachings of Prophet Muhammad (S.A.W) (571-632) | 3 |
| 2 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 |
| 3 | HIST-2119 | History of Punjab | 3 |
| 4 | MSCI-2101 | Introduction to Humane Resource Management | 3 |
| 5 | HIST-2115 | History of Ancient India | 3 |
| 6 | HIST-2116 | History of Umayyads | 3 |
| Total | | | 17 |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | HIST-3141 | Muslim Rule in South Asia(711-1526AD) | 3 |
| 2 | HIST-3142 | History of Sufism | 3 |
| 3 | HIST-3143 | Muslim Political Thoughts in South Asia | 3 |
| 4 | HIST-3144 | Muslim Rule in South Asia (1526-1857AD) | 3 |
| 5 | HIST-3145 | History of Ancient Religions of South Asia | 3 |
| 6 | HIST-3152 | Introduction to World Religions | 3 |
| Total | | | 18 |

## Semester6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | HIST-3146 | History of the Region/Bahawalpur | 3 |
| 2 | HIST-3147 | Historiography | 3 |
| 3 | HIST-3148 | History of Europe (1789--1919 AD) | 3 |
| 4 | HIST-3149 | History of Pakistan (1947-2008) | 3 |
| 5 | HIST-3150 | Cultural Heritage of Pakistan | 3 |
| 6 | HIST-3151 | History of Muslim Social and Political Thought | 3 |
| Total | | | 18 |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | HIST-4111 | History of Muslim Rule in Spain (755-1492) | 3 |
| 2 | HIST-4112 | | 3 |
| 3 | HIST-4113 | History of Ottomans | 3 |
| 4 | HIST-4115 | History of Modern Muslim World | 3 |
| 5 | HIST-4116 | History of Abbasids | 3 |
| Total | | | 15 |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-4147 | Research Methodology | 3 |
| 2 | HIST-4118 | History of Freedom Movement (1857-1947 AD) | 3 |
| 3 | HIST-4120 | History of Revivalist Movement in South Asia (18th -20th Century) | 3 |
| 4 | HIST-4321 | Research Report/viva voce | 6 |
| Total | | | 15 |

| Total Number of Credit Hours | 131 |
|---|---|

# BS Heritage Studies (Archaeology)

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | PAKS-1113 | Pakistan Studies (Compulsory) | 2 |
| 3 | MATH-1111 | Mathematics-I | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 3 |
| 5 | COSC-1105 | Introduction to ICT | 2+1 |
| 6 | COSC-1205 | Introduction to ICT-Lab Introduction to Sociology | 3 |
| Total | | | 17 |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ISLS-1112 | Islamic Studies (Compulsory) | 2 |
| 3 | MATH-1112 | Mathematics-II | 3 |
| 4 | PHED-1110 | Trauma and Rehabilitation | 3 |
| 5 | PAKS-1122 | International Relations | 3 |
| 6 | ENSC-1101 | Introduction to Environmental Science | 3 |
| Total | | | 16 |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and presentation Skills | 3 |
| 2 | ARCH-2101 | Introduction to Archaeology | 3 |
| 3 | ARCH-2102 | Introduction to Anthropology | 3 |
| 4 | ARCH-2103 | Ancient History of South Asia | 3 |
| 5 | ARCH-2104 | Archaeological Heritage of Pakistan. | 3 |
| 6 | ENGL-4127 | Language , Culture & Identity | 3 |
| **Total** | | | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARCH-2105 | Fundamentals of Geography | 3 |
| 2 | ARCH-2106 | Introduction to Comparative Religion | 3 |
| 3 | ARCH-2107 | Stone Age Cultures of Pakistan | 3 |
| 4 | ARCH-2207 | Stone Age Cultures of Pakistan (Field Work) | 1 |
| 5 | ARCH-2108 | Bronze Age Cultures of Pakistan | 3 |
| 6 | ARCH-2208 | Bronze Age Cultures of Pakistan (Field Work) | 1 |
| 7 | ARCH-2109 | Museums Studies | 3 |
| **Total** | | | **17** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | HIST-3145 | History of Ancient Religions of South Asia | 3 |
| 2 | ARCH-3101 | Field Archaeology | 3 |
| 3 | ARCH-3201 | Field Archaeology (Practical) | 1 |
| 4 | PAKS-3130 | Ancient Civilizations: Mehargarh, Indus Valley and Gandhara Civilizations | 3 |
| 5 | ARCH-3102 | Indus Civilization | 3 |
| 6 | ARCH-3103 | Muslim History of South Asia | 3 |
| **Total** | | | **16** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARCH-3104 | Cultural Tourism in Pakistan | 3 |
| 2 | ARCH-3105 | Muslim Architecture of South Asia | 3 |
| 3 | ARCH-3106 | Cultural Anthropology | 3 |
| 4 | ARCH-3107 | Provincial Cultural Heritage | 3 |
| 5 | SSCI-3120 | Constitution and Legal System of Pakistan | 2 |
| 6 | SSCI-2151 | Introduction to Social Work/Univ.Optional | 3 |
| **Total** | | | **17** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARCH-4101 | Muslim Art: Calligraphy, Painting, Minor Arts and Crafts | 3 |
| 2 | ARCH-4147 | Research Methodology | 3 |
| 3 | ARCH-4102 | Ancient Art and Architecture of South Asia (within Major) | 3 |
| 4 | ARCH-4103 | Numismatics of Pakistan and India. | 3 |
| 5 | ARCH-4104 | Paleography and Epigraphy of South Asia | 3 |
| **Total** | | | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARCH-4105 | Gandhara Civilization (within Major) | 3 |
| 2 | ARCH-4106 | Archaeological Conservation (within Major) | 3 |
| 3 | ARCH-4407 | Internship with report writing and presentation in a Seminar. | 6 |
| 4 | ARCH-4308 | Research Report/ Viva Voice | 6 |
| **Total** | | | **18** |

# MS Pakistan Studies

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-5101 | Research Methodology | 3 |
| 2 | PAKS-5102 | Philosophy of Social Sciences | 3 |
| 3 | PAKS-5103 | Political and Constitutional History of Pakistan | 3 |
| 4 | PAKS-XXXX | Elective Course-I | 3 |
| **Total** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-XXXX | Elective Course-II | 3 |
| 2 | PAKS-XXXX | Elective Course-III | 3 |
| 3 | PAKS-XXXX | Elective Course-IV | 3 |
| 4 | PAKS-XXXX | Elective Course-V | 3 |
| **Total** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-6601 | Thesis | 12 |
| **Semester Credit Hours** | | | **12** |

*"A Candle never Loses any of its Light while Lighting up another candle"*

*- Rumi*

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-6101 | Historiography in Pakistan | 3 |
| 2 | HIST-5101 | Philosophy of History | 3 |
| 3 | PAKS-6103 | Contemporary issues in Pakistan's Foreign Policy | 3 |
| 4 | PAKS-6104 | Pakistan's Economy: Challenges and Responses | 3 |
| 5 | PAKS-6105 | Social Change and Cultural Transformation | 3 |
| 6 | PAKS-6106 | Pakistani Society as Reflected in Pakistani Literature (1947-till date) | 3 |
| 7 | PAKS-6107 | Study of Archives | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 8 | PAKS-6108 | Study of Leadership | 3 |
| 9 | PAKS-6109 | Study of Colonialism | 3 |
| 10 | PAKS-6110 | History of Punjab (1849- 1947)/Regional History | 3 |
| 11 | PAKS-6111 | History of Muslim Social and Political Thought | 3 |
| 12 | PAKS-6112 | Era of European Domination in South Asia 1498 to 1857 | 3 |
| 13 | PAKS-6113 | Political and Constitutional History of Pakistan (1947 to 1969) | |
| 14 | PAKS-6114 | Political and Constitutional History of Pakistan (1969 to 1999) | 3 |
| 15 | PAKS-6115 | Era of European Domination in South Asia 1858 to 1947 | 3 |

# MS History

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-5101 | Research Methodology | 3 |
| 2 | PAKS-5102 | Philosophy of Social Sciences | 3 |
| 3 | HIST- 5101 | Philosophy of History | 3 |
| 4 | HIST-XXXX | Elective Course-I | 3 |
| Semester Credit Hours | | | 12 |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | HIST-XXXX | Elective Course-II | 3 |
| 2 | HIST-XXXX | Elective Course-III | 3 |
| 3 | HIST-XXXX | Elective Course-IV | 3 |
| 4 | HIST-XXXX | Elective Course-V | 3 |
| Semester Credit Hours | | | 12 |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | HIST-6601 | Thesis | 12 |
| Semester Credit Hours | | | 12 |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-6112 | Era of European Domination in South Asia 1498 to 1857 | 3 |
| 2 | PAKS-6115 | Era of European Domination in South Asia 1857 to 1947 | 3 |
| 3 | PAKS-6113 | Political & Constitutional Development in Pakistan (1947-1969) | 3 |
| 4 | PAKS-6114 | Political & Constitutional Development in Pakistan (1969-1999) | 3 |
| 5 | PAKS-6111 | History of Muslim Social and Political Thought | 3 |
| 6 | HIST-6101 | History of Sufism | 3 |
| 7 | HIST-6102 | History of Islamic Art and Architecture | 3 |
| 8 | HIST-6103 | History of Modern Muslim World 1919-1945 | 3 |
| 9 | HIST-6104 | History of Religious Thought in Islam | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 10 | HIST-6105 | History of Muslim Contribution to Science | 3 |
| 11 | HIST-6106 | History of Muslim Social and Political Thought | 3 |
| 12 | HIST-6107 | History of Ancient Civilizations | 3 |
| 13 | HIST-6108 | Muslim History (Life & Teachings of Prophet Muhammad (S.A.W) and Pious Caliphate (Khula-fa-i-Rashideen) | 3 |
| 14 | HIST-6109 | History of Umayyads and Abbasids | 3 |
| 15 | HIST-6110 | Muslim Rule in South Asia (711-1526 AD) | 3 |
| 16 | HIST-6111 | Muslim Rule in South Asia (1526-1707 AD) | 3 |
| 17 | HIST-6112 | Historiography | 3 |
| 18 | HIST-6113 | Cultural Heritage of Pakistan | 3 |

# BS Islamic Studies with IT

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENG-1118 | Functional English | 3+0 |
| 2 | PAKS-1113 | Pakistan Studies | 2+0 |
| 3 | MATH-1111 | Mathematics-I | 3+0 |
| 4 | SSCI-1111 | Introduction to Sociology | 3+0 |
| 5 | COSC-1105 | Introduction to ICT | 3+0 |
| | COSC-1205 | Introduction to ICT lab | |
| 6 | ISLS-1103 | Text of Qur'an-I | 3+0 |
| **Total** | | | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENG-1119 | Communication Skills | 3+0 |
| 2 | COSC-1101 | Programming Fundamentals | 2+1 |
| | COSC-1201 | Programming Fundamentals + lab | |
| 3 | ISLS-1101 | Arabic Language-I | 3+0 |
| 4 | PAKS-1122 | International Relations | 3+0 |
| 5 | ISLS-1113 | Text of Qur'an-II | 3+0 |
| 6 | MATH-1112 | Mathematics-II | 3+0 |
| **Total** | | | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3+0 |
| 2 | ISLS-2104 | Arabic Language-II | 3+0 |
| 3 | HLTH-1113 | Basic Health Awareness | 2+0 |
| 4 | MSCI-   XXXX | Basic Economics | 2+0 |
| 5 | ISLS-2103 | Seerah and Fiqh us Seerah of Prophet SAWS | 3+0 |
| 6 | ISLS-3114 | Uloom ul Qur'an | 3+0 |
| **Total** | | | **16** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ISLS-1112 | Islamic Studies / Ethics | 3+0 |
| 2 | ISLS-2107 | Arabic Language-III | 3+0 |
| 3 | ISLS-2108 | Adab ut Tafseer | 3+0 |
| 4 | ISLS-2109 | Fundamentals of Islamic Economics | 3+0 |
| 5 | ISLS-2110 | Semitic religions& Non-Semitic religions | 3+0 |
| 6 | ISLS-2111 | History of Caliphs, Umayyads and Ab- | 3+0 |
| **Total** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | COSC-2103 | Database Systems | 3+0 |
| 2 | COSC-2203 | Database Systems-Lab | 1+0 |
| 3 | ISLS-3111 | Arabic Language- IV | 3+0 |
| 4 | ISLS-3106 | Research Methodology | 3+0 |
| 5 | ISLS-3102 | History and Principles of fiqh | 3+0 |
| 6 | ISLS-3105 | Uloom ul Hadith-I | 3+0 |
| **Total** | | | **16** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | CPED-XXXX | Mendeley & SPSS Computer Program | 2+1 |
| 2 | ISLS-3108 | Uloom ul Hadith-II | 3+0 |
| 3 | SSCI-3120 | Constitution and legal system of Pakistan | 2+0 |
| 4 | HIST-3111 | Introduction to the History of Ottomans, Spain & Sub-Continent (Mughal Emperor) | 3+0 |
| 5 | ISLS-3112 | Islamic Philosophy and Kalam | 3+0 |
| 6 | ISLS-3113 | Islam & Orientalism | 3+0 |
| **Total** | | | **17** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ISLS-4114 | Muslim World (Problems & Solutions) | 3 |
| 2 | INFT-2102 | Web Systems & Technologies | 2 |
| 3 | INFT-2202 | Web Systems & Technologies – Lab | 1 |
| 4 | MSCI-XXXX | Islamic Banking & Finance | 3 |
| 5 | ISLS-4115 | Modern Political Social Thoughts & Islam / Dawah wa Irshaad | 3 |
| 6 | ISLS-4117 | Maktaba Shamila (Computer Islamic Library) | 1+2 |
| **Total** | | | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ICOSC-2121 | Management Information Systems | 3 |
| 2 | ISLS-4118 | Islam and Science | 3 |
| 3 | ISLS-4119 | Tassawwuf wa Ikhlaaq | 3 |
| 4 | ISLS-4120 | Modern Fiqh Problems & Solutions | 3 |
| 5 | ISLS-4301 | Project/Case Study | 6 |
| **Total** | | | **18** |

# MS Islamic Studies

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ISLS-5101 | Research Methodology | 3 |
| 2 | ISLS-5102 | Quranic Sciences | 3 |
| 3 | ISLS-5103 | Hadith Sciences | 3 |
| 4 | ISLS-XXXX | Elective Course-I | 3 |
| **Total** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ISLS-XXXX | Elective Course-II | 3 |
| 2 | ISLS-XXXX | Elective Course-III | 3 |
| 3 | ISLS-XXXX | Elective Course-IV | 3 |
| 4 | ISLS-XXXX | Elective Course-V | 3 |
| **Total** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ISLS-6601 | Thesis | 12 |
| **Semester Credit Hours** | | | **12** |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|--------|-------------|--------------|--------------|
| 1 | ISLS-6101 | Comparative Study of Religion | 3 | 10 | ISLS -6110 | Dawah-wa-Irshad | 3 |
| 2 | ISLS -6103 | Islam and Modern Thoughts | 3 | 11 | ISLS -6111 | Fiqh-wa-Ijtihad | 3 |
| 3 | ISLS -6104 | Islamic Jurisprudence and History | 3 | 12 | ISLS -6112 | Critical Study of English Text on Islam | 3 |
| 4 | ISLS -6105 | Sira and Tasawwuf | 3 | 13 | ISLS -6113 | Science of Tafseer and Methodology of Mufasireen | 3 |
| 5 | ISLS -6106 | Arabic Language and literature | 3 | 14 | ENGL-1118 | Functional English | 3 |
| 6 | ISLS -6107 | Human Rights in Islam | 3 | | | | |
| 7 | ISLS -6108 | Analytical Study of Orientalism | 3 | | | | |
| 8 | ISLS -6109 | Educational system of Islam | 3 | | | | |

# BS English

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENG-1118 | Functional English | 3 |
| 2 | PAKS-1113 | Mathematics-I | 3 |
| 3 | MATH-1111 | Introduction to Sociology | 3 |
| 4 | SSCI-1111 | Pakistan Studies (Compulsory) | 2 |
| 5 | COSC-1105 | Basic Health Awareness | 2 |
| | COSC-1205 | Introduction to ICT | 2+1 |
| 6 | ISLS-1103 | I Introduction to ICT-Lab | |
| **Total** | | | **16** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ISLS-1112 | Islamic Studies (Compulsory) | 2 |
| 2 | ENGL-1119 | Communication Skills | 3 |
| 3 | MATH-1112 | Mathematics-II | 3 |
| 4 | PAKS-1122 | International Relations | 3 |
| 5 | ENSC-1101 | Introduction to Environmental Sciences | 3 |
| 6 | PHED-1101 | Trauma and Rehabilitation | 3 |
| **Total** | | | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-2101 | Introduction to Linguistics | 3 |
| 2 | ENGL-2108 | Classical and Elizabethan Drama | 3 |
| 3 | ENGL-2104 | Classical Poetry (from Chaucer to Pope) | 3 |
| 4 | ENGL-2105 | Introduction to ELT | 3 |
| 5 | ENGL-2109 | History of English Literature-I | 3 |
| 6 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| **Total** | | | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-2102 | Phonetics and Phonology | 3 |
| 2 | ENGL-2107 | Romantic Poetry | 3 |
| 3 | ENGL-2106 | Morphology and Syntax | 3 |
| 4 | MSCI-2101 | Human Resource Management | 3 |
| 5 | ENGL-2103 | History of English Literature-II | 3 |
| 6 | ENGL-2111 | Literary Criticism | 3 |
| **Total** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-3112 | Post-Colonial Literature | 3 |
| 2 | ENGL-3113 | Modern Fiction | 3 |
| 3 | ENGL-3114 | Literary Theory | 3 |
| 4 | ENGL-3115 | Semantics and Pragmatics | 3 |
| 5 | ENGL-3116 | Sociolinguistics | 3 |
| 6 | SSCI-2151 | Introduction to Social Work/Univ. Optional | 3 |
| **Total** | | | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-3123 | American Literature | 3 |
| 2 | ENGL-3117 | Modern Poetry | 3 |
| 3 | ENGL-3120 | Introduction to Applied Linguistics | 3 |
| 4 | ENGL-3121 | Modern Drama | 3 |
| 5 | ENGL-3122 | Stylistics | 3 |
| 6 | SSCI-3120 | Constitution and legal system of Pakistan | 2 |
| **Total** | | | **17** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-4124 | Pakistani Literature in English | 3 |
| 2 | ENGL-4125 | Modern Prose | 3 |
| 3 | ENGL-4127 | Introduction to Critical Applied Linguistics | 3 |
| 4 | SSCI-2111 | Professional Ethics | 2 |
| 5 | ENGL-4134 | Research Methodology | 3 |
| 6 | ENGL-4130 | Discourse Analysis | 3 |
| **Total** | | | **17** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-4328 | Research Project | 3 |
| 2 | ENGL-4126 | Psycholinguistics | 3 |
| 3 | ENGL-4131 | Post -War Literature | 3 |
| 4 | ENGL 4132 | Short Story | 3 |
| 5 | ENGL-4133 | English for Specific Purposes | 3 |
| **Total** | | | **15** |

| Total Number of Credit Hours | 136 |
|---|---|

# M.Phil English Linguistics

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-5101 | General Linguistics | 03 |
| 2 | ENGL-5102 | Research Methodology | 03 |
| 3 | ENGL-XXXX | Elective Course – I | 03 |
| 4 | ENGL-XXXX | Elective Course – II | 03 |
| **Total** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-5103 | Applied Linguistics | 03 |
| 2 | ENGL-5104 | Discourse Analysis | 03 |
| 3 | ENGL-XXXX | Elective Course – I | 03 |
| 4 | ENGL-XXXX | Elective Course – II | 03 |
| **Total** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENG-6601 | Thesis (20,000 to 25,000 words) | 12 |
| **Semester Credit Hours** | | | **12** |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours | S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|---|---|---|---|
| 1 | ENGL-6105 | Stylistics | 03 | 10 | ENGL-6114 | Language Assessment | 03 |
| 2 | ENGL-6106 | Intercultural pragmatics | 03 | 11 | ENGL-6115 | Globalization and Spread of English | 03 |
| 3 | ENGL-6107 | Language and Gender | 03 | 12 | ENGL-6116 | English for Specific Purposes | 03 |
| 4 | ENGL-6108 | Semiotics | 03 | 13 | ENGL-6117 | Translation Studies | 03 |
| 5 | ENGL-6109 | Sociolinguistics | 03 | 14 | ENGL-6118 | Bilingualism | 03 |
| 6 | ENGL-6110 | Corpus Linguistics | 03 | 15 | ENGL-6119 | Psycholinguistics | 03 |
| 7 | ENGL-6111 | Syntax | 03 | | | | |
| 8 | ENGL-6112 | Computational Linguistics | 03 | | | | |
| 9 | ENGL-6113 | Theory of Language Description | 03 | | | | |

# B.Ed (Hons) 4 Years Elementary

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | COSC-1105 | Introduction to ICT | 2+1 |
| | COSC-1205 | Introduction to ICT-Lab | |
| 3 | BEDU-1101 | Child Development (Foundation) | 3 |
| 4 | MATH-1111 | Mathematics-I | 3 |
| 5 | BEDU-1103 | General Science | 3 |
| 6 | PAKS-1113 | Pakistan Studies (Compulsory) | 3 |
| **Total** | | | **18** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | BEDU-1105 | Classroom Management (Foundation) | 3 |
| | BEDU-1106 | Methods of Teaching Islamic Studies (Professional) | 3 |
| 3 | | | |
| 4 | ISLS-1112 | Islamic Studies/Ethics (Compulsory) | 3 |
| 5 | BEDU-1102 | Urdu / Regional Languages | 3 |
| 6 | BEDU-1104 | General Methods of Teaching (Foundation) | 3 |
| **Total** | | | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU -3107 | Teaching Literacy Skills (Professional) | 3 |
| 2 | BEDU-2108 | Art, Crafts and Calligraphy | 3 |
| 3 | BEDU-2109 | Teaching of Urdu/Regional Languages (Professional) | 3 |
| 4 | | | |
| 5 | BEDU- 2110 | Teaching of General Science (Professional) | 3 |
| | BEDU- 2111 | Instructional and Communication Technology (ICT) in Education (Professional) | 3 |
| 6 | | | |
| | BEDU- 2112 | Teaching Practice (Short Term) | 3 |
| **Total** | | | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU- 2113 | Classroom Assessment (Foundation) | 3 |
| 2 | BEDU -2114 | Teaching of English (Professional) | 3 |
| 3 | BEDU-2115 | Teaching of Mathematics (Professional) | 3 |
| 4 | BEDU-3116 | School, Community and Teacher (Foundation) | 3 |
| 5 | BEDU -2117 | Teaching of Social Studies (Professional) | 3 |
| 6 | BEDU -2118 | Teaching Practice | 3 |
| **Total** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL- 2111 | Technical Writing & Presentation Skills | 3 |
| 2 | BEDU-3119 | Foundations of Education (Foundation) | 3 |
| 3 | BEDU-XXXX | Content Course from Specialization- I/a | 3 |
| 4 | BEDU-XXXX | Content Course from Specialization - II/a | 3 |
| 5 | BEDU-3122 | Curriculum Development& Planning (Foundation) | 3 |
| 6 | BEDU-3123 | Educational Psychology (Foundation) | 3 |
| **Total** | | | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU-4124 | Contemporary Issues and Trends in Education (Professional) | 3 |
| 2 | BEDU-XXXX | Content Course from Specialization - I/b | 3 |
| 3 | BEDU-XXXX | Content Course from Specialization - II/b | 3 |
| 4 | BEDU-4127 | Comparative Education (Professional) | 3 |
| 5 | BEDU-3128 | Introduction to Guidance and Counseling (Professional) | 3 |
| **Total** | | | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU- 4129 | Content Course from Specialization - I/c | 3 |
| 2 | BEDU -4130 | Content Course from Specialization - II/c | 3 |
| 3 | BEDU -4131 | Pedagogy - 1 (Methods of Teachings related to specialization - Id) | 3 |
| 4 | BEDU-4132 | | 3 |
| 5 | BEDU-4133 | Pedagogy - II (Methods of teaching related to specialization - IId) | 3 |
| 6 | BEDU-4134 | Research Methods in Education (Professional) | 3 |
| **Total** | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU- 4135 | School Management (Professional) | 3 |
| 2 | BEDU- 4136 | Test Development and Evaluation | 3 |
| 3 | BEDU -4237 | Practicum (Long Term) (06 Credit Hours) * | 6 |
| 4 | BEDU -4338 | Research Project | 3 |
| **Total** | | | **15** |

| Total Credit Hours of Program | 138 |
|---|---|

# B.Ed 1.5 Year Secondary

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU-5141 | Philosophy of Education (Foundation) | 03 |
| 2 | BEDU-5123 | Educational Psychology | 03 |
| 3 | BEDU-5140 | General Methods of Teaching (Professional) | 03 |
| 4 | BEDU-5142 | Critical Thinking and Reflective Practices (Professional) | 03 |
| 5 | BEDU-XXXX | Area of Specialization – Course –I | 03 |
| 6 | BEDU-XXXX | Area of Specialization – Course –II | 03 |
| **Total** | | | **18** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU-5136 | Test Development and Evaluation | 03 |
| 2 | BEDU-3122 | Curriculum planning & Development (Foundation) | 03 |
| 3 | BEDU-5147 | Perspectives on Teacher Education (Professional) | 03 |
| 4 | BEDU-5133 | Research Methods in Education (Professional) | 03 |
| 5 | BEDU-XXXX | Area of Specialization –Course –III | 03 |
| 6 | BEDU-5160 | Micro-Teaching and Pedagogy (Professional) | 03 |
| **Total** | | | **18** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | BEDU-5148 | Inclusive Education (Professional) | 03 |
| 2 | BEDU-5161 | Teaching Practice (professional) | 03 |
| 3 | BEDU-5338 | Research Project (Professional) | 03 |
| 4 | BEDU-5162 | Educational Leadership and Management (Professional) | 03 |
| 5 | BEDU-5163 | Citizenship and Community Engagement | 03 |
| 6 | BEDU-XXXX | Area of Specialization –Course- IV | 03 |
| **Total** | | | **18** |

*"The art of knowing is knowing what to ignore"*

*- Rumi*

# LLB (5 Years)

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | COSC-1105 COSC-1205 | Introduction to ICT Introduction to ICT-Lab | 2+1 |
| 3 | LEDU-1147 | Introduction to Law | 3 |
| 4 | PAKS-1113 | Pakistan Studies | 2 |
| 5 | LEDU-1102 | Legal System of Pakistan | 3 |
| 6 | SSCI-1111 | Introduction to Sociology | 3 |
| **Total** | | | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | EENGL-1119 | Communication Skills | 3 |
| 2 | ENSC-1101 | Introduction to Environmental Science | 3 |
| 3 | ISLS-1112 | Islamic Studies/Ethics | 2 |
| 4 | PAKS-1122 | International Relations | 3 |
| 5 | LEDU-1103 | Law of Torts- I | 3 |
| 6 | PHED-1110 | Trauma and Rehabilitation | 3 |
| **Total** | | | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 2 | LEDU-2104 | Introduction to Logic and Reasoning | 3 |
| 3 | LEDU-2105 | Islamic Jurisprudence – I | 3 |
| 4 | LEDU-2106 | Law of Torts-II | 3 |
| 5 | LEDU-2107 | Law of Contract – I | 3 |
| 6 | LEDU-2108 | Constitutional Law-I (UK) | 3 |
| **Total** | | | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-2109 | Human Rights Law | 3 |
| 2 | LEDU-2110 | Constitutional Law-Ii (Us) | 3 |
| 3 | LEDU-2111 | Law of Contract-Ii | 3 |
| 4 | LEDU-2112 | Islamic Jurisprudence – Ii | 3 |
| 5 | LEDU-2113 | Introduction to Psychology | 3 |
| **Total** | | | **15** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-3114 | Jurisprudence – I | 3 |
| 2 | LEDU-3123 | Constitutional Law-Iii (Pakistan) | 3 |
| 3 | LEDU-3115 | Islamic Personal Law – I | 3 |
| 4 | LEDU-3116 | Criminal Law-I | 3 |
| 5 | LEDU-3117 | Law of Property | 3 |
| **Total** | | | **15** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-3118 | Jurisprudence – Ii | 3 |
| 2 | LEDU-3119 | Law of Business Organizations | 3 |
| 3 | LEDU-3120 | Islamic Personal Law – Ii | 3 |
| 4 | LEDU-3121 | Criminal Law – Ii | 3 |
| 5 | LEDU-3122 | Land Laws | 3 |
| **Total** | | | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-4123 | Public International Law – I | 3 |
| 2 | LEDU-4124 | Constitutional Development in Pakistan | 3 |
| 3 | LEDU-4125 | Civil Procedure-I | 3 |
| 4 | LEDU-4126 | Criminal Procedure – I | 3 |
| 5 | LEDU-4127 | Law of Evidence – I | 3 |
| 6 | LEDU-4128 | Legal Drafting – I | 3 |
| **Total** | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-4129 | Public International Law – Ii | 3 |
| 2 | LEDU-4130 | Equity and Specific Relief | 3 |
| 3 | LEDU-4131 | Civil Procedure – Ii | 3 |
| 4 | LEDU-4132 | Criminal Procedure – Ii | 3 |
| 5 | LEDU-4134 | Law of Evidence – Ii | 3 |
| 6 | LEDU-4135 | Legal Drafting – Ii | 3 |
| **Total** | | | **18** |

## Semester 9

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-5137 | Research Methods | 3 |
| 2 | HLTH-1113 | Basic Health Awareness | 2 |
| 3 | LEDU-5138 | Minor Acts | 3 |
| 4 | LEDU-5141 | Moot Cases and Professional Ethics | 3 |
| 5 | LEDU-XXXX | Elective-I* | 3 |
| 6 | LEDU-XXXX | Elective-II* | 3 |
| **Total** | | | **17** |

## Semester 10

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-5142 | Administrative LAW | 3 |
| 2 | LEDU-5143 | Interpretation of Statues and Legislative Drafting | 3 |
| 3 | LEDU-5344 | Research Project | 3 |
| 4 | LEDU-XXXX | Elective-Iii* | 3 |
| 5 | LEDU-XXXX | Elective-Iv* | 3 |
| 6 | | | |
| **Total** | | | **15** |

| Total Number of Credit Hours | 166 |
|---|---|

## List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | LEDU-5146 | Alternate Dispute Resolution | 3 |
| 2 | LEDU-5147 | Banking Laws | 3 |
| 3 | LEDU-5148 | Conflict of Laws | 3 |
| 4 | LEDU-5149 | Consumer Protection Laws | 3 |
| 5 | LEDU-5150 | Custom and Tariff Laws | 3 |
| 6 | LEDU-5151 | e-Commerce Law | 3 |
| 7 | LEDU-5152 | Election Laws | 3 |
| 8 | LEDU-5153 | Environmental Laws | 3 |
| 9 | LEDU-5154 | Gender and Law | 3 |
| 10 | LEDU-5155 | Insurance laws | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 11 | LEDU-5156 | Intellectual Property Laws | 3 |
| 12 | LEDU-5157 | International Economic Law | 3 |
| 13 | LEDU-5158 | International Humanitarian Law | 3 |
| 14 | LEDU-5159 | International Institutions | 3 |
| 15 | LEDU-5160 | International Trade Law | 3 |
| 16 | LEDU-5161 | Islamic Commercial Laws | 3 |
| 17 | LEDU-5162 | Labour Laws | 3 |
| 18 | LEDU-5163 | Law and Development | 3 |
| 19 | LEDU-5164 | Law and Energy | 3 |

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 20 | LEDU-5165 | Law and Society in Pakistan | 3 |
| 21 | LEDU-5166 | Local and Special Laws | 3 |
| 22 | LEDU-5167 | Media Laws | 3 |
| 23 | LEDU-5168 | Medical and Forensic Law | 3 |
| 24 | LEDU-5169 | Mergers and Acquisitions | 3 |
| 25 | LEDU-5170 | Islamic Legal Maxims | 3 |
| 26 | LEDU-5171 | Public Interest Litigation | 3 |
| 27 | LEDU-5172 | Securities Regulation | 3 |
| 28 | LEDU-5173 | Shipping and Admiralty Laws | 3 |
| 29 | LEDU-5174 | Taxation Laws | 3 |
| 30 | LEDU-5175 | Telecommunication Laws | 3 |

*"All progress takes place outside the comfort zone."*

*- Michael John Bobak*

## BS Physical Education

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | COSC-1105 | Introduction to ICT | 2+1 |
|   | COSC-1205 | Introduction to ICT-Lab |  |
| 3 | MATH-1111 | Mathematics-I | 3 |
| 4 | PAKS-1113 | Pakistan Studies (Compulsory) | 2 |
| 5 | HLTH-1113 | Basic Health Awareness | 2 |
| 6 | SSCI-1111 | Introduction to Sociology | 3 |
| **Total** | | | **16** |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ENSC-1101 | Introduction to Environmental Science | 3 |
| 3 | PHED-1110 | Trauma and Rehabilitation | 3 |
| 4 | ISLS-1112 | Islamic Studies/Ethics (Compulsory) | 2 |
| 5 | MATH-1112 | Mathematics-II | 3 |
| 6 | PHED-1217 | Games Practical (Table Tennis) | 2 |
| **Total** | | | **16** |

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PHED-2104 | Administration and Management in Sports (Foundation 4) (Theory) | 3 |
| 2 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 3 | PHED-2101 | Science of Track and Field | 3 |
| 4 | PHED-2150 | Research Methodology in Physical Education | 3 |
| 5 | PHED-2202 | Games Practical-III | 2 |
| 6 | PHED-2203 | Athletics Practical-III | 2 |
| **Total** | | | **16** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1102 | Phonetics and Phonology | 3 |
| 2 | MSCI-2101 | Human Resource Management | 3 |
| 3 | PAKS-3128 | Human Rights in Pakistan | 3 |
| 4 | PHED-2205 | Games Practical-IV(Badminton) | 2 |
| 5 | PHED-2206 | Athletics Practical-IV | 2 |
| 6 | SSCI-2151 | Introduction to Social Work/Univ. Optional | 3 |
| **Total** | | | **16** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHED-3107 | Science of Sports Training | 3 |
| 2 | PHED-3208 | Physical Education for Special Population (Elective-1) | 3 |
| 3 | PHED-3109 | Sports Nutrition | 3 |
| 4 | PHED-3210 | Science of Human Movement Education (General 5) | 3 |
| 5 | PHED-3211 | Games Practical (Hockey) | 2 |
| 6 | PHED-3212 | Scouting (Roaring)/Girl Guiding | 3 |
| **Total** | | | **17** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHED-3113 | Basics of Human Anatomy and Physiology | 3 |
| 2 | PHED-3114 | Test, Measurement and Evaluation in Phy. Edu | 3 |
| 3 | PHED-3116 | Sports Bio-Mechanics | 3 |
| 4 | PHED-3218 | Net Ball for Girls/Swimming for Boys | 2 |
| 5 | PAKS-1122 | International Relations | 3 |
| 6 | SSCI-3120 | Constitution and legal system of Pakistan | 2 |
| **Total** | | | **16** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHED-4123 | Development of Research Proposal | 3 |
| 2 | PHED-4219 | Sport Injuries, Treatment& Rehabilitation (Major 6) | 3 |
| 3 | PHED-4220 | Exercise Physiology (Major 7) (Theory + Practical) | 3 |
| 4 | PHED-4221 | Scientific Sports Coaching (Foundation 6) | 3 |
| 5 | PHED-4224 | Physical Efficiency Test (Theory + Practical) | 1+2 |
| 6 | PHED-4222 | Specialization in one game | 3 |
| **Total** | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | PHED-4125 | Sports Medicine (Major 8) | 3 |
| 2 | PHED-4126 | Curriculum Development in Physical Education(Major 9) | 3 |
| 3 | PHED-4228 | Gymnastic (Practical) | 2 |
| 4 | PHED-4229 | Recreation, Hiking &Hill Trekking | 3 |
| 5 | PHED-4327 | Research Theses/ Research Project | 4 |
| **Total** | | | **15** |

| Total Number of Credit Hours | 130 |
|------------------------------|-----|

# BS Urdu

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | PAKS-1113 | Pakistan Studies (Compulsory) | 2 |
| 3 | SSCI-1111 | Introduction to Sociology | 3 |
| 4 | MATH-1111 | Mathematics - I | 3 |
| 5 | URDU-1101 | اردو زبان ۔ تشکیل و ارتقاء | 3 |
| **Total** | | | **14** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-1119 | Communication Skill | 3 |
| 2 | ISLS-1112 | Islamic Studies (Compulsory) | 2 |
| 3 | MATH-1112 | Mathematics - II | 3 |
| 4 | URDU-1102 | علم التعلیم | 3 |
| 5 | URDU-1103 | شعری اصناف ۔ تعارف اور تفہیم ۔ حصہ اول | 3 |
| **Total** | | | **14** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | ENGL-2111 | Technical Writing and Presentation Skill | 3 |
| 2 | PHED-1110 | Trauma and Rehabilitation | 3 |
| 3 | SSCI-3120 | Constitutional and Legal System of Pakistan | 3 |
| 4 | URDU-2101 | برصغیر کی تاریخ ۔ مائل تاریخ سے ۱۹۴۷ء | 3 |
| 5 | URDU-2102 | شعری اصناف ۔ تعارف و تفہیم ۔ حصہ دوم | 3 |
| **Total** | | | **15** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | COSC-1105 | Introduction to ICT | 2 |
| 2 | COSC-1205 | Introduction to ICT (Lab) | 1 |
| 3 | URDU-2103 | پاکستانی زبانوں کا ادب ۔ پنجابی / سرائیکی | 3 |
| 4 | URDU-2104 | جغرافیہ عالم | 3 |
| 5 | URDU-2105 | نثری اصناف ۔ تعارف و تفہیم ۔ حصہ اول | 3 |
| 6 | URDU-2106 | تقریر و انشاء ۔ عملی تربیت | 3 |
| **Total** | | | **15** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | URDU-3101 | اردو داستان اور ناول فکری اور فنی مباحث | 3 |
| 2 | URDU-3102 | اردو غزل کا فکری و فنی مطالعہ | 3 |
| 3 | URDU-3103 | تاریخ ادب اردو اور ادبی تحریکیں | 3 |
| 4 | URDU-3104 | Economics | 3 |
| 5 | URDU-3105 | مسلم تہذیب و ثقافت / تاریخ اسلام | 3 |
| 6 | URDU-3106 | اردو داستان اور ناول فکری اور فنی مباحث | 3 |
| **Total** | | | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | URDU-3107 | اردو افسانہ اور ڈرامہ فکری اور فنی مطالعہ | 3 |
| 2 | URDU-3108 | اردو ناول کا ارتقاء ۔ بیسویں صدی تا حال | 3 |
| 3 | URDU-3109 | اردو نظم ۔ فکری و فنی مطالعہ | 3 |
| 4 | URDU-3110 | اردو نثر کے اسالیب | 3 |
| 5 | URDU-3111 | بشریات | 3 |
| 6 | Urdu-3112 | اردو افسانہ اور ڈرامہ فکری اور فنی مطالعہ | 3 |
| **Total** | | | **18** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | URDU-4101 | لسانیات | 3 |
| 2 | URDU-4102 | اصول تحقیق و تنقید | 3 |
| 3 | URDU-4303 | ریسرچ ورک | 3 |
| 4 | URDU-4104 | اردو فکشن میں تاریخی و تہذیبی شعور | 3 |
| 5 | URDU-4105 | غالب کے تخلیقی و فکری جہات | 3 |
| 6 | URDU-4106 | لسانیات | 3 |
| **Total** | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | URDU-4303 | ریسرچ ورک | 3 |
| 2 | URDU-4107 | نئے تنقیدی مباحث | 3 |
| 3 | URDU-4108 | اقبال کا خصوصی مطالعہ ۔ فکری وفنی مطالعہ اور تشریحِ متن | 3 |
| 4 | URDU-4109 | اردو ادب کا مابعد نوآبادیاتی مطالعہ | 3 |
| 5 | URDU-4110 | سر سید کے فکری جہات | 3 |
| **Total** | | | **15** |

# MS Urdu

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | URDU-5101 | اصول تحقیق | 3 |
| 2 | URDU-5102 | اصول تنقید | 3 |
| 3 | URDU-5103 | تحقیق وتدوین عملی و اطلاقی | 3 |
| 4 | URDU-XXXX | Elective Course-I | 3 |
| **Total** | | | **12** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | URDU-XXXX | Elective Course-II | 3 |
| 2 | URDU-XXXX | Elective Course-III | 3 |
| 3 | URDU-XXXX | Elective Course-IV | 3 |
| 4 | URDU-XXXX | Elective Course-V | 3 |
| **Total** | | | **12** |

## Semester 3 & 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | URDU-6601 | Thesis | 12 |
| **Semester Credit Hours** | | | **12** |
| **Total Number of Credit Hours** | | | **36** |

# List of Elective Courses

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | URDU-6101 | تدوین و روایات | 3 |
| 2 | URDU-1118 | اصول تنقید | 3 |
| 3 | URDU -6103 | تاریخ ادب اردو | 3 |
| 4 | URDU -6104 | فارسی زبان ادب و مطالعہ | 3 |
| 5 | URDU -6105 | ہندی زبان رسم الخط اور بنیادی معلومات | 3 |
| 6 | URDU -6106 | لسانیات | 3 |
| 7 | URDU -6107 | تحقیق وتدوین عملی و اطلاقی | 3 |
| 8 | URDU -6108 | جدید تنقید | 3 |
| 9 | URDU -6109 | ترجمہ اصول قواعد | 3 |
| 10 | URDU-6110 | اقبالیات میں تحقیق وتدوین کی روایات | 3 |
| 11 | URDU -6111 | اصول تنقید وتدوین | 3 |
| 12 | URDU -6112 | اصول تنقید | 3 |
| 13 | URDU -6113 | انگریزی زبان کا مطالعہ | 3 |
| 14 | URDU-6114 | کمپیوٹر لرننگ | 3 |

*"It's your road & yours alone. Others may walk it with you, but no one can walk it for you"*

*- Rumi*

# BS International Relations

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | MATH-1111 | Mathematics-1 | 3 |
| 3 | SSCI-1111 | Introduction of Sociology | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 |
| 5 | COSC-1105 | Introduction to ICT | 2 |
| 6 | COSC-1205 | Introduction to ICT (LAB) | 1 |
| 7 | PAKS-1113 | Pakistan Studies (Compulsory) | 2 |
| **Total** | | | **16** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ISLS-1112 | Islamic Studies (Compulsory) | 2 |
| 3 | PHED-1110 | Trauma and Rehabilitation | 3 |
| 4 | MATH-1112 | Mathematics-II (Calculus) | 3 |
| 5 | ENSC-1101 | Introduction to Environmental Science | 3 |
| 6 | PAKS-1122 | International Relations (General) | 3 |
| **Total** | | | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 2 | POSC-2101 | Introduction to Political Science - I | 3 |
| 3 | IRRE-2101 | Public Administration | 3 |
| 4 | IRRE-2102 | Globalization and International Relations | 3 |
| 5 | IRRE-2103 | International Relations: 1648-1945 | 3 |
| **Total** | | | **15** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | IRRE-2104 | Approaches and theories of international relations | 3 |
| 2 | IRRE-2105 | International Relations Since 1945 | 3 |
| 3 | IRRE-2106 | Introduction to International Security | 3 |
| 4 | IRRE-2107 | Evolution of State | 3 |
| 5 | IRRE-2108 | Foreign Policy Analysis | 3 |
| 6 | IRRE-2109 | Public International Law-I | 3 |
| **Total** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | IRRE-3101 | International Politics of Environment | 3 |
| 2 | IRRE-3102 | Public International Law-II | 3 |
| 3 | IRRE-3103 | Regional and International Organizations | 3 |
| 4 | IRRE-3104 | Geo-Political Structure of the World | 3 |
| 5 | IRRE-3105 | Foreign Policy of Pakistan | 3 |
| **Total** | | | **15** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-4147 | Research Methodology | 3 |
| 2 | IRRE-3107 | Comparative Politics | 3 |
| 3 | IRRE-3108 | International Political Economy | 3 |
| 4 | IRRE-3109 | Strategic Studies | 3 |
| 5 | SSCI-3120 | Constitutional and Legal System of Pakistan | 3 |
| 6 | IRRE-3110 | International Politics of Human Rights | 3 |
| **Total** | | | **18** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | IRRE-4101 | Diplomacy | 3 |
| 2 | IRRE-4102 | Conflict Management and Resolution | 3 |
| 3 | IRRE-4103 | Dynamics of Kashmir Conflict | 3 |
| 4 | IRRE-4104 | Comparative Foreign Policies of Us, Russia, and China | 3 |
| 5 | IRRE-4105 | Nuclear Studies | 3 |
| 6 | IRRE-4310 | Research Report / Viva Voce | 3 |
| **Total** | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | IRRE-4106 | Regional Connectivity and CPEC | 3 |
| 2 | IRRE-4107 | Government and Politics in Pakistan | 3 |
| 3 | IRRE-4108 | Arms Control, Disarmament and Nuclear Non-Proliferation | 3 |
| 4 | IRRE-4109 | Peace Studies | 3 |
| 5 | IRRE-4310 | Research Report/Viva Voce | 3 |
| **Total** | | | **15** |

| **Program Total Credit Hours** | **132** |
|---|---|

# BS Political Science

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | MATH-1111 | Mathematics-1 | 3 |
| 3 | SSCI-1111 | Introduction of Sociology | 3 |
| 4 | HLTH-1113 | Basic Health Awareness | 2 |
| 5 | COSC-1105 | Introduction to ICT | 2 |
| 6 | COSC-1205 | Introduction to ICT (LAB) | 1 |
| 7 | PAKS-1113 | Pakistan Studies (Compulsory) | 2 |
| **Total** | | | **16** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Communication Skills | 3 |
| 2 | ISLS-1112 | Islamic Studies (Compulsory) | 2 |
| 3 | PHED-1110 | Trauma and Rehabilitation | 3 |
| 4 | MATH-1112 | Mathematics-II (Calculus) | 3 |
| 5 | ENSC-1101 | Introduction to Environmental Science | 3 |
| 6 | PAKS-1122 | International Relations | 3 |
| **Total** | | | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing And Presentation Skills | 3 |
| 2 | POSC-2101 | Introduction to Political Science - I | 3 |
| 3 | POSC-2102 | Political Systems (Developed) UK and USA | 3 |
| 4 | POSC-2103 | Pakistan Movement | 3 |
| 5 | POSC-2104 | Comparative and Developmental Politics-I | 3 |
| 6 | POSC-2105 | Introduction to Philosophy | 3 |
| **Total** | | | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | POSC-2106 | Introduction to Political Science - II | 3 |
| 2 | POSC-2107 | Political Systems (Developing) China, India, Turkey | 3 |
| 3 | POSC-2108 | Western Political Philosophy-I | 3 |
| 4 | POSC-2109 | Muslim Political Philosophy-I | 3 |
| 5 | IRRE-2108 | Foreign Policy Analysis | 3 |
| **Total** | | | **15** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | POSC-3101 | Introduction to Political Science - III | 3 |
| 2 | POSC-3102 | Western Political Philosophy-II | 3 |
| 3 | POSC-3103 | Muslim Political Philosophy-II | 3 |
| 4 | IRRE-3105 | Foreign Policy of Pakistan | 3 |
| 5 | POSC-3104 | Comparative and Developmental Politics-II | 3 |
| **Total** | | | **15** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | PAKS-4147 | Research Methodology | 3 |
| 2 | POSC-3105 | Ideology and dynamics of Pakistan's politics | 3 |
| 3 | SSCI-3120 | Constitution and Legal System of Pakistan | 3 |
| 4 | POSC-3107 | Public Administration | 3 |
| 5 | POSC-3108 | Introduction to Local Government | 3 |
| **Total** | | | **15** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | IRRE-4101 | Diplomacy | 3 |
| 2 | IRRE-4102 | Conflict Management And Resolution | 3 |
| 3 | IRRE-4104 | Comparative Foreign Policies Of Us, Russia, And China | 4 |
| 4 | POSC-4101 | Political Parties and Elections in Pakistan | 3 |
| 5 | POSC-4102 | Democracy and Governance | 3 |
| **Total** | | | **16** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | POSC-4103 | Muslim World in Global Politics | 3 |
| 2 | POSC-4104 | Political Ideologies | 3 |
| 3 | POSC-4105 | Political Economy of Pakistan | 3 |
| 4 | IRRE-4109 | Peace Studies | 3 |
| 5 | POSC-4307 | Research Report/Viva Voce | 6 |
| **Total** | | | **18** |

| Program Total Credit Hours | 130 |
|---|---|

*"The highest result of education is tolerance"*

*-Helen Keller*

# BS Fine Arts

## Foundation Year

### Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-1201 | Drawing-I | 3(0+3) |
| 2 | ARTS-1202 | Drafting-I | 2(0+2) |
| 3 | ARTS-1203 | Basic Design-I | 2(0+2) |
| 4 | ARTS-1204 | 3D Study-I | 2(0+2) |
| 5 | ARTS-1105 | History of Art-I | 3(3+0) |
| 6 | ARTS-1206 | Material and Process-I | 2(0+2) |
| 7 | ENGL-1118 | Functional English | 3(3+0) |
| 8 | PAKS-1113 | Pakistan Studies | 2(2+0) |
| **Total** | | | **18** |

### Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-1207 | Drawing-II | 3(0+3) |
| 2 | ARTS-1208 | Drafting-II | 2(0+2) |
| 3 | ARTS-1209 | Basic Design-II | 2(0+2) |
| 4 | ARTS-1210 | 3D Study-II | 2(0+2) |
| 5 | ARTS-1111 | History of Art-II | 3(3+0) |
| 6 | ARTS-1212 | Material and Process-II | 2(0+2) |
| 7 | ENGL-2111 | Technical Writing and Presentation Skill | 3(3+0) |
| 8 | ISLS-1112 | Islamic Studies / Ethics) | 2(2+0) |
| **Total** | | | **17** |

## Painting Major

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -2201 | Drawing-III | 2(0+2) |
| 2 | ARTS -2202 | Major Studio Painting-I | 3(0+3) |
| 3 | ARTS -2203 | Fundamental of Graphic Art | 3(0+3) |
| 4 | ARTS -2104 | History of Art-III | 2(2+0) |
| 5 | COSC-1105 | Introduction to ICT | 1(1+0) |
| 6 | COSC-1205 | Introduction to ICT (Lab) | 2(0+2) |
| 7 | ENGL-1119 | Communication Skills | 3(3+0) |
| **Total** | | | **16** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS- 2211 | Drawing-IV | 2(0+2) |
| 2 | ARTS -2212 | Major Studio Painting-II | 3(0+3) |
| 3 | ARTS -2213 | Major Studio Painting-III | 3(0+3) |
| 4 | ARTS -2214 | Elective Studio Minor-I | 3(0+3) |
| 5 | ARTS -2115 | History of Art-IV | 2(2+0) |
| 6 | MATH-XXXX | Maths for Art & Design | 3(3+0) |
| **Total** | | | **16** |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -3201 | Drawing-V | 2(0+2) |
| 2 | ARTS -3202 | Major Studio Painting-IV | 3(0+3) |
| 3 | ARTS -3203 | Major Studio Painting-V | 3(0+3) |
| 4 | ARTS -3204 | Major Studio Painting-VI | 3(0+3) |
| 5 | ARTS -3205 | Elective Studio Minor-II | 3(0+3) |
| 6 | ARTS -3106 | History of Art-V | 2(2+0) |
| **Total** | | | **18** |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-3211 | Drawing-VI | 2(0+2) |
| 2 | ARTS -3212 | Major Studio Painting-VII | 3(0+3) |
| 3 | ARTS -3213 | Major Studio Painting-VIII | 3(0+3) |
| 4 | ARTS -3214 | Major Studio Painting-IX | 3(0+3) |
| 5 | ARTS-3215 | Elective Studio Minor-III | 3(0+3) |
| 6 | ARTS -3116 | History of Art-VI | 3(3+0) |
| **Total** | | | **18** |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-4201 | Drawing-VII | 2(0+2) |
| 2 | ARTS-4202 | Research and Thesis | 4(0+4) |
| 3 | ARTS-4203 | Major Studio Painting-X | 3(0+3) |
| 4 | ARTS-4204 | Major Studio Painting-XI | 3(0+3) |
| 5 | ARTS-4205 | Elective Studio Minor-IV | 3(0+3) |
| 6 | ARTS -4106 | Contemporary Art Seminar | 3(3+0) |
| **Total** | | | **18** |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-4211 | Painting Thesis-XII | 4(0+4) |
| 2 | ARTS-4212 | Painting Thesis-XIII | 4(0+4) |
| 3 | ARTS-4213 | Painting Thesis-XIV | 4(0+4) |
| 4 | ARTS-4114 | Universal Optional (Thesis Report)(optional minor course) | 3(3+0) |
| **Total** | | | **15** |

| Program Total Credit Hours | 136(40+96) |
|---|---|

## Graphic Art Major

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -2201 | Drawing-III | 2(0+2) |
| 2 | ARTS -2204 | Major Studio Graphic Art-I | 3(0+3) |
| 3 | ARTS -2203 | Fundamental of Graphic Art | 3(0+3) |
| 4 | ARTS -2104 | History of Art-II | 2(2+0) |
| 5 | COSC-1105 | Introduction to ICT | 1(1+0) |
| 6 | COSC-1205 | Introduction to ICT | 2(0+2) |
| 7 | ENGL-1119 | Communication Skills | 3(3+0) |
| **Total** | | | **16** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS- 2211 | Drawing-IV | 2(0+2) |
| 2 | ARTS -2222 | Major Studio Graphic Art-II | 3(0+3) |
| 3 | ARTS -2223 | Major Studio  Graphic Art-III | 3(0+3) |
| 4 | ARTS -2214 | Elective Studio Minor-I | 3(0+3) |
| 5 | ARTS -2115 | History of Art-IV | 2(2+0) |
| 6 | MATH-XXXX | Maths for Art & Design | 3(3+0) |
| **Total** | | | **16** |

### Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -3201 | Drawing-V | 2(0+2) |
| 2 | ARTS -3222 | Major Studio  Graphic Art –IV | 3(0+3) |
| 3 | ARTS -3223 | Major Studio  Graphic Art –V | 3(0+3) |
| 4 | ARTS -3224 | Major Studio  Graphic Art –VI | 3(0+3) |
| 5 | ARTS -3205 | Elective Studio Minor-II | 3(0+3) |
| 6 | ARTS -3106 | History of Art-V | 2(2+0) |
| 8 | ARTS -3107 | General Theory-I | 2(2+0) |
| **Total** | | | **18** |

### Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-3211 | Drawing-VI | 2(0+2) |
| 2 | ARTS -3222 | Major Studio  Graphic Art –VII | 3(0+3) |
| 3 | ARTS -3223 | Major Studio  Graphic Art –VIII | 3(0+3) |
| 4 | ARTS -3214 | Major Studio  Graphic Art –IX | 3(0+3) |
| 5 | ARTS-3215 | Elective Studio Minor-III | 3(0+3) |
| 6 | ARTS -3116 | History of Art-VI | 3(3+0) |
| **Total** | | | **17** |

### Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-4201 | Drawing-VII | 2(0+2) |
| 2 | ARTS -4202 | Research and Thesis | 4(0+4) |
| 3 | ARTS -4223 | Major Studio  Graphic Art –X | 3(0+3) |
| 4 | ARTS -4224 | Major Studio  Graphic Art –XI | 3(0+3) |
| 5 | ARTS -4205 | Elective Studio Minor-IV | 3(0+3) |
| 6 | ARTS -4106 | Contemporary Art Seminar | 3(3+0) |
| **Total** | | | **18** |

### Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-4221 | Graphic Art  Thesis-XII | 4(0+4) |
| 2 | ARTS-4222 | Graphic Art Thesis-XIII | 4(0+4) |
| 3 | ARTS-4223 | Graphic Art Thesis-XIV | 4(0+4) |
| 4 | ARTS-4114 | Universal Optional (Thesis Report) | 3(3+0) |
| **Total** | | | **15** |

| Program Total Credit Hours | 136(40+96) |
|---|---|

## Sculpture Major

### Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -2201 | Drawing-III | 2(0+2) |
| 2 | ARTS -2205 | Major Studio Sculpture-I | 3(0+3) |
| 3 | ARTS -2203 | Fundamental of Graphic Art | 3(0+3) |
| 4 | ARTS -2104 | History of Art-III | 2(2+0) |
| 5 | COSC-1105 | Introduction to ICT | 1(1+0) |
| 6 | COSC-1205 | Introduction to ICT (Lab) | 2(0+2) |
| 7 | ENGL-1119 | Communication Skills | 3(3+0) |
| **Total** | | | **16** |

### Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS- 2211 | Drawing-IV | 2(0+2) |
| 2 | ARTS -2232 | Major Studio Sculpture-II | 3(0+3) |
| 3 | ARTS -2233 | Major Studio   Sculpture –III | 3(0+3) |
| 4 | ARTS -2214 | Elective Studio Minor-I | 3(0+3) |
| 5 | ARTS -2115 | History of Art-IV | 2(2+0) |
| 6 | MATH-XXXX | Maths for Art & Design | 3(3+0) |
| **Total** | | | **16** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -3201 | Drawing-V | 2(0+2) |
| 2 | ARTS -3232 | Major Studio  Sculpture –IV | 3(0+3) |
| 3 | ARTS -3233 | Major Studio  Sculpture  -V | 3(0+3) |
| 4 | ARTS -3234 | Major Studio  Sculpture –VI | 3(0+3) |
| 5 | ARTS -3205 | Elective Studio Minor-II | 3(0+3) |
| 6 | ARTS -3106 | History of Art-V | 2(2+0) |
| 8 | ARTS -3107 | General Theory-I | 2(2+0) |
| **Total** | | | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-3211 | Drawing-VI | 2(0+2) |
| 2 | ARTS -3232 | Major Studio  Sculpture –VII | 3(0+3) |
| | ARTS -3233 | Major Studio  Sculpture –VIII | 3(0+3) |
| 3 | ARTS -3234 | Major Studio  Sculpture –IX | 3(0+3) |
| 4 | ARTS-3215 | Elective Studio Minor-III | 3(0+3) |
| 5 | ARTS -3116 | History of Art-VI | 3(3+0) |
| **Total** | | | **17** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-4201 | Drawing-VII | 2(0+2) |
| 2 | ARTS -4202 | Research and Thesis | 4(0+4) |
| 3 | ARTS -4233 | Major Studio  Sculpture –X | 3(0+3) |
| 4 | ARTS -4234 | Major Studio  Sculpture –XI | 3(0+3) |
| 5 | ARTS -4205 | Elective Studio Minor-IV | 3(0+3) |
| 6 | ARTS -4106 | Contemporary Art Seminar | 3(3+0) |
| **Total** | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-4231 | Sculpture Thesis-XII | 4(0+4) |
| 2 | ARTS-4232 | Sculpture Thesis-XIII | 4(0+4) |
| 3 | ARTS-4233 | Sculpture Thesis-XIV | 4(0+4) |
| 4 | ARTS-4114 | Universal Optional (Thesis Report) | 3(3+0) |
| **Total** | | | **15** |

| **Program Total Credit Hours** | **136(40+96)** |
|---|---|

# Miniature Major

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -2201 | Drawing-III | 2(0+2) |
| 2 | ARTS -2206 | Major Studio Miniature-I | 3(0+3) |
| 3 | ARTS -2203 | Major Studio  Graphic Art-II | 3(0+3) |
| 4 | ARTS -2104 | History of Art-III | 2(2+0) |
| 5 | COSC-1105 | Introduction to ICT | 1(1+0) |
| 6 | COSC-1205 | Introduction to ICT(Lab) | 2(0+2) |
| 7 | ENGL-1119 | Communication Skills | 3(3+0) |
| **Total** | | | **16** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS- 2211 | Drawing-IV | 2(0+2) |
| 2 | ARTS -2242 | Major Studio Miniature-II | 3(0+3) |
| 3 | ARTS -2243 | Major Studio Miniature  -III | 3(0+3) |
| 4 | ARTS -2214 | Elective Studio Minor-IV | 3(0+3) |
| 5 | ARTS -2115 | History of Art-IV | 2(2+0) |
| 6 | MATH-XXXX | Maths for Art & Design | 3(3+0) |
| **Total** | | | **16** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -3201 | Drawing-V | 2(0+2) |
| 2 | ARTS -3242 | Major Studio  Miniature –V | 3(0+3) |
| 3 | ARTS -3243 | Major Studio  Miniature –VI | 3(0+3) |
| 4 | ARTS -3244 | Major Studio  Miniature -VII | 3(0+3) |
| 5 | ARTS -3205 | Elective Studio Minor-II | 3(0+3) |
| 6 | ARTS -3106 | History of Art-V | 2(2+0) |
| 8 | ARTS -3107 | General Theory-I | 2(2+0) |
| **Total** | | | **18** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -3211 | Drawing-VI | 2(0+2) |
| 2 | ARTS -3242 | Major Studio  Miniature  -VIII | 3(0+3) |
| | ARTS -3243 | Major Studio  Miniature –IX | 3(0+3) |
| 3 | ARTS -3244 | Major Studio  Miniature –X | 3(0+3) |
| 4 | ARTS -3215 | Elective Studio Minor-III | 3(0+3) |
| 5 | ARTS -3116 | History of Art-VI | 3(3+0) |
| **Total** | | | **17** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS -4201 | Drawing-VII | 2(0+2) |
| 2 | ARTS -4202 | Research and Thesis | 4(0+4) |
| 3 | ARTS -4243 | Major Studio Miniature  -XI | 3(0+3) |
| 4 | ARTS -4244 | Major Studio Miniature  -XII | 3(0+3) |
| 5 | ARTS -4205 | Elective Studio Minor-IV | 3(0+3) |
| 6 | ARTS -4106 | Contemporary Art Seminar | 3(3+0) |
| **Total** | | | **18** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ARTS-4241 | Miniature  Thesis-XIII | 4(0+4) |
| 2 | ARTS-4242 | Miniature Thesis-XIV | 4(0+4) |
| 3 | ARTS-4243 | Miniature Thesis-XV | 4(0+4) |
| 4 | ARTS-4114 | Universal Optional (Thesis Report) | 3(3+0) |
| **Total** | | | **15** |

| **Program Total Credit Hours** | **136(40+96)** |
|---|---|

# BS Media and Communication

## Semester 1

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1118 | Functional English | 3 |
| 2 | PAKS-1113 | Pakistan Studies | 2 |
| 3 | MECO-1101 | Introduction to Mass Communication | 3 |
| 4 | COSC-1101 | Introduction to ICT | 2+1 |
|  | COSC-1201 | Introduction to ICT-lab |  |
| 5 | MATH-1111 | Mathematics-I | 3 |
| 6 | HLTH-1113 | Basic Health Awareness | 3 |
| **Total** | | | **17** |

## Semester 2

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-1119 | Comunication Skills | 3 |
| 2 | ISLS-1112 | Islamic Studies | 2 |
| 3 | MECO-1102 | Contemporary World Media | 3 |
| 4 | ENSC-1101 | Introduction to Environmental Science | 3 |
| 5 | URDU-XXXX | Functional Urdu | 3 |
| 6 | PAKS-1122 | International Relations | 3 |
| **Total** | | | **17** |

## Semester 3

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | ENGL-2111 | Technical Writing and Presentation Skills | 3 |
| 2 | MECO-2104 | Media Laws and Ethics | 3 |
| 3 | MECO-2105 | National & International Affairs | 3 |
| 4 | POSC-XXXX | Political Economics | 3 |
| 5 | SSCI-1111 | Introduction of Sociology | 3 |
| 6 | MATH-XXXX | Statistics | 3 |
| **Total** | | | **18** |

## Semester 4

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MECO-2218 | Introduction to Advertising and Public Relations | 2+1 |
| 2 | MECO-2106 | Mass Media in Pakistan | 3 |
| 3 | POSC-2101 | Introduction to Political Science-I | 3 |
| 4 | MSCI-2102 | Human Resource Management | 3 |
| 5 | BEDU-XXXX | Introduction to Education studies | 3 |
|  | ENGL-XXXX | Academic writing | 3 |
| **Total** | | | **18** |

## Semester 5

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MECO-3109 | News Reporting & Writing | 3 |
| 2 | MECO-3110 | Broadcast Journalism | 3 |
| 3 | MECO-3111 | Online Journalism | 3 |
| 4 | MECO-3212 | Introduction to Film and Cinema | 2+1 |
| 5 | MECO-3113 | Theories of Communication-I | 3 |
| **Total** | | | **15** |

## Semester 6

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MECO-3114 | Sub Editing & Page Designing (Theory & Practice) | 2+1 |
| 2 | MECO-3214 | |  |
| 3 | MECO-3116 | Research Methods –I | 4 |
| 4 | MECO-3117 | Theories of Communication – II | 3 |
| 5 | MECO-3218 | ICT for Mass Media and Communication | 2+1 |
| 6 | SSCI-3120 | Constitution and Legal System of Pakistan | 3 |
| **Total** | | | **16** |

## Semester 7

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MECO-4119 | Development Communication | 3 |
| 2 | IRRE-4109 | Peace Studies | 3 |
| 3 | MECO-XXXX | Course from Specialization-I | 2+1 |
| 4 | MECO-XXXX | Course from Specialization-II | 2+1 |
| 5 | MECO-3115 | Feature, Column & Editorial Writing (Theory & Practice) | 2+1 |
|  | MECO-3215 | |  |
| **Total** | | | **15** |

## Semester 8

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MECO-4122 | Media Management & Marketing | 3 |
| 2 | MECO-XXXX | Course from Specialization-III | 3 |
| 3 | MECO-XXXX | Course from Specialization-IV | 3 |
| 4 | MECO-4436 | Internship | 3 |
| 5 | MECO-4321 | Research Report/Media project | 3 |
| **Total** | | | **15** |

| Program Total Credit Hours | 131 |
|---|---|

# Elective Courses of Specialization

## Specialization Course-I (Print Media)

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MECO-4137 | Advance Reporting (Theory+ Practical) | 2+1 |
|  | MECO-4237 | |  |
| 2 | MECO-4138 | Newspaper Production (Theory+ Practical) | 2+1 |
|  | MECO-4238 | |  |
| 3 | MECO-4139 | Advance Sub Editing (Theory+ Practical) | 2+1 |
|  | MECO-4239 | |  |
| 4 | MECO-4140 | Magazine and Book Production (Theory+ Practical) | 2+1 |
|  | MECO-4240 | |  |

## Specialization Course-III(Advertising and Public Relations)

| S. No. | Course Code | Course Title | Credit Hours |
|---|---|---|---|
| 1 | MECO-4141 | Radio News Reporting and Production (Theory+ Practical) | 2+1 |
|  | MECO-4241 | |  |
| 2 | MECO-4142 | TV News Reporting and Production (Theory+ Practical) | 2+1 |
|  | MECO-4242 | |  |
| 3 | MECO-4143 | Radio Programme Production (Theory+ Practical) | 2+1 |
|  | MECO-4243 | |  |
| 4 | MECO-4144 | TV Programme Production (Theory+ Practical) | 2+1 |
|  | MECO-4244 | |  |

## Specialization Course-III(Advertising and Public Relations)

| S. No. | Course Code | Course Title | Credit Hours |
|--------|-------------|--------------|--------------|
| 1 | MECO-4145 MECO-4245 | Advertising-I (Theory+ Practical) | 2+1 |
| 2 | MECO-4146 MECO-4246 | Public Relations-I (Theory+ Practical) | 2+1 |
| 3 | MECO-4147 MECO-4247 | Advertising-II (Theory+ Practical) | 2+1 |
| 4 | MECO-4148 MECO-4248 | Public Relations-II (Theory+ Practical) | 2+1 |

*"A ruler should be slow to punish and swift to reward"*

*-Ovid*



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# Events & Happenings

## Section 4

# Events & Happenings

- Sports Gala-2019
- Spring Fiesta-2019
- Mushaira
- EXPO ( Educational and Industrial )
- Holi (For Minorities)
- Mock Exercises (Security)
- Open House and Project Exhibition
- FIT Challange
- Tree Plantation
- Blood Donation Camps
- Health & Safety Seminars
- Turkish Agriculture Delegation
- PEC Visits
- MOU signing ceremony with Bait-ul-Maal
- KRIS
- Institute of Electrical and Electronics Engineers (IEEE)
- Pink Ribbons Day
- Smog Walk
- Media Confrence with Print & Electronic Media
- World Food Day

Sports Gala 2019

Spring Fiesta 2019

**Mushaira**

**Holi** (For Minorities)

**Security Mock Exercises**

**Open House Exibitions**

CS-FIT Challenge

Tree Plantation

Blood Donation Camp

Health & Safety Seminar

**Turkish Agriculture Delegation**

PEC
Accreditation Visits
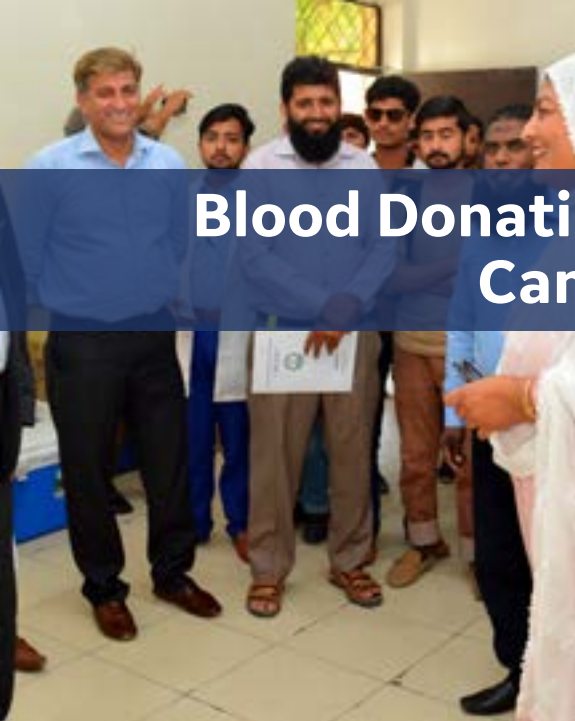
MOU Signing with Pakistan Bait-Ul-Maal

**KRIS**
(KFUEIT Research & Innovation Society)
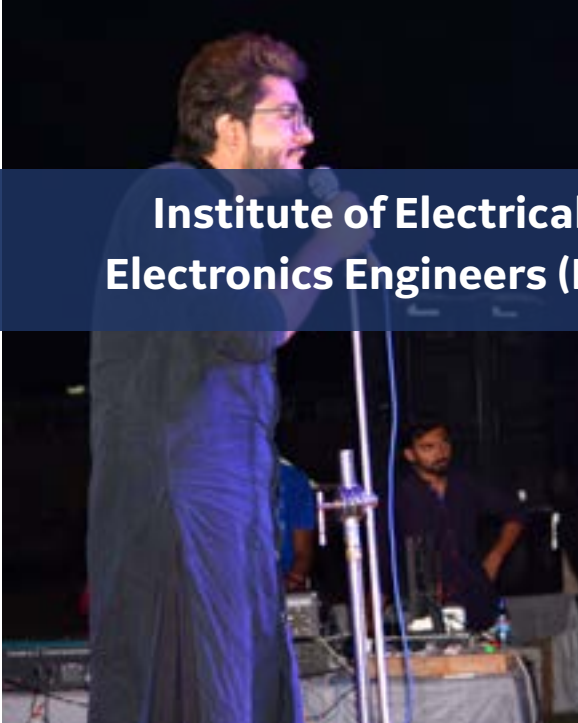
Institute of Electrical and Electronics Engineers (IEEE)

Media Confrence 2019

Smog Walk

Pink Ribbon Day

World Food Day

# Admissions, Scholarships and Testing Services

## Section

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# Admissions, Scholarships and Testing Services

## Admission Office

### Ali Goher

**Director Admissions**
Call: +92 (68) 5882433
Email: admissions@kfueit.edu.pk

The Admission Office, being first contact point for any student, assists in every possible way and provides complete relevant information about admissions in all programs. It guides student about making the right choice regarding particular academic program & career. Our Admission Counseling Team actively engages with the parents and the prospective students about different options and opportunities available for them.

**The major services provided by admission office of KFUEIT include:**
- Operate and maintain the admissions and enrolment modules of the Web Application
- Briefings about admission procedures, courses offered and documentation to prospective students and their parents through phone calls, emails and face to face meetings
- Counseling the prospective students about their future aims / targets
- Reviewing student applications for the eligibility and academic qualification
- Processing of Admission Applications and enrolment of new students
- Fee submission and on-boarding of students
- Prepare and present applicants report and analysis to University management
- Maintain regular communication with students, parents, colleagues and external agencies for coordinating admission activities and resolving problems
- Collaborate with the program coordinators to organize presentations, information sessions and recruitment related activities

## Department of Testing Services

### Muhammad Nasir

**Manager Testing Services**
Call: +92 (68) 5882472
Email: mts@kfueit.edu.pk

Department of Testing Services has been established to conduct tests for the purpose of recruitment, promotions, admissions and competency / skill assessment of applicants, students and employees of the University. The Testing Services Department through its conduct of appropriate test shall ensure merit and transparency in recruitment, admissions, promotions and teaching activities of the University. Properly developed and well-validated tests are a reliable and objective means of gathering education / job-related information on candidates / employees / students.

**Core Services of Testing Services Department are:**
- Admission Tests / Entry Tests / Migration Tests
- End of Degree Exam / Comprehensive
- Recruitment / Pre-Employment Test
- Employees Promotion Tests
- Test conduction on the request of other departments outside the University

# Scholarships and Financial Assistance Department

## Dr. Muhammad Hashim

**Director Scholarships and Financial Assistance**
Call: +92 (68) 5882419
Email: dsfa@kfueit.edu.pk

In order to facilitate the talented and needy student, the university offers substantial number of scholarships and financial assistants so that the future leaders do not discontinue their studies because of financial constraints. To ensure transparency and meritocracy, Scholarships and Financial Assistance Department along with a Committee, consisting of member from each faculty, administers all matters related to scholarships and financial assistance.

The major function of the Scholarships Department is to process the internal Need Based, Merit Scholarships and external scholarships like Fareed Scholarship, Pakistan Bait ul Mall, Ministry of Religious Affairs and IEP – SAC (Saudi Arabia) Scholarships.

## List of Scholarships currently running at KFUEIT

### Internal Programs:
- KFUEIT Merit Scholarships
- KFUEIT Need Based Scholarships

### External Programs:
- Prime Minister's Fee Reimbursement Scheme
- PEEF Scholarships
- PEEF Master's Scholarships
- Fareed Scholarships
- IEP-SAC (Saudi Arabia) Scholarships
- Karwan-e-Ilm Foundation
- Mora (Zakat) Scholarships
- Ihsan Trust Interest Free Student Loan Scheme
- Pakistan Bait-ul-Mal
- FFC Sona Wards Scholarships
- Fouji Foundation Scholarships
- National Bank of Pakistan Interest Free Student Loan Scheme
- WEVA Scholarships
- WISSEN-Zafar Shamim Scholarships

## Scholarships Committee

| Name | Designation | Status |
|------|-------------|--------|
| Dr. Muhammad Hashim | Director Scholarships | President |
| Dr. Muhammad Aslam | Assistant Professor | Member |
| Engr. Dr. Shanawar Hamid | Assistant Professor | Member |
| Dr. Muther Mansoor Qaisrani | Assistant Professor | Member |
| Ms. Fasiha Nargis | Assistant Registrar | Member |
| Mr. Athar Munir | Assistant Manager Finance | Member |
| Ms. Gul e Zainab Bukhari | Manager Scholarships | Member/Secretary |

## Total Number of Scholarships Awarded to KFUEIT Students since, its Establishment

| | |
|---|---|
| Total Applications Processed | **3,270** |
| Amount of Scholarships Awarded | **PKR 81,873,914** |

Following External Scholarships are also being processed through Scholarships and Financial Assistance Department to assist our students.

- Benevolent Fund Scholarships
- Minorities Scholarships
- WAPDA Welfare Fund Scholarships
- Federal Employee Group Insurance Fund
- Unilever Pakistan Scholarships
- Diya Pakistan Scholarships
- Worker Welfare Board
- Pakistan Engineering Congress

## Summary of Scholarships (Fall 2014 to Fall 2018)

**The following semester wise summary picturizes the growth of scholarships department along with the University:**

| Semester | No. of scholarships awarded to students | Amount Distributed among students |
|----------|-----------------------------------------|-----------------------------------|
| Fall-14 | 9 | 159,000 |
| Spring-15 | 18 | 399,000 |
| Fall-15 | 18 | 399,000 |
| Spring-16 | 95 | 1,430,052 |
| Fall-16 | 388 | 11,139,384 |
| Spring-17 | 475 | 13,363,336 |
| Fall-17 | 702 | 16,954,980 |
| Spring-18 | 732 | 17,207,601 |
| Fall-18 | 833 | 20,821,561 |
| **Total** | **3,270** | **81,873,914** |

# Programs Being Offered (Undergraduate, Graduate, PhD)

## Undergraduate Degree Programs

1. BS Electrical Engineering
2. BS Electrical Technology *
3. BS Electronics
4. BS Mechanical Engineering
5. BS Materials Science
6. BS Civil Engineering
7. BS Computer Engineering
8. BS Software Engineering
9. BS Agricultural Engineering
10. BS Agriculture
11. BS Chemical Engineering
12. BS Environmental Science
13. BS Environmental Engineering *
14. BS Computer Science
15. MSc Computer Science
16. BS Information Technology
17. BS Bioinformatics
18. BS Telecommunication System *
19. BS Chemistry
20. MSc Chemistry
21. BS Forensic Science
22. BS Zoology
23. BS Botany
24. BS Biochemistry
25. BS Biotechnology
26. BS Physics
27. MSc Physics
28. BS Mathematics
29. MSc Mathematics
30. BS Food Science and Technology
31. BS Human Nutrition and Dietetics
32. BBA
33. BS Public Administration
34. BS Economics
35. MBA Executive
36. BS English
37. BS Islamic Studies with IT
38. BS Pakistan Studies
39. BS Physical Education
40. BS History
41. BS Heritage Studies (Archaeology)
42. LLB (5 Years)
43. B.Ed 1.5 Year Secondary *
44. B.Ed (Hons) 4 Years Elementary *
45. BS Urdu
46. BS Media & Communication
47. BS International Relations
48. BS Political Science
49. BS Fine Arts
50. BS Clinical Psychology
51. BS Cosmetology and Dermatological Sciences
52. BS Radiology *
53. BS Medical Laboratory Technology *
54. BS Optometery *

## Graduate Degree Programs

1. MS Electrical Engineering
2. MS Electronics *
3. MS Mechanical Engineering
4. MS Materials Science *
5. MS Civil Engineering (Water Resource & Irrigation Engineering)
6. MS Computer Engineering
7. MS Software Engineering
8. MS Agricultural Engineering
9. MS Water Resources Management *
10. MS Chemical Engineering
11. MS Environmental Science
12. MS Environmental Engineering *
13. MS Computer Science
14. MS Data Science *
15. MS Information Technology *
16. MS Information Security
17. MS Telecommunication System *
18. MS Chemistry
19. MS Physics
20. MS Mathematics
21. MS Food Technology
22. MS Human Nutrition and Dietetics *
23. MS Food Safety and Quality Management *
24. MBA 2 Years
25. MBA 2.5 Years
26. MS Management Sciences
27. MS Engineering Management
28. M.Phil English Linguistics
29. MS Islamic Studies *
30. MS Pakistan Studies *
31. MS History *
32. MS Urdu *
33. MS Health Care Management

## PhD Degree Programs

1. PhD Electrical Engineering *
2. PhD Mechanical Engineering *
3. PhD Environmental Science *
4. PhD Computer Science *
5. PhD Chemistry
6. PhD Physics *
7. PhD Mathematics *

*"Knowledge is that which benefits not that which is memorized"*

*Imam Al-Shafi'i (RA)*

\* Subject to approval / NOC from HEC / Competent Authority / Accreditation Body
\*\* KFUEIT can take decision not to start any program subject to no of applicants below standard number

# Eligibility Criteria | **Undergraduate (BS Program)**

## Faculty of Engineering

a) Candidate should meet standards of physique and eye sight laid down in the medical certificate.

b) Merit Score = (0.7x Percentage HSSC including Hafiz-e-Quran marks) + (0.3x Percentage Aptitude Test Score).

*   Result awaiting candidate(s) may apply on the basis of Part I result. Result of Part I will be considered for merit calculation in place of HSSC complete result, provided that the candidate(s) fulfill the minimum eligibility criteria.

| Programs | Academic Qualification |
|---|---|
| BS Agricultural Engineering<br>BS Civil Engineering<br>BS Chemical Engineering<br>BS Electrical Engineering<br>BS Environmental Engineering *<br>BS Mechanical Engineering | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics or equivalent with 60% marks.<br>b) KFUEIT recognized aptitude test (ECAT / HAT / KFEAT)<br>c) DAE in relevant field (2% quota) |
| BS Computer Engineering | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS including Mathematics, Physics and Computer or equivalent with 60% marks.<br>b) KFUEIT recognized aptitude test (ECAT / HAT / KFEAT)<br>c) DAE in relevant field (2% quota) |
| BS Software Engineering | a) The minimum requirements for admission in a Bachelor degree program in Software Engineering, is at least 50% marks in Intermediate (HSSC) examination. Moreover, applicant must have obtained at least 60% marks in Intermediate (HSSC) level Mathematics. Applicants having equivalent qualifications (such as A-level or diploma from a Polytechnic) are also eligible.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / ECAT / KFEAT / HAT) with minimum score of 40%. |
| BS Electronics | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS including Mathematics, Physics and Computer / Diploma of Associate Engineering (DAE) in Electrical / Electronics or equivalent with 2nd Division.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / ECAT / KFEAT / HAT) with minimum score of 40% |
| BS Electrical Technology * | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS including Mathematics, Physics and Computer / Diploma of Associate Engineering (DAE) in Electrical / Electronics or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / ECAT / KFEAT / HAT) with minimum score of 40% |
| BS Environmental Science | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT / HAT/ ECAT / KFEAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |
| BS Material Sciences | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS with Mathematics, with 50% marks / Diploma of Associate Engineer (DAE) in relevant technologies* with 60% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / ECAT / KFEAT / HAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |

## Non-Engineering Programs

| Faculty of Computer Science & Information Technology | |
|---|---|
| **Programs** | **Academic Qualification** |
| BS Computer Science | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / "Computer Science group" including Math, Physics and Computer Studies as mandatory subjects or equivalent with 50% marks. At least 60% marks in Intermediate (HSSC) level Mathematics.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / ECAT / KFEAT / HAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |
| BS Information Technology<br>BS Telecommunications System | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / "Computer Science group" including Math, Physics and Computer Studies as mandatory subjects or equivalent with 50% marks. At least 60% marks in Intermediate (HSSC) level Mathematics.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / ECAT / KFEAT / HAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |
| BS Bioinformatics | a) Higher Secondary School Certificate (HSSC) with Pre Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT / HAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |

## Faculty of Natural Sciences

| Programs | Academic Qualification |
|---|---|
| BS Food Science and Technology | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical or equivalent with 60% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT/ ECAT / KFEAT / HAT) with minimum score of 40%<br>c) DAE in Food Science & Technology are eligible |
| BS Human Nutrition and Dietetics | a) Higher Secondary School Certificate (HSSC) with Pre-Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT) with minimum score of 40% are eligible |
| BS Mathematics | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering or equivalent with Mathematics with 50% marks.b) KFUEIT recognized aptitude test (KFAT / NAT / ECAT / KFEAT / HAT) with minimum score of 40%c) DAE at least 60% marks with Mathematics are eligible |
| BS Physics | a) Higher Secondary School Certificate (HSSC) with Physics or equivalent with 50% marks. b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT / ECAT / KFEAT / HAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |
| BS Forensic Science | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT/ ECAT / KFEAT / HAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |
| BS Chemistry | a) Higher Secondary School Certificate (HSSC) with Chemistry or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT / ECAT / KFEAT / HAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |
| BS Biochemistry<br>BS Botany<br>BS Biotechnology<br>BS Zoology | a) Higher Secondary School Certificate (HSSC) with Pre-Medical or equivalent with Chemistry and Biology with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT) with minimum score of 40%<br>c) DAE in relevant field are eligible |
| BS Clinical Psychology<br>BS Cosmetology and Dermatological Sciences<br>BS Medical Laboratory Technology *<br>BS Optometry *<br>BS Radiology * | a) Higher Secondary School Certificate (HSSC) with Pre-Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT) with minimum score of 40%<br>c) 50% Marks in F.Sc. Pre Medical or Equivalent from any recognized Institution. |
| BS Agriculture | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical / Diploma in Agricultural Sciences or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT/ ECAT / KFEAT / HAT) with minimum score of 40%<br>c) Diploma in Agriculture Sciences |

## Faculty of Management Sciences & Humanities

| Programs | Academic Qualification |
|---|---|
| BBA<br>BS Economics<br>BS Public Administration | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT / KFEAT) with minimum score of 40%<br>c) DAE in all fields are eligible. |
| BS English<br>BS Fine Arts<br>BS History<br>BS Heritage Studies (Archeology)<br>BS Islamic Studies with Computer Technology<br>BS Media & Communication<br>BS Pakistan Studies<br>BS Physical Education<br>BS Political Sciences<br>BS International Relations<br>BS Urdu | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>c) PET (Physical Efficiency Test) only for BS Physical Education.<br>d) 45% Marks in English only for BS English.<br>e) DAE in all fields are eligible. |
| LLB (5 Years) | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b) LAT conducted by HEC)<br>c) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>d) 05% Quota for the sons / daughters of Advocates<br>e) Maximum age limit to get admission in LLB is 23(years).<br>f) Only LAT qualifiers will be allowed to get admission, except the genuine cases like students from FATA. |
| B.Ed (Hons) 4 Years Elementary * | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>c) DAE in all fields are eligible. |
| B.Ed 1.5 Year Secondary * | a) 16 Years of education or equivalent with CGPA 2.50/4.00 in semester system or 45% marks in annual system.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>c) Interview for admission is not mandatory<br>d) Bachelors Pre Req for B.Ed 2.5Years |

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## Eligibility Criteria | Undergraduate (MSc and BBA 3rd Year Program)

| Programs | Academic Qualification |
|---|---|
| MSc Physics | a) 14 years of education with Mathematics & Physics or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |
| MSc Chemistry | a) 14 years of education with Chemistry or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |
| MSc Mathematics | a) 14 years of education with Mathematics A & B or any other examination of a Foreign University / Institution / Examination Body, equivalent to BSc with Physics and Mathematics (equivalence and percentage of marks will be determined by HEC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |
| MSc Computer Science | a) 14 years of education with Computer Science of 200 marks or equivalent with 45% marks.<br>b) 5% seats are reserved for Associate Degree Program (ADP in Computer Science) holders.<br>c) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |
| BBA (3rd Year) | a) 14 years of education or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |

## Eligibility Criteria | Graduate Programs

a) 2.5/4.0 or 3.5/5.0 in semester system or 50% in annual system. (45% in annual system for MS English Program)
b) NTS GAT General Test/HEC/Department Admission Test with a minimum 50% cumulative score is mandatory.

| Programs | Academic Eligibility Requirement | Specializations Offered in MBA/MS Programs |
|---|---|---|
| MS Electrical Engineering | 16 years of education in following disciplines:<br>1- Electrical Engineering<br>2- Telecommunication Engineering<br>3- Electronics Engineering<br>4- Any other relevant degree | 1- Power<br>2- Telecommunication<br>3- Electronics |
| MS Electronics | 16 years of education in following disciplines:<br>1- Electrical Engineering<br>2- Electrical Technology<br>3- Telecommunication Engineering<br>4- Electronics Engineering<br>5- Electronics Technology<br>6- BS Physics<br>7- Any other relevant degree | 1- MS Electronics |

| Programs | Academic Eligibility Requirement | Specializations Offered in MBA/MS Programs |
|---|---|---|
| MS Mechanical Engineering | 16 years of education in following disciplines:<br>1- BS Mechanical Engineering<br>2- BS Mechatronics Engineering<br>3- BS Industrial Engineering<br>4- Any other relevant degree | 1- MS Mechanical Engineering |
| MS Chemical Engineering | 16 years of education in following disciplines:<br>1- Chemical Engineering<br>2- Petroleum and Gas Engineering<br>3- Polymer Engineering<br>4- Environmental Engineering<br>5- Any other relevant degree | 1- MS Chemical Engineering |
| MS Environmental Engineering * | 16 years of education in following disciplines:<br>1- Environmental Engineering<br>2- Chemical Engineering<br>3- Petroleum and Gas Engineering<br>4- Mining Engineering<br>5- Polymer Engineering<br>6- Energy Engineering<br>7- Industrial Engineering<br>8- Agricultural Engineering<br>9- Mechanical Engineering<br>10-Civil Engineering<br>11-Any other relevant degree | 1- MS Environmental Engineering* |
| MS Environmental Science | 16 years of education in following disciplines:<br>1- Environmental Science<br>2- Environmental Engineering<br>3- Any other relevant degree | 1-MS Environmental Science |
| MS Software Engineering | 16 years of education in following disciplines:<br>1- BS Computer Science<br>2- BS Information Technology<br>3- BS Software Engineering<br>4- MCS/MSc Computer Science<br>5- Any other relevant degree | 1- MS Software Engineering |
| MS Computer Engineering | 16 years of education in following disciplines:<br>1- Computer (Systems) Engineering<br>2- Software Engineering<br>3- Electrical Engineering<br>4- Telecommunication Engineering<br>5- Electronics Engineering<br>6- BS Computer Sciences<br>7- BS Information Technology<br>8- Any other relevant degree | 1- Machine Vision<br>2- Hardware Design<br>3- Communications |
| MS Computer Science<br>MS Data Science * | 16 years of education in following disciplines:<br>1- BS Computer Science<br>2- BS Information Technology<br>3- BS Software Engineering<br>4- MCS/MSc Computer Science | 1- General Computer Science Degree |
| MS Physics | 16 years of education in following disciplines:<br>1- MSc Physics<br>2- BS Physics<br>3- Any other relevant degree | 1- Master of Science in Physics |
| MS Chemistry | 16 years of education in following disciplines:<br>1- MSc Chemistry<br>2- BS Chemistry<br>3- Any other relevant degree | 1- Analytical Chemistry<br>2- Organic Chemistry<br>3- Physical Chemistry<br>4- Applied Chemistry |

| Programs | Academic Eligibility Requirement | Specializations Offered in MBA/MS Programs |
|---|---|---|
| MS Mathematics | 16 years of education in following disciplines:<br>1- MSc Mathematics<br>2- BS Mathematics<br>3- Any other relevant degree | 1- Pure Mathematics<br>2- Applied Mathematics |
| MS Management Sciences | 16 years of education in following disciplines:<br>1- BS (Hons)-Management<br>2- BPA (Hons)<br>3- B.Com (Hons)<br>4- BBS<br>5- M.Com<br>6- MA Accounting & Finance<br>7- MPA<br>8- MBA 16 Years<br>9- BBA | 1- Supply Chain Management<br>2- Finance<br>3- Human Resource Management<br>4- Management<br>5- Marketing<br>6- Project Management |
| MS Engineering Management | 16 years of education in any engineering relevant discipline including the following:<br>1- B.Sc. Computer Engineering<br>2- B.Sc. Building & Architectural Engineering<br>3- B.Sc. Architectural Engineering<br>4- B.Sc. Petroleum & Gas Engineering<br>5- B.Sc. Polymer Engineering<br>6- B.Sc. Geological Engineering<br>7- B.Sc. Chemical Engineering<br>8- B.Sc. Electrical Engineering<br>9- B.Sc. Mining Engineering<br>10- B.Sc. Metallurgical & Materials Engineering<br>11- B.Sc. Civil Engineering<br>12- B.Sc. Environmental Engineering<br>13- B.Sc. Industrial & Manufacturing Engineering<br>14- B.Sc. Mechatronics & Control Engineering<br>15- B.Sc. Mechanical Engineering<br>16- B.Sc. Transportation Engineering<br>17- B.Sc. Chemical Engineering<br>18- B.Sc. Mechatronics Engineering<br>19- B.Sc. Textile Engineering | 1- Engineering Management<br>2- Quality Management<br>3- Construction Management<br>4- Information Management<br>5- Knowledge Management<br>6- Telecom Management<br>7- Manufacturing Management<br>8- Supply Chain Management<br>9- Project Management |
| MBA 2 Years | 16 years of education in following disciplines:<br>1- BBA (Hons)<br>2- BS (Hons)-Management<br>3- BPA (Hons)<br>4- B.Com (Hons)<br>5- BBS<br>6- M.Com<br>7- MBA 16 Years<br>8- MA Accounting & Finance<br>9- MPA | 1- Supply Chain Management<br>2- Finance<br>3- Human Resource Management<br>4- Management<br>5- Marketing<br>6- Project Management |
| MBA 2.5 Years | 16 years of education in any discipline: | 1- Supply Chain Management<br>2- Finance<br>3- Human Resource Management<br>4- Management<br>5- Marketing<br>6- Project Management |
| MS Food Technology | 16 years of education in following disciplines:<br>1- BS Food Science & Technology<br>2- B.Sc. (Hons.) Agriculture with Food Technology as a major subject<br>3- BS/B.Sc. (Hons.) Dairy Technology<br>4- BS/B.Sc. (Hons) Dairy Science & Technology.<br>**The candidates possessing following are also eligible for admission in MS Food Technology with deficiency courses.**<br>5- BS/B.Sc. (Hons) Human Nutrition and Dietetics<br>6- BS/B.Sc. (Hons.) Food Engineering<br>7- BS/B.Sc. (Hons.) Microbiology<br>8- BS/B.Sc. (Hons.) Home Economics (Food & Nutrition)<br>9- DND Doctor of Nutrition and Dietetics.<br>10- DONS Doctor of Dietetics and Nutritional Science<br>11- Any other relevant degree | 1- MS Food Technology |

| Programs | Academic Eligibility Requirement | Specializations Offered in MBA/MS Programs |
|---|---|---|
| MS Human Nutrition and Dietetics | 16 years of education in following disciplines:<br>1- B.Sc. (Hons.) Human Nutrition and Dietetics.<br>2- B.Sc. (Hons.) Human Nutrition.<br>3- B.S. (Hons.) Nutrition and Dietetics.<br>4- B.S. Food Science and Nutrition.<br>5- B.Sc. (Hons.) Food Science and Human Nutrition.<br>6- B.S/ B.Sc. (Hons.) Home Economics (Food and Nutrition).<br>7- B.Sc. (Hons.) Nutrition<br>The candidates possessing following are also eligible for admission in MS Human Nutrition and Dietetics with deficiency courses.<br>8- B.Sc. (Hons.) Food Science and Technology/ Food Technology or<br>9- B.Sc. (Hons.) Agriculture with Food Technology as major/<br>10-B.Sc. (Hons.) Dairy Science and Technology/Dairy Science/<br>11-B.Sc. (Hons.) Microbiology/ Doctor of Veterinary Medicines/ Pharm D/MBBS<br>12- DND Doctor of Nutrition and Dietetics<br>13-DDNS Doctor of Dietetics and Nutritional Sciences.<br>14- Any other relevant degree | 1- MS Human Nutrition and Dietetics |
| MS Food Safety and Quality Management | 16 years of education in following disciplines<br>1- B.S/B.Sc. (Hons.) Food Science and Technology/ Food Technology<br>2- B.Sc. (Hons.) Agriculture with Food Technology as major<br>3- B.Sc. (Hons.) Home Economics (Food & Nutrition)<br>4- B.Sc. (Hons.) Human Nutrition & Dietetics<br>5- B.S. Food Science & Nutrition<br>6- B.Sc. (Hons.) Dairy Science & Technology<br>7- B.S. (Hons.) Dairy Technology<br>8- B.S. (Hons.) Animal Science<br>9- B.Sc. (Hons.) Microbiology<br>10-B.Sc. Agricultural Engineering/ Food Engineering/ Doctor of Veterinary Medicines<br>11- DND Doctor of Nutrition and Dietetics<br>12- DONS Doctor of Dietetics and Nutritional Science<br>13- Any other relevant degree | 1- MS Food Safety and Quality Management |
| MS Healthcare Management | 16 years of education in relevant discipline including the following:<br>1- MBBS<br>2- BDS<br>3- Pharm-D<br>4- BS Nursing<br>5- MHA<br>6- DPT<br>7- BS Physiotherapy<br>8- Any other relevant degree | 1-MS Healthcare Management |
| MS Civil Engineering | 16 years of education in following disciplines:<br>1- BS Civil Engineering<br>2- BS Architectural Engineering<br>3- BS Transportation Engineering<br>4- BS Environmental Engineering<br>5- BS Water Resource Engineering<br>5- Any other equivalent degree | 1- Water Resource & Irrigation Engineering. |
| MS Information Security<br>MS Information Technology<br>MS Telecommunications System | 16 years of education in following disciplines:<br>1- BS Information Technology<br>2- BS Computer Engineering<br>3- BS Computer Science<br>4- BS Electrical Engineering<br>5- BS Telecommunication Engineering<br>6- BS Electronics (Engineering)<br>7- BS Physics<br>8- BS Mathematics<br>9- BS Software Engineering<br>10- MCS/MSc Computer Science<br>11- Any other equivalent degree | 1- MS Information Security<br>2- MS Information Technology<br>3- MS Telecommunication System |

| Programs | Academic Eligibility Requirement | Specializations Offered in MBA/MS Programs |
|---|---|---|
| MS Pakistan Studies<br>MS Islamic Studies *<br>MS Urdu | 16 years of education in following disciplines:<br>1- BS/MSc/MA/MSc/BA(Hons)<br>2-Any other equivalent degree | 1- MS Pakistan Studies<br>2- MS Urdu<br>3- MS Islamic Studies with Computer Technology |
| M.Phil English Linguistics | 16 years of education in following disciplines:<br>1- MA English<br>2- BS English<br>3- Any other equivalent degree | 1- MS English (Linguistics) |
| MS Water Resource Management | 16 years of education in following disciplines:<br>1- BS Agricultural Engineering<br>2- BS Civil Engineering<br>3- BS Environmental Engineering<br>4- BS Water Management<br>5- Any other equivalent degree | 1- MS Water Resource Management |
| MS Agricultural Engineering | 16 years of education in following disciplines:<br>1- BS Agriculture Engineering<br>2- BS Civil Engineering<br>3- BS Mechanical Engineering<br>4- BS Environmental Science<br>5- BS Water Resource<br>6- BS Energy System<br>7- BS Food Engineering<br>8- Any other equivalent degree | 1- MS Agricultural Engineering |
| MS Materials Science * | 16 years of education in following disciplines:<br>1- Materials Science<br>2- Environmental Science<br>3- Chemistry<br>4- Physics<br>5- Metallurgy Engineering<br>6- Electrical Engineering<br>7- Mechanical Engineering<br>8- Chemical Engineering<br>9- MSc (16 years) in Chemistry/Physics<br>10-Relevant physical science and engineering disciplines | 1- MS Materials Sciences |

# DAE Acceptable

| Program Acceptable | Academic Qualification |
|---|---|
| BS Electrical Engineering | DAE Electrical Technology<br>DAE Telecommunication Technology<br>DAE Electronics Technology<br>DAE Avionics Technology<br>DAE Instrumentation Technology<br>DAE Information Technology |
| BS Mechanical Engineering | DAE Mechanical Technology (with any specialization)<br>DAE Precision Mechanical & Instruments Technology<br>DAE Auto & Diesel Technology<br>DAE Bio-Medical Technology<br>DAE Dies & Mold Technology<br>DAE Automation Technology<br>DAE Refrigeration & Air Conditioning Technology |

| Programs | Academic Qualification |
|----------|------------------------|
| BS Chemistry | Bio Medical<br>Petroleum<br>Petrochemical<br>Chemical Technology<br>Chemical Processing Technology<br>Food Technology Food Processing & Preservation<br>Critical Health and Technology<br>Diploma in Agriculture Science |
| BS Biochemistry<br>BS Biotechnology<br>BS Zoology<br>BS Botany<br>BS Forensic Science | Bio Medical<br>Chemical Technology<br>Chemical Processing Technology<br>Food Technology<br>Food Processing & Preservation<br>Critical Health and Technology<br>Diploma in Agriculture Science |
| BS Material Sciences | DAE Electrical Technology<br>DAE Electronics Technology<br>DAE Mechanical Technology<br>DAE Chemical Technology<br>DAE Bio Mechanical Technology<br>DAE Metallurgy and welding technology<br>DAE Petro-Chemical Technology<br>DAE Petroleum Technology |
| BS Environmental Science | DAE Leather Technology<br>DAE Chemical Technology<br>DAE Petrochemical Technology<br>DAE Petroleum Technology<br>DAE in Chemical Technology with Specialization in Pharmaceutical |
| BS Computer Engineering | DAE Computer Information Technology<br>DAE Computer Science<br>DAE Telecommunication Technology<br>DAE Electrical Technology<br>DAE Electronics Technology<br>DAE Software<br>DAE Radar Technology<br>DAE Automation<br>DAE Radio Technology<br>DAE Instrumentation/Instrumentation & Process Control |
| BS Agricultural Engineering | DAE Agricultural Engineering<br>DAE Civil Engineering<br>DAE Mechanical Engineering<br>DAE Auto Mobil Engineering<br>DAE Farm Machinery Technology |
| BS Chemical Engineering | DAE Chemical Technology |
| BS Civil Engineering | DAE Civil Engineering |

| Programs | Academic Qualification |
|---|---|
| BS Food Science and Technology | DAE Food Sciences |
| BS Computer Science<br>BS IT<br>BS Software Engineering | DAE relevant to Computer Sciences |
| BBA<br>BS Economics<br>BS Public Administration | All DAE candidates are eligible |
| BS Mathematics | DAE with Mathematics |
| BS Physics | DAE with Physics and Mathematics |
| BS English<br>BS Fine Arts<br>BS History<br>BS Heritage Studies (Archeology)<br>BS Islamic Studies (With Computer Technology)<br>BS Media And Communication<br>BS Pakistan Studies<br>BS Physical Education<br>BS Political Sciences<br>BS International Relations<br>BS Urdu<br>B.Ed. (Hons) Elementary (4 - Year)<br>LLB (5 Years) | All DAE candidates are eligible |

# Eligibility Criteria | **Post Graduate / PhD Programs**

a) 3.0/4.0 in semester system or 60% in annual system
b) NTS GAT Subject Test / HEC Test / International GRE Subject test with a minimum 60% percentile score or departmental admission test with a minimum 70% cumulative score is mandatory

| Programs | Academic Qualification |
| --- | --- |
| PhD Chemistry | 18 years of education in following disciplines:<br>1- Chemistry<br>2- Any other relevant degree |
| PhD Mathematics | 18 years of education in following disciplines:<br>1- Mathematics<br>2- Any other relevant degree |
| PhD Physics | 18 years of education in following Discipline<br>1- Physics<br>2- Any other relevant degree |
| PhD Mechanical Engineering | 18 years of education in following disciplines:<br>1- Mechanical Engineering<br>2- Mechatronics Engineering<br>3- Industrial Engineering<br>4- Any other relevant degree |
| PhD Environmental Science * | 18 years of education in following disciplines:<br>1-Environmental Science<br>2-Chemistry<br>3-Any other relevant degree |
| PhD Electrical Engineering | 18 years of education in following disciplines:<br>1- Electrical<br>2- Electronic<br>3- Telecommunications<br>4- Any other relevant degree |
| PhD Computer Science * | 18 years of education in following disciplines:<br>1- MS Computer Science<br>2- MS Information Technology<br>3- MS Software Engineering<br>4- Any other relevant degree |

# Reserved Seats

| S. No. | Type of Reserved Seat(s) | Description / Eligibility | No. of Reserved Seat(s) |
|---|---|---|---|
| 1 | Advocates / Lawyers Children | 5% Quota for the children of Advocates / Lawyers in Law Degree Programs. | 5% in Law Degree Programs |
| 2 | Baluchistan | Baluchistan residents<br>The applicant must have domicile of Baluchistan | 1 seat in each Program |
| 3 | Martyred / War-Disabled / KFUEIT-Deceased | Children of martyrs of Army, Police, War disabled personnel<br>OR<br>The children of employee of KFUEIT, who died during the service at KFUEIT.<br>The certificate of martyrdom or war disability from relevant Govt department (if Applicable) must be provided.<br>Death certificate (if applicable) must be provided.<br>Proof of employment must be provided. | 1 seat in each program |
| 4 | KFUEIT Employees | Children / spouse(s) / self / siblings i.e. brothers or sisters (excluding step siblings) of the KFUEIT Employees, serving or retired or contract completed or resigned (excluding deputation/part-time employees) are eligible to apply as follows:<br>First preference will be given to Employees (Regular / Contract awarded after Selection Process) having continuous or intermittent minimum service of 5 years.<br>Second Preference will be given to Employees (Regular / Contract awarded after Selection Process / Ad-hoc) having continuous minimum service of 3 years. | 4% Seat(s) in each program |

## How to Apply for Admissions

A candidate seeking admission in any academic program shall apply online as per prescribed procedure:

- Candidates shall register himself / herself on the university website **https://eportal.kfueit.edu.pk/** by filling the registration form **https://eportal.kfueit.edu.pk/**

- After completing registration, he/she will be able to fill Admission Application Form by using his/her login credentials. While submitting the admission form, the applicants are advised to be careful and provide the correct information.

- After submitting of application, system will generate a challan form, to be printed by the candidate.

- The applicant shall deposit prescribed admission processing fee on auto generated challan in any nearest HBL branch and then upload a copy of paid challan on **https://eportal.kfueit.edu.pk/.**
- The candidate will be able to check the status of his/her application online by logging in.

- Merit lists will be displayed on website. If the candidate's name appears in merit list, with-in due date he/she has to submit all original documents to the admission office and follow the instructions given by the admission office.

## Steps to Apply for Admissions

**1.      First step goes to login E-Portal**

- Click on Register Now
- Registered your self

**2.      Create new account**

- Fill all the fields
- Click on Register Now
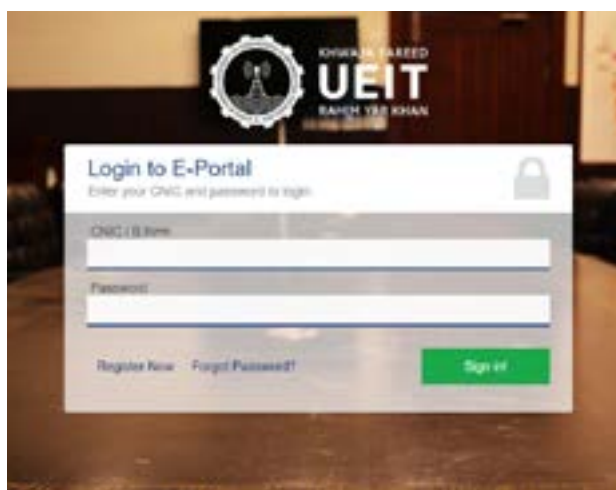
### 3. Welcome to KFUEIT E-portal

- Click on the KTS apply for test if required
- Click on the admissions if you are interested for apply admission
- Click on KFUEIT if you want to visit the main menu of websit



### 4. Personal Information

- Fill all the fields with your best knowledge
- Click Next to go on the next page or window



### 5. Guardian's Information

- Fill all the fields with your best knowledge
- Click Next to go on the next page or window



### 6. Additional Information

- Fill all the fields with your best knowledge
- Click Next to go on the next page or window



### 7. Academic Information

- Click on add qualification
- Enter your all degree's marks one by one
- Click on Entry Test tab
- Enter your Entry test marks



### 8. Choose Program

- Click on select category
- Click on Bachelors (16 Years) for BS students
- Click on Masters (16 Years) for MSc students
- Click on MS/M.Phil. (18 Years) for MS students
- Click on PhD for PhD students/applicants
- After your program selection click on next

### 9. Terms & conditions

- Read all the terms and conditions carefully before submitting your application.
- Enter your name in text box (capital letters).
- Save application.



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## Documents Required



**Required Documents**

| Sr No. | Particular | Status |
|---|---|---|
| 01 | Offer Letter | |
| 02 | Challan Form (paid) | |
| 03 | Admission Application Form | |
| 04 | Medical Fitness Certificate | |
| 05 | Undertaking on Stamp Paper of Rs. 50 | |
| 06 | 4 Attested Copies of Matric Certificate / Result Card | |
| 07 | 4 Attested Copies of Intermediate Certificate / Result Card | |
| 08 | 4 Attested Copies of Graduation Certificate / Result Card (for MSc Programs) | |
| 09 | 4 Attested Copies of Master Certificate / Result Card (for MS / MBA Programs) | |
| 10 | 4 Fresh Passport size Pictures | |
| 11 | 4 Copies of Domicile, CNIC / B. Form and Father / Guardian CNIC | |
| 12 | NOC from Employer for MS Programs (if applicable) | |
| 13 | Equivalence Certificate (if applicable) | |
| 14 | Entry Test Result Card (if applicable) | |

## Steps to Apply for KFUEIT Entry Test

### Step 1

- Visit / Open link
  https://eportal.kfueit.edu.pk



### Step 2

- If you are a new user, click on "Register Now" button and register yourself.
- If you are existing user, just put your CNIC / B-Form number and password to get login



### Step 3

- Fill all the fields.
- Click on "Register Now" button to proceed further the registration process.



### Step 4

- Click on the KTS link to apply for Entry Test.



### Step 5

- After clicking the KTS link, following window will be get displayed.
- Click on "Update Profile" link on left side of the page to update your profile.

## Step 6

- Fill and verify all Text boxes carefully.
- Upload your recent photograph (Maximum size of 1MB).
- Upload your CNIC (front side) or B-Form picture (Maximum size of 1MB)
- Click on the "Update Profile" button.

## Step 7

- After updating profile, Click at "Home" top left corner of the page.
- Click on "Apply Now" showing parallel to your desired test.

## Step 8

- Click on "My Tests" appeared after clicking on "Apply Now".

## Step 9

- Download your test fee voucher from the "Download Voucher" button.
- Upload your scanned clear picture of paid voucher using "Upload Voucher" action.

## Fee Voucher Sample

- Fee voucher will be like this.

## Step 10

- After uploading the paid voucher, go to the "My Tests" menu as shown below, to check status of your application.
- Your application status will appear like given below. It shows that you have successfully

**SPECIAL INSTRUCTIONS:**

- Upload recent photograph and CNIC image.
- Upload payed voucher for verification (readable) after payment (mentioned on the voucher) in the concerned bank within due date; otherwise you may not be notified for test schedule or not be able to appear in the test.
- Remember your password to get back this portal for your result.
- Remember that you must have to upload the paid voucher on the portal; otherwise you may not be able to sit in the test.
- Any kind of electronic or calculating device is not allowed in the test center.
- For further queries, feel free to contact Testing Services Department during office hours or call at +92-68-5882472, +92-303-0300666, or email us at kts@kfueit.edu.pk

## Merit Determination Criteria

### Undergraduate Programs

**Merit Score = (0.7 X Last Earned Degree including Hafiz-e-Quran marks) + (0.3 X Percentage Aptitude Test Score)**

### Graduate Programs

**Merit Score = (0.4 X Percentage Academic Record) + (0.3 X Percentage KFGAT / NAT-GAT Score) + (0.3 X Percentage Interview / Statement of Purpose Marks)**

The weightage of academic record is further distributed as:

| SSC | HSSC | Undergraduate (04 Years) | Total |
|-----|------|--------------------------|-------|
| 5% | 5% | Y1=5%, Y2=5%, Y3=10%, Y4=10% | 40% |

### Post Graduate Programs

**Merit Score = (0.4 X Percentage Academic Record) + (0.3 X Percentage KFGAT / NAT-GAT Score) + (0.3 X Percentage Interview / Statement of Purpose Marks)**

The weightage of academic record is further distributed as:

| SSC | HSSC | BS | MS/M.Phil |
|-----|------|-----|-----------|
| 5% | 5% | Y1=2%, Y2=2%, Y3=3%, Y4=3%   ( 10% ) | 20% |

For each degree the final Percentage or CGPA will only be counted. For example, If a student has passed two years BSc with 60% marks and two years MSc with also 60% marks, then contribution againist undergraduate will be equal to

$$(04\% * 60/100) + (06\% * 60/100) = 6\%$$

## Entry Test

### Internal Entry Tests of KFUEIT

| | |
|-----|-----|
| **KFAT** | Entry Test for Undergraduate Programs |
| **KFEAT** | Entry Test for Engineering Programs |
| **KFGAT** | Entry Test for Graduate Programs |

### Valid Entry Tests (Other than Internal Tests)

| | |
|-----|-----|
| **For Undergraduate Programs** | **NAT, MCAT, HAT, ECAT, LAT** |
| **For Graduate Programs** | **NTS, GAT, HEC Test** |

## Fee Structure

### General Dues for BS Programmes, BBA, B.Ed. (4 Years) & L.L.B.

| S. No | Fee Type | Amount (Rs.) | Remarks |
|-------|----------|--------------|---------|
| 1 | Admission Fee | 10,000 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 5,000 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 35,000 | Per Semester |
| 4 | Semester Charges | 3,500 | Per Semester |
| 5 | Internet Charges | 1,500 | Per Semester |
| 6 | Transport Charges | 5,000 | Per Semester |
| | **Total** | **60,000** | |

### General Dues for M.Sc Programmes, B.Ed (2.5 Years) & MBA Executive

| S. No | Fee Type | Amount (Rs.) | Remarks |
|-------|----------|--------------|---------|
| 1 | Admission Fee | 10,000 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 5,000 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 40,000 | Per Semester |
| 4 | Semester Charges | 6,000 | Per Semester |
| 5 | Internet Charges | 1,500 | Per Semester |
| 6 | Transport Charges | 5,000 | Per Semester |
| | **Total** | **67,500** | |

### General Dues for MS, B.Ed. (1.5 Years) & MBA (2, 2.5years)

| S. No | Fee Type | Amount (Rs.) | Remarks |
|-------|----------|--------------|---------|
| 1 | Admission Fee | 15,000 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 10,000 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 50,000 | Per Semester |
| 4 | Semester Charges | 8,500 | Per Semester |
| 5 | Internet Charges | 1,500 | Per Semester |
| 6 | Research Facility Expenditure | 5,000 | Per Semester |
| 7 | Transport Charges | 5,000 | Per Semester |
| | **Total** | **95,000** | |

### General Dues for PHD Programmes

| S. No | Fee Type | Amount (Rs.) | Remarks |
|-------|----------|--------------|---------|
| 1 | Admission Fee | 20,000 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 10,000 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 50,000 | Per Semester |
| 4 | Semester Charges | 13,500 | Per Semester |
| 5 | Internet Charges | 1,500 | Per Semester |
| 6 | Research Facility Expenditure | 5,000 | Per Semester |
| 7 | Transport Charges | 5,000 | Per Semester |
| | **Total** | **105,000** | |

## Hostel Fees

| S. No | Fee Type | Amount (Rs.) | Remarks |
|---|---|---|---|
| 1 | Hostel Fee | 15,000 | Per Semester (Non- Refundable) |
| 2 | Hostel Security Deposit | 6,000 | Once only at the time of Admission (Refundable) |
| 3 | Processing Fee | 750 | Once only at the time of Admission (Non-Refundable) |
| **Total** | | **21,750** | |

## Other Fees / Charges

| S. No | Fee Type | Amount (Rs.) | Remarks |
|---|---|---|---|
| 1 | Absconding Charges | 15,000 | Per semester at the time of freeze (Non-Refundable) |
| 2 | Freeze Semester BS & MSc, B.Ed(2.5) & MBA (Executive) | 10,000 | Per semester at the time of freeze (Non-Refundable) |
| 3 | Freeze Semester MS, MBA (2, 2.5 Years) & B.Ed. (1.5 Year) | 10,000 | Per semester at the time of freeze (Non-Refundable) |
| 4 | Freeze Semester PHD Programmes | 10,000 | Per semester at the time of freeze (Non-Refundable) |
| 5 | Late Fee Payment Fine | 50 | Per Day (Non-Refundable) |
| 6 | Subject Improvement/Repeat-BS, BBA, B.Ed.(4 years) & LLB(5years) | 1,500 | Per Credit Hour |
| 7 | Subject Improvement/Repeat-MSc, B.Ed(2.5) & MBA(Executive) | 2,000 | Per Credit Hour |
| 8 | Subject Improvement/Repeat-MS, MBA (2, 2.5 Years) & B.Ed. (1.5 Year) | 2,500 | Per Credit Hour |
| 9 | Subject Improvement/Repeat-PHD Programmes | 3,000 | Per Credit Hour |
| 10 | Summer Session-BS, BBA, B.Ed.(4 years) & LLB(5years) | " Double | Per Credit Hour |
| 11 | Summer Session-MSc, B.Ed(2.5) & MBA(Executive) | of Course | Per Credit Hour |
| 12 | Summer Session-MS, MBA (2, 2.5 Years) & B.Ed. (1.5 Year) | improvement | Per Credit Hour |
| 13 | Summer Session-PHD Programmes | fee " | Per Credit Hour |
| 14 | Migration / Assesment Fee (Other university to KFUEIT) | 25,000 | At the time of Migration (Non-Refundable) |
| 15 | NOC Charges for Migration (KFUEIT to other university) | 5,000 | At the time of Migration (Non-Refundable) |
| 16 | Make Up Exam Fee (Mid Term) | 3,000 | Per Paper (Non-Refundable) |
| 17 | Make Up Exam Fee (Final Exam) | 3,000 | Per Paper (Non-Refundable) |
| 18 | Re-Checking Fee (Mid Exam) | 500 | Per Paper (Non-Refundable) |
| 19 | Re-Checking Fee (Fianl Exam) | 500 | Per Paper (Non-Refundable) |
| 20 | Late Course Registration Fee | 1,500 | Per Paper (Non-Refundable) |
| 21 | Final Transcript Fee | 1,000 | Per Transcript (Non-Refundable) |
| 22 | ID Card / Duplicate Transcript Fee (First Time) | 200 | Per Application for ID Card / Transcript (Non-Refundable) |
| 23 | ID Card / Duplicate Transcript Fee (Second Time and Onwards) | 500 | Per Application for ID Card / Transcript (Non-Refundable) |
| 24 | Admission Processing Fee - Under Graduates & Graduates | 750 | At the time of application for admission (Non-Refundable) |
| 25 | Admission Processing Fee - Post Graduates | 1,500 | At the time of application for admission (Non-Refundable) |
| 26 | KTS - KFAT Fee | 1,000 | Pre-Admission Test Fee (Non-Refundable) |
| 27 | KTS - KFEAT Fee | 1,000 | Pre-Admission Test Fee (Non-Refundable) |
| 28 | KTS - KFGAT Fee | 1,500 | |

## Employees Testing Fee

| S. No | BPS | Amount (Rs.) | Remarks |
|---|---|---|---|
| 1 | BPS-1-4 | 500 | |
| 2 | BPS-5-9 | 1,000 | |
| 3 | BPS-10-16 | 1,500 | |
| 4 | BPS-17 | 2,000 | |
| 5 | BPS-18 | 2,500 | |
| 6 | BPS-19 & Above | 3,000 | |

## Fee Structure For Foreign Students

### General Dues for BS Programmes, BBA, B.Ed. (4 Years) & L.L.B.

| S. No | Fee Type | Amount (USD) | Remarks |
|---|---|---|---|
| 1 | Admission Fee | 250 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 125 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 875 | Per Semester |
| 4 | Semester Charges | 90 | Per Semester |
| 5 | Internet Charges | 35 | Per Semester |
| 6 | Transport Charges | 125 | Per Semester |
| | **Total** | **1,500** | |

### General Dues for M.Sc Programmes, B.Ed (2.5 Years) & MBA Executive

| S. No | Fee Type | Amount (USD) | Remarks |
|---|---|---|---|
| 1 | Admission Fee | 250.00 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 140.00 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 1,000.00 | Per Semester |
| 4 | Semester Charges | 150.00 | Per Semester |
| 5 | Internet Charges | 35.00 | Per Semester |
| 6 | Transport Charges | 125.00 | Per Semester |
| | **Total** | **1,700** | |

### General Dues for MS, B.Ed. (1.5 Years) & MBA (2, 2.5years)

| S. No | Fee Type | Amount (USD) | Remarks |
|---|---|---|---|
| 1 | Admission Fee | 275.00 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 210.00 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 1,050.00 | Per Semester |
| 4 | Semester Charges | 180.00 | Per Semester |
| 5 | Internet Charges | 35.00 | Per Semester |
| 6 | Research Facility Expenditure | 125.00 | Per Semester |
| 7 | Transport Charges | 125.00 | Per Semester |
| | **Total** | **2,000** | |

### General Dues for PHD Programmes

| S. No | Fee Type | Amount (USD) | Remarks |
|---|---|---|---|
| 1 | Admission Fee | 634 | Once only at the time of Admission (Non-Refundable) |
| 2 | Security Deposit | 210 | Once only at the time of Admission (Refundable) |
| 3 | Tution Fee | 1,050 | Per Semester |
| 4 | Semester Charges | 321 | Per Semester |
| 5 | Internet Charges | 35 | Per Semester |
| 6 | Research Facility Expenditure | 125 | Per Semester |
| 7 | Transport Charges | 125 | Per Semester |
| | **Total** | **2,500** | |

# Hostel Fees

| S. No | Fee Type | Amount (USD) | Remarks |
|---|---|---|---|
| 1 | Hostel Fee | 315 | Per Semester (Non- Refundable) |
| 2 | Hostel Security Deposit | 120 ' | Once only at the time of Admission (Refundable) |
| 3 | Processing Fee | 65 | Once only at the time of Admission (Non-Refundable) |
| | **Total** | **500** | |

# Other Fees / Charges

| S. No | Fee Type | Amount (USD) | Remarks |
|---|---|---|---|
| 1 | Absconding Charges | 315 | Per semester at the time of freeze (Non-Refundable) |
| 2 | Freeze Semester BS & MSc, B.Ed(2.5) & MBA (Executive) | 210 | Per semester at the time of freeze (Non-Refundable) |
| 3 | Freeze Semester MS, MBA (2, 2.5 Years) & B.Ed. (1.5 Year) | 210 | Per semester at the time of freeze (Non-Refundable) |
| 4 | Freeze Semester PHD Programmes | 210 | Per semester at the time of freeze (Non-Refundable) |
| 5 | Late Fee Payment Fine | 1 | Per Day (Non-Refundable) |
| 6 | Subject Improvement/Repeat-BS, BBA, B.Ed.(4 years) & LLB(5years) | 32 | Per Credit Hour |
| 7 | Subject Improvement/Repeat-MSc, B.Ed(2.5) & MBA(Executive) | 42 | Per Credit Hour |
| 8 | Subject Improvement/Repeat-MS, MBA (2, 2.5 Years) & B.Ed. (1.5 Year) | 53 | Per Credit Hour |
| 9 | Subject Improvement/Repeat-PHD Programmes | 63 | Per Credit Hour |
| 10 | Summer Session-BS, BBA, B.Ed.(4 years) & LLB(5years) | " Double | Per Credit Hour |
| 11 | Summer Session-MSc, B.Ed(2.5) & MBA(Executive) | of Subject | Per Credit Hour |
| 12 | Summer Session-MS, MBA (2, 2.5 Years) & B.Ed. (1.5 Year) | Improvement | Per Credit Hour |
| 13 | Summer Session-PHD Programmes | Fee " | Per Credit Hour |
| 14 | Migration / Assesment Fee (Other university to KFUEIT) | 525 | At the time of Migration (Non-Refundable) |
| 15 | NOC Charges for Migration (KFUEIT to other university) | 105 | At the time of Migration (Non-Refundable) |
| 16 | Make Up Exam Fee (Mid Term) | 63 | Per Paper (Non-Refundable) |
| 17 | Make Up Exam Fee (Final Exam) | 63 | Per Paper (Non-Refundable) |
| 18 | Re-Checking Fee (Mid Exam) | 11 | Per Paper (Non-Refundable) |
| 19 | Re-Checking Fee (Fianl Exam) | 11 | Per Paper (Non-Refundable) |
| 20 | Late Course Registration Fee | 32 | Per Paper (Non-Refundable) |
| 21 | Final Transcript Fee | 21 | Per Transcript (Non-Refundable) |
| 22 | ID Card / Duplicate Transcript Fee (First Time) | 4 | Per Application for ID Card / Transcript (Non-Refundable) |
| 23 | ID Card / Duplicate Transcript Fee (Second Time and Onwards) | 11 | Per Application for ID Card / Transcript (Non-Refundable) |
| 24 | ID Card / Duplicate Transcript Fee (Second Time and Onwards) | 15 | |
| 25 | Admission Processing Fee - Under Graduates & Graduates | 30 | At the time of application for admission (Non-Refundable) |
| 26 | Admission Processing Fee - Post Graduates | 20 | Pre-Admission Test Fee (Non-Refundable) |
| 27 | KTS - KFAT Fee | 20 | Pre-Admission Test Fee (Non-Refundable) |
| 28 | KTS - KFEAT Fee | 30 | Pre-Admission Test Fee (Non-Refundable) |

# Candidates Testing Fee

| S. No | BPS | Amount (USD) | Remarks |
|---|---|---|---|
| 1 | BPS-1-4 | 10 | |
| 2 | BPS-5-9 | 20 | |
| 3 | BPS-10-16 | 30 | |
| 4 | BPS-17 | 45 | |
| 5 | BPS-18 | 55 | |
| 6 | BPS-19 & Above | 65 | |

# Rules & Regulations

## Section 6

# Rules & Regulations

# ADMISSION REGULATIONS 2019

1. **SHORT TITLE**
   These regulations shall be called as the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan Admission Regulations 2019.

2. **COMMENCEMENT**
   These regulations shall come into force at once upon/after approval of the Syndicate.

3. **APPLICATION**
   These regulations govern the admission to all degree programs at the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan.

4. **ADMISSIONS COMMITTEE**
   Vice Chancellor shall constitute an Admissions Committee for Undergraduate Programs to oversee the undergraduate admission process. Graduate Programs Committee, which is constituted by the Vice Chancellor, shall oversee the graduate admission process in additionto other responsibilities. These committees will ensure that admission to the University is conducted in a transparent manner and that Admission Rules and Regulations are faithfully observed.

5. **ADMISSION NOTICE**
   The University shall conduct admission to its degree programs after publishing Admission Notice in the National press, informing potential candidates about the degree programs for which admissions are open. Other advertisement and publicity channels will also be utilized. The relevant guidance and instructions will be provided to the potential candidates.

6. **ADMISSION PROCEDURE**
   To the extent possible, the University shall facilitate the admission procedure and application procedure by adopting information and communication technologies.

   A candidate seeking admission in any degree program shall apply online as per the following procedure:

   i.   Candidate process shall register himself/herself through the University website www.eportal.kfueit.edu.pk, on online admission portal by filling the online registration form.
   ii.  After completing registration, candidate will be able to fill the online Admission Application Form and upload the required documents.
   iii. After submitting the application, the system will generate a challan form, to be printed by the candidate.
   iv.  The applicant shall deposit the prescribed admission processing fee on auto-generated challan in the bank and upload it to the admission portal.
   v.   The candidate will be able to check the status of his/her application online.
   vi.  If the candidate's name appears in a merit list, then within due date he/she has to submit all required documents including deposited fee challan to the admission office and follow any other instructions provided by the admission office.

7. **GENERAL RULES**
   (a) All selected candidates will be granted provisional admission.
   (b) In case of revelation or discovery at any stage before or after graduation, of forged, fake, and/or tempered degree, certificate, documents, or any incorrect information provided by the candidate, he/she shall stand expelled from university, his/her graduate status shall stand null and void, or any decision made by university authorities. Furthermore, candidate shall be liable to legal action leading to imprisonment as provided in the law and he/she shall also stand disqualified to seek admission in any university of Pakistan, as may deem suitable by the university authorities.

(c) In case of expulsion, removed from the university rolls and/or graduate status declared null and void, a student shall not claim any compensation and/or damages including but not limited to fees and dues.

(d) The university reserves the right to rectify/correct any error, omission or clerical/typographical mistake at any stage. In case, a candidate/student becomes ineligible or falls out of the merit due to aforementioned correction(s) by the university, he/she shall be removed from the rolls of the University at any time or any decision made by KFUEIT authorities.

(e) Conditional admission(s) may be granted in any discipline/degree program with the approval of Vice Chancellor.

(f) The university reserves the right to start or discontinue any program / discipline. In case of discontinuation of a program, such candidates may be offered to apply for admission in other discipline/program where vacant seat(s) are available, if the candidate fulfill the admission eligibility criteria for the desired program/discipline.

(g) The University may open second phase of Admission as it may deem fit, with the approval of Competent Authority.

## 8. EQUIVALENT EXAMINATIONS

The University recognizes the following examinations as equivalent to the Intermediate (Pre-Engineering) examination with Mathematics, Physics, and Chemistry of the Pakistani Boards of Intermediate and Secondary Education:

(a) Intermediate (Pre-Engineering) Examination of the Board of Intermediate & Secondary Education, Azad Kashmir.

(b) Cambridge Overseas Higher School Certificate with Physics, Chemistry, and Mathematics.

(c) British General Certificate of Education (Advanced Level) with Physics, Chemistry, and Mathematics.

(d) Intermediate (Pre-Medical) in Mathematics as an additional course.

(e) American High School Graduation Diploma (12th Grade) or equivalent.

Such applicants are required to attach an equivalence certificate showing marks with the application for admission issued by the Inter Board Committee of Chairmen (IBCC).

## 9. ELIGIBILITY CRITERIA AND MERIT DETERMINATION FOR ADMISSION

A candidate must fulfill the eligibility criteria to get admission in any discipline/degree program at KFUEIT. The eligibility criteria and merit determination for all disciplines/degree programs are provided in Annex-A, which may be revised from time to time with the approval of concerned authorities.

## 10. SEATS FOR DIPLOMA HOLDERS

(a) For admission in Engineering Programs against seats reserved for the holders of Diploma of Associate Engineer (DAE), the candidate should have passed diploma examination of a Board of Technical Education in the relevant technology. Number of reserved seats / quotas against each discipline/program is mentioned in Annex-A, which may be revised from time to time with the approval of concerned authorities.

(b) Applicants seeking admission against reserved seats for the holders of Diploma of Associate Engineer shall not be eligible unless their diplomas are in the relevant technology as specified against each degree course mentioned in Annex-B, which may be revised from time to time with the approval of concerned Authorities.

## 11. AGE LIMIT

There is no age restriction for seeking admission to any degree program at the University, unless otherwise specified in the eligibility criteria.

## 12. APPLICANT'S GENDER

All applicants regardless of gender are eligible to apply for all seats.

## 13. CREDIT FOR HAFIZ-E-QURAN

Up to 20 marks will be added to the academic marks in H.S.S.C/BSc or equivalent examination of an applicant who is Hafiz-e-Quran. He will get the benefit only if he/she has:

(a) Filled in the necessary check box (option) provided in the application form;

(b)    Appeared before the Hafiz-e-Quran Committee for oral test carrying zero to twenty marks and the Committee has awarded marks according to the degree of his proficiency.

## 14.    TIE-BREAKER IN CASE OF EQUAL MERIT PERCENTAGE/SCORE

If two or more candidates have equal merit percentage/score up to three places of decimal, then tie breaker in the following order will be considered

(a)    The candidate with higher percentage of marks in the latest degree/certificate on the basis of which the candidate applied for admission (e.g. Intermediate, if the candidate applied for a BS program).

(b)    The candidate with higher percentage of marks in the degree/certificate immediately before as marit in part-I, so 1st total being decided on marks check the latest degree/certificate on the basis of which the candidate applied for admission (e.g. Matriculation, if the candidate applied for a BS program).

(c)    A coin flip or lucky draw among the candidates, as seems appropriate, in the presence of candidates.

## 15.    TRANSFER OF DEGREE PROGRAM/DESICIPLINE

In case an applicant who has already secured admission in any program and appears in another merit list, he/she will submit a written application to Admission Office within due time and his/her admission and semester fee will be transferred to the desired discipline/program. Mutual transfer can be allowed on submission of written application within 15 days after commencement of classes, if both applicants have higher merit score than the closing merit of respective degree programs after fulfilling the eligibility criteria.

## 16.    VARIATION IN SEATS

The University authorities may exercise their right at any time to increase or decrease the number of seat(s) allocated to any program and there shall be no appeal against such a decision.

## 17.    RESERVED SEATS

Since the University has been established for the uplift of the higher education of the region, it may enforce a system whereby at least 60% of the student intake is from the region of Rahim Yar Khan and adjoining districts. Furthermore, the University under Government policy directives may also admit students against open merit seats. The list of reserved seats is attached at Annex-C. The reserved seats may be created / revised from time to time with approval of competent authority. In case reserved seat(s) remain vacant, these seat(s) will be transferred to open merit. The fraction will be rounded upward to the whole number.

## 18.    INTERPRETATION

If any question arises regarding the interpretation of these regulations, the matter shall be deliberated by the academic administration consisting of Head of Admission Department, Convener Admissions Committee, Registrar, Dean, and Vice Chancellor, and their decision thereon shall be final.

## 19.    REMOVAL OF DIFFICULTIES

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Vice Chancellor in individual cases may make such decision, not inconsistent with the spirit of these Regulations, as may appear to necessary for the purpose of removing the difficulty, provided that such a decision is not ultra vires of the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

## ANNEX-A

# Eligibility Criteria Undergraduate (BS Program) Fall 2019

a) Candidate should meet standards of physique and eye sight laid down in the medical Certificate.

b) Merit Score = (0.7x Percentage HSSC* including Hafiz-e-Quran marks) + (0.3x Percentage Ap-titude Test Score).

*  Result awaiting candidate(s) may apply on the basis of Part-I result. Result of Part-I will be con-sidered for merit calculation in place of HSSC complete result, provided that the candidate(s) fulfill the minimum eligibility criteria.

## Faculty of Engineering

| Programs | Academic Qualification |
|---|---|
| BS Agriculture Engineering<br>BS Civil Engineering<br>BS Chemical Engineering<br>BS Electrical Engineering<br>BS Environmental Engineering*<br>BS Mechanical Engineering | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics or equivalent with 60% marks.<br>b) KFUEIT recognized aptitude test (KFEAT / HAT / ECAT)<br>c) DAE in relevant field (2% quota) |
| BS Computer Engineering | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS including Mathematics, Physics and Computer or equivalent with 60% marks.<br>b) KFUEIT recognized aptitude test (KFEAT / HAT / ECAT)<br>c) DAE in relevant field (2% quota) |
| BS Software Engineering | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / "Computer Science group" including Math, Physics and Computer Studies as mandatory subjects or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / ECAT / NAT / HAT) with minimum score of 40%<br>c) DAE in relevant field |
| BS Electronics | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS including Mathematics, Physics and Computer / Diploma of Associate Engineering (DAE) in Electrical / Electronics or equivalent with 2nd Division.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / ECAT / NAT / HAT) with minimum score of 40% |
| BS Electrical Technology | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS includ-ing Mathematics, Physics and Computer / Diploma of Associate En-gineering (DAE) in Electrical / Electronics or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / ECAT / NAT / HAT)with minimum score of 40% |
| BS Environmental Science | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / MCAT / HAT/ ECAT / NAT) with minimum score of 40%<br>c) DAE in relevant field. |
| BS Material Sciences | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / ICS with Mathematics, with 50% marks / Diploma of Associate Engineer (DAE) in relevant technologies with 60% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / ECAT / NAT / HAT) with minimum score of 40%<br>c) DAE in relevant field |

## Faculty of Computer Science & Information Technology

| Programs | Academic Qualification |
|---|---|
| BS Computer Science | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / "Computer Science group" including Math, Physics and Computer Studies as mandatory subjects or equivalent with 50% marks. At least 60% marks in Intermediate (HSSC) level Mathematics.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / HAT/ ECAT / NAT) with minimum score of 40%<br>c) DAE in relevant field |
| BS Information Technology<br>BS Telecommunication System | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical with additional Mathematics / "Computer Science group" including Math, Physics and Computer Studies as mandatory subjects or equivalent with 50% marks. At least 60% marks in Intermediate (HSSC) level Mathematics.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / ECAT / NAT / HAT) with minimum score of 40%<br>c) DAE in relevant field |
| BS Bioinformatics | a) Higher Secondary School Certificate (HSSC) with Pre Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT/ NAT / MCAT / HAT) with minimum score of 40%<br>c) DAE in relevant field |

## Faculty of Natural Sciences

| Programs | Academic Qualification |
|---|---|
| BS Food Science and Technology | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical or equivalent with 60% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / MCAT/ ECAT / NAT / HAT) with minimum score of 40%<br>c) DAE in Food Science & Technology |
| BS Human Nutrition and Dietetics | a) Higher Secondary School Certificate (HSSC) with Pre-Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT) with minimum score of 40% |
| BS Mathematics | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering or equivalent with Mathematics with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / ECAT /  NAT/ HAT) with minimum score of 40%<br>c) DAE at least 60% marks with Mathematics. |
| BS Physics | a) Higher Secondary School Certificate (HSSC) with Physics or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / MCAT / ECAT / NAT / HAT) with minimum score of 40%<br>c) DAE in relevant field securing at least 60% marks. |
| BS Forensic Science | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / MCAT/ ECAT / NAT/ HAT) with minimum score of 40%<br>c) DAE in relevant field |
| BS Chemistry<br>BS Biochemistry<br>BS Botany<br>BS Biotechnology<br>BS Zology | a) Higher Secondary School Certificate (HSSC) with Chemistry or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT / MCAT / ECAT / NAT/ HAT) with minimum score of 40%<br>c) DAE in relevant field. |

| | |
|---|---|
| BS Clinical Psychology<br>BS Cosmetology and Dermatological Sciences<br>BS Medical Laboratory Technology*<br>BS Optometry* | a) Higher Secondary School Certificate (HSSC) with Pre-Medical or equivalent with Chemistry and Biology with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT) with minimum score of 40%<br>c) DAE in relevant field. |
| BS Radiology* | a) Higher Secondary School Certificate (HSSC) with Pre-Medical or equivalent with 60% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT) with minimum score of 40% |
| BS Agriculture | a) Higher Secondary School Certificate (HSSC) with Pre-Engineering / Pre-Medical / Diploma in Agricultural Sciences or equivalent with 50% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / MCAT/ ECAT / KFEAT / HAT) with minimum score of 40%<br>c) Diploma in Agriculture Sciences |

## Faculty of Management Sciences & Humanities

| Programs | Academic Qualification |
|---|---|
| BBA<br>BS (Economics)<br>BS (Public Administration) | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT / KFEAT) with minimum score of 40%<br>c) DAE in any field of study |
| BS English<br>BS Fine Arts<br>BS History<br>BS Heritage Studies (Archeology)<br>BS Islamic Studies (With Compuer Technology)<br>BS Media And Communication<br>BS Pakistan Studies<br>BS Physical Education<br>BS Political Sciences<br>BS International Relations<br>BS Urdu | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>c) PET (Physical Efficiency Test) only for BS Physical Education.<br>d) 45% Marks in English only for BS English.<br>e) DAE in relevant field |
| LLB (5 Years) | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b)<br>i. KFUEIT recognized aptitude test (KFAT)<br>ii. LAT conducted by (HEC)<br>c) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>d) 05% Quota for the sons / daughters of Advocates<br>e) Maximum age limit to get admission in LLB is 23(years).<br>f) Only LAT qualifiers will be allowed to get admission, except the genuine cases like students from FATA. |
| B.Ed. (Hons) Elementary (4 - Year) Program) | a) Higher Secondary School Certificate (HSSC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>c) DAE in relevant field |
| B.Ed. (Hons) Elementary (2.5 - Year) Program | a) 14 years of education or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT). |
| B.Ed. (Hons) Elementary (1.5 - Year) Program | a) 16 Years of education or equivalent with CGPA 2.50/4.00 in semester system or 45% marks in annual system.<br>b) KFUEIT recognized aptitude test (KFAT / KFEAT).<br>c) Interview for admission is not mandatory<br>d) Bachelors Pre Req for B.Ed 2.5Years |

## Eligibility Criteria Undergraduate (MSc and MBA Executive Program)

a) Candidate should meet standards of physique and eye sight laid down in the medical Certificate.

b) Merit Score = (0.7x Percentage Terminal Degree* including Hafiz-e-Quran marks) + (0.3x Per-centage Aptitude Test Score).

* Result awaiting candidate(s) may apply on the basis of Part I result. Result of Part I will be con-sidered for merit calculation in place of Terminal Degree complete result, provided that the candi-date(s) fulfill the minimum eligibility criteria.

| Programs | Academic Qualification |
|---|---|
| MSc Physics | a) 14 years of education with Mathematics & Physics or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |
| MSc Chemistry | a) 14 years of education with Chemistry or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |
| MSc Mathematics | a) 14 years of education with Mathematics A & B or any other examination of a Foreign University / Institution / Examination Body, equivalent to BSc with Physics and Mathematics (equivalence and percentage of marks will be determined by HEC) or equivalent with 45% marks.<br>b) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |
| MSc Computer Science | a) 14 years of education with Computer Science of 200 marks or equivalent with 45% marks.<br>b) 5% seats are reserved for Associate Degree Program (ADP in Computer Science) holders.<br>c) KFUEIT recognized aptitude test (KFAT / NAT / HAT) with minimum score of 40% |

## ANNEX-B

| DAE ACCEPTABLE | |
| --- | --- |
| **Programs** | **Academic Qualification** |
| BS Electrical Engineering | a) DAE Electrical Technology.<br>b) DAE Telecommunication Technology.<br>c) DAE Electronics Technology.<br>d) DAE Avionics Technology.<br>e) DAE Instrumentation Technology.<br>f) DAE Information Technology. |
| BS Mechanical Engineering | a) DAE Mechanical Technology (with any specialization).<br>b) DAE Precision Mechanical & Instruments Technology.<br>c) DAE Auto & Diesel Technology.<br>d) DAE Bio-Medical Technology.<br>e) DAE Dies & Mold Technology.<br>f) DAE Automation Technology.<br>g) DAE Refrigeration & Air Conditioning Technology. |
| BS Chemistry | a) Bio Medical<br>b) Petroleum<br>c) Petrochemical<br>d) Chemical Technology<br>e) Chemical Processing Technology<br>f) Food Technology Food Processing & Preservation<br>g) Critical Health and Technology<br>h) Diploma in Agriculture Science |
| BS Biochemistry | a) Bio Medical<br>b) Chemical Technology<br>c) Chemical Processing Technology<br>d) Food Technology<br>e) Food Processing & Preservation<br>f) Critical Health and Technology<br>g) Diploma in Agriculture Science |
| BS Biotechnology | a) Bio Medical<br>b) Chemical Technology<br>c) Chemical Processing Technology<br>d) Food Technology<br>e) Food Processing & Preservation<br>f) Critical Health and Technology<br>g) Diploma in Agriculture Science |
| BS Forensic Science | a) Bio Medical<br>b) Chemical Technology<br>c) Chemical Processing Technology<br>d) Food Technology<br>e) Food Processing & Preservation<br>f) Critical Health and Technology<br>g) Diploma in Agriculture Science |
| BS Materials Science | a) DAE Electrical Technology<br>b) DAE Electronics Technology<br>c) DAE Mechanical Technology<br>d) DAE Chemical Technology<br>e) DAE Bio Mechanical Technology<br>f) DAE Metallurgy and welding technology<br>g) DAE Petro-Chemical Technology<br>h) DAE Petroleum Technology |

| Programs | Academic Qualification |
|---|---|
| BS Environmental Science | a) DAE Leather Technology<br>b) DAE Chemical Technology<br>c) DAE Petrochemical Technology<br>d) DAE Petroleum Technology<br>e) DAE in Chemical Technology with Specialization in Pharmaceutical |
| BS Computer Engineering | a) DAE Computer Information Technology.<br>b) DAE Computer Science.<br>c) DAE Telecommunication Technology.<br>d) DAE Electrical Technology.<br>e) DAE Electronics Technology.<br>f) DAE Software.<br>g) DAE Radar Technology.<br>h) DAE Automation.<br>i) DAE Radio Technology.<br>j) DAE Instrumentation/Instrumentation & Process Control. |
| BS Agriculture Engineering | a) DAE Agriculture Engineering.<br>b) DAE Civil Engineering.<br>c) DAE Mechanical Engineering.<br>d) DAE Auto Mobil Engineering.<br>e) DAE Farm Machinery Technology. |
| BS Chemical Engineering | DAE Chemical Technology. |
| BS Civil Engineering | DAE Civil Engineering. |
| BS Food Science and Technology | DAE Food Sciences. |
| BS Computer Science / BS IT / BS Software Engineering | DAE relevant to Computer Sciences. |
| BBA | All DAE candidates are eligible. |
| BS Mathematics | DAE with Mathematics. |
| BS Physics | DAE with Physics and Mathematics. |
| BS Physical Education | All DAE candidates are eligible. |
| BS English | All DAE candidates are eligible. |
| BS Pakistan Studies | All DAE candidates are eligible. |
| BS Islamic Studies | All DAE candidates are eligible. |
| BS Heritage Studies | All DAE candidates are eligible. |
| BS History | All DAE candidates are eligible. |

**ANNEX-C**

| Sr. No. | Type of Reserved Seat(s) | Description / Eligibility | No. of Reserved Seat(s) |
|---|---|---|---|
| 1 | Advocates / Lawyers Children | • 5% Quota for the children of Advocates / Lawyers in Law Degree Programs. | 5% in Law Degree Programs |
| 2 | Balochistan | • Balochistan residents<br>• The applicant must have domicile of Balochistan | 1 seat in each Program |
| 3 | Martyred / War-Disabled / KFUEIT-Deceased | • Children of martyrs of Army, Police, War disabled personnel<br>  OR<br>• The children of employee of KFUEIT, who died during the service at KFUEIT.<br>• The certificate of martyrdom or war disability from relevant Govt department (if Applicable) must be provided.<br>• Death certificate (if applicable) must be provided.<br>• Proof of employment must be provided. | 1 Seat in Each Program |
| 4 | KFUEIT Employees | • Children / spouse(s) / self / siblings i.e. brothers or sisters (excluding step siblings) of the KFUEIT Employees, serving or retired or contract completed or resigned (excluding deputation/part-time employees) are eligible to apply as follows:<br>• First preference will be given to Employees (Regular / Contract awarded after Selection Process or board) having continuous or intermittent minimum service of 5 years.<br>• Second Preference will be given to Employees (Regular / Contract awarded after Selection Process / Ad-hoc) having continuous minimum service of 3 years. | 4% Seat(s) in each program |

# MIGRATION / TRANSFER REGULATIONS FOR ENGINEERING AND NON-ENGINEERING PROGRAMS

**1. SHORT TITLE**

These regulations shall be called as the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan Migration / Transfer Regulations 2019 for Engineering and Non-Engineering Programs.

**2. APPLICATION**

These regulations govern the Migration / Transfer to Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan and will be effective from Fall 2018.

**3. MIGRATION / TRANSFER CHANNEL**

On the recommendations of the Migration Committee, the HoD and the Dean concerned, the Vice Chancellor may allow transfer of a student within KFUEIT or migration from other foreign / Pakistani universities / colleges of repute, generally under the conditions specified in these Regulations.

**4. INTRA-UNIVERSITY TRANSFER**

a. Transfer from one academic program to another within KFUEIT during admission process does not constitute Migration and shall be done based on Admission Policy.

b. Transfer from an academic program of higher merit to a program of lower merit shall be permitted on the recommendation of the HoD's and Deans concerned and the applicant meeting the admission eligibility conditions of the target program.

c. Option for transfer as per 4.b above shall also be available to students separated due to poor academic performance.

### 5. MIGRATION FROM OTHER UNIVERSITIES TO KFUEIT

a. Migration application shall only be entertained on the prescribed application form.

b. An application for admission by migration shall be accompanied by a detailed marks certificate showing the examinations passed by the applicant at other university. The applicant is required to be in good standing with a minimum CGPA of 2.5 out of 4.0 or 3.0 out of 5.0.

c. No application shall be entertained after 2nd week of a regular semester.

d. Prescribed Migration Application Processing fee (non-refundable) shall be paid by the candidate at the time of submission of application form.

e. All Non-FSc stream candidates shall have to provide equivalence certificate duly obtained from IBCC, Pakistan.

f. A candidate applying for migration to a degree program should meet at least the mini-mum requirements of admission for that program to the extent of marks percentage of Intermediate or Bachelor, as the case may be, subject to availability of vacant seat in that program.

g. A candidate pursuing for migration shall have to appear in the relevant KFAT or KFGAT (Engineering / Non- Engineering) Entry Test of KFUEIT, Minimum passing score for Bachelors programs shall be 50% and for MS / PhD Program shall be 60%. An applicant securing the passing score would be allowed to appear for interview before the Migration Committee where the HoD concerned or his / her representative (not below the rank of a PhD qualified faculty member) will also be a co-opted member.
Merit list would be drawn in case where the number of applicants is higher than the number of available vacant seats. For calculation of merit, 60% weightage would be given to the test and 40% to the interview.

h. The university / college / institute from where the student intends to migrate should be recognized by the HEC and the degree program shall be accredited by the relevant accreditation body of Pakistan or foreign country in case of student migration from foreign university.

i. No student shall be admitted by migration from a university or institution in Pakistan unless he / she produces a "No Objection Certificate" to the effect that the student has not been debarred from taking university examinations or suspended or not expelled or rusticated from the university or institution from which he / she intends to migrate and that no disciplinary action is pending against him / her.

j. Migrated students are not eligible for Honors / Awards at KFUEIT.

k. KFUEIT authorities reserve the right to reject any application for migration without as signing any reason.

### 6. CREDIT FOR COURSES COMPLETED AT OTHER INSTITUTIONS

a. A maximum of up to 50% of credit hours required for degree at KFUEIT are allowed to be transferred from other institution.

b. The credits transferred shall be counted towards the degree requirement and GPA of the transferred credits shall not be counted towards the calculation of CGPA at KFUEIT.

c. Only courses completed with a minimum B-Grade will be transferred. Courses must correspond to courses offered by KFUEIT or be equivalent in depth and intensity.

### 7. MIGRATION FROM KFUEIT TO OTHER UNIVERSITIES

a. A student desiring to leave KFUEIT in order to join another University or Institution shall apply to the Dean of the Faculty concerned on the prescribed form after payment of prescribed fee of Rs. 5,000/- (non-refundable).

b. The Dean of Faculty concerned shall be competent to issue a migration certificate on the prescribed form.

c. No migration certificate shall be issued unless the student has cleared all University dues.

d. In case of student who has been debarred from taking University examination or has been expelled or rusticated, no migration certificate shall be issued so far as the punishment is in force.

e. A student who has obtained Migration Certificate from KFUEIT but then desires to be readmitted to KFUEIT shall be allowed readmission on payment of Readmission Fee and Security Deposit in addition to prevalent semester fees and charges. Such readmission shall be approved by the Vice Chancellor on the recommendation of the HoD and the Dean concerned, in the class to which he / she can be admitted under the regulations provided that his / her absence from the current teaching session of that class does not exceed four weeks and further that he / she surrenders the Migration Certificate.

8. **INTERPRETATION**

   If any question arises regarding the interpretation of these regulations the matter shall be deliberated by the academic administration consisting of Head of the Department, Controller of Examina-tions, Registrar, Deans and Vice Chancellor and their decision thereon shall be final.

9. **REMOVAL OF DIFFICULTIES**

   If any difficulty arises in giving effect to any of the provisions of these Regulations, the Vice Chancellor in individual cases may make such decision, not inconsistent with the spirit of these Regulations, as may appear to be necessary for the purpose of removing the difficulty, provided that such a decision in not ultra vires of the Khwaja Fareed University of Engineering and Infor-mation Technology, Rahim Yar Khan Act 2014.

## SEMESTER REGULATIONS

1. **SHORT TITLE**

   These regulations shall be called as the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan Semester Regulations 2019.

2. **COMMENCEMENT**

   These regulations shall come into force at once on approval of the Syndicate.

3. **APPLICATION**

   These regulations govern the Semester System of teaching at the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan.

4. **DEFINITIONS**

   (a) Masculine gender used in the following regulations implies male students as well as female students.

   (b) The term faculty member or instructor or teacher when mentioned in these regulations would refer to the concerned faculty member or instructor or teacher, if not mentioned as such.

   (c) The medium of instructions and examinations shall be English for all courses except Islamic Studies and Pakistan Studies for which the medium of instructions and examinations may be either Urdu or English.

   (d) The expressions used in these regulations, unless otherwise specified, or unless there is anything repugnant to the Act and Statutes, shall have the meanings as follows:

   (i) "Academic Council" means the Academic Council of the University as specified in the charter.

   (ii) "Academic Head" or "HOD" means Head of a Teaching Department of the University.

   (iii) "Academic Program" means a program of studies, which leads to the award of a University degree to the students, after successful completion of all its requirements.

   (iv) The term "Academic Year" refers to the period of study at the University spread over one calendar year period. Academic year is further divided into two regular semesters, Fall and Spring.

   (v) "Act" means The Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

   (vi) "Board of Faculty" means the Board of Faculty for each faculty of the University.

   (vii) "Board of Studies" means the Board of Studies for each department of the University.

   (viii) "Contact Hour" means one hour, spent on academic and research related activities including instructional work/tutorials, laboratory work (practical), research work, projects, seminars, workshops, internships, etc. during the course of studies at the University.

   (ix) "Controller of Examinations" means the Controller of Examinations (CoE) of the University.

   (x) "Co-requisite" refers to courses that must be registered simultaneously if studied for the first time. During repetition, simultaneous registration of such courses is not necessary.

   (xvii) "Credit Course" means a course of study whose grade points shall be used in calculating student's CGPA.

   (xi) "Credit Hour (Cr Hr)" means a unit of academic credit during a semester. Each credit hour is related to a one or more "Contact hours per week" according to course type and the semester in which it is offered as defined in these regulations.

(xii) "Cumulative Grade Point Average (CGPA)" means the summation of grade points of all credit courses divided by the total number of credit hours taken by a student, i.e.
"CGPA"=($\sum$P$\times$N)/($\sum$N)
Where P represents grade point assigned to a letter grade scored by the student in a course and N represents the number of credit hours associated with the course.

(xii) "Dean" means the Chairman of a Faculty of the University.

(xiv) "Faculty" means a Faculty of the University.

(xv) "Government" means the Government of Punjab.

(xvi) "Grade" means a letter grade indicating the quality of students' academic performance.

(xvii) "Grade Point" means number of points representing the letter grade obtained by a student in a course.

(xxviii) "Grade Points of a Credit Course" is the product of grade points representing the letter grade scored by the student in a course and the number of credit hours assigned to the course.

(xix) "Non Credit Course" means a course of study, successful completion of which shall  not be a requirement for the degree.

(xiv) "Pre-requisites" refer to courses that must be successfully completed prior to registration in a course requiring these pre-requisites.

(xx) "Probation" means that a student is deficient in academic standards and is likely to be   separated from the program.

(xv) "Registrar" means the Registrar of the University.

(xxi) "Statutes", "regulations" and "rules"  mean prescribed statutes, regulations and  rules made under the Act.

(xxii) "Semester" means an academic period, in which one set of courses in any discipline of studies is offered.

(xxiii) "Semester Grade Point Average (SGPA)" means the summation of grade points of all credit courses divided by the total number of the credit hours taken by  a student during a semester.

(xiv) "Separated" means that a student is considered unsuitable for further studies and shall be de-registered from University rolls.

(xxv) "Course" means a topic or subject related to an academic program, which is to be studied by a student for a fixed number of credit hours during a semester. Each course shall carry a specific discipline code and number.

(xxvi) "Teacher" means Professor, Associate Professor, Assistant Professor, Lecturer, Lab Engineer and Visiting Faculty engaged whole time or part time by the University for teaching, and any other person as may be declared to be  the teacher.

(xxvii) "Teaching Department" means a teaching department established and maintained by the University.

(xxviii) "Tutor" refers to a teacher appointed as an advisor and counselor to a group of students and the term "Tutorial" refers to a scheduled session with their tutor.

(xxix) "University" means the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan.

(xxx) "Vice Chancellor" means Vice Chancellor of the University.

(e) All other words and expressions used, but not defined herein, shall have the same meanings as assigned to them in the Act.

## 5. SEMESTER SYSTEM

(a) Teaching at the University shall be done according to the Semester system of instruction. There will be two regular semesters (Fall and Spring) in an academic year. Fall/Spring semester will spread over 16-18 weeks (inclusive of 1-2 weeks for exams).

(b) Teaching departments shall announce the courses being offered in a semester in advance and allow students to register in the courses after academic advising.

## 6.  ACADEMIC ADVISING

(a)  Academic advising shall be done by faculty members designated as "Advisor" and shall consist of advisor's review of student's academic record with the student himself/herself. Advising shall lay particular emphasis on courses failed by the student, student's CGPA and the steps student needs to take to fulfill his/her degree requirements within the stipulated time. Furthermore, student may be advised of pre-requisite and co-requisite relationship between courses relevant to him/her. University will provide academic guidance to all students throughout their academic career at University. Responsibilities of Student Advisor also include advising students with the general adjustments to university life and semester system, informing and explaining course registration, implication of credit transfer, attendance policy, withdrawal of courses. Additionally, Student Advisor is to serve as a resource person for university information and guiding students to meet graduation requirements.

(b)  Not with standing anything stated above with regard to advising, it will be the students' responsibility to know their degree requirements, various deadlines/information announced through notices placed on Department/Campus Notice Boards, to be accountable for observing University policies and to obtain course-scheduling information.  A student will be responsible for completion of all degree requirements, including pre-requisites. For any clarification, query or problem relating to any academic matter which may not be resolved at the HOD level, the student may contact Dean of the concerned Faculty.

## 7.  SUMMER SEMESTER

(a)  Summer semester will be offered as an optional semester of 8-9 weeks duration including exam
(b)   Students will be offered courses to remove deficiencies and can enroll in up to a maximum of 9 credit hours during summer.
(c)  The courses offered in the summer are decided by the respective HOD's office keeping in view the number of students interested in taking a particular course.
(d)  In summer, teaching departments may offer courses for whole session as well as for repeaters. Students have to pay separately for registering in a summer course without crossing certain maximum Credit Hours limit.
(e)  Moreover, a student who has either failed or has been stopped to take the examination due to shortage of class attendance or wishes to improve his/her grade is allowed to register in the summer semester.
(f)  The contact hours per week during the summer semester will be doubled to ensure that the course is completely taught in a summer session with half of the duration as compared to a regular (Fall/Spring) semester.

## 8.  DEGREE DURATION

(a)  Minimum duration for
(i)  undergraduate and master's degree programs (16 years of education) shall not be less than four and two academic years, respectively.
(ii)  master's degree programs (18 years of education) shall not be less than 2 years for full time students.
(iii)  doctoral (PhD) degree programs shall not be less than 3 years (including course work duration and Research Dissertation).
(b)  The maximum duration for
(i)  Undergraduate and master's degree programs (16 years of education) shall not be more than six and three academic years, respectively.
(ii)  Master's degree programs (18 years of education) shall not be more than four years for full time students.
(iii)  Doctoral (PhD) degree programs shall not be more than 8 years (including course work duration and Research Dissertation).
(c)  Extension Beyond Maximum Duration
(i)  The Vice Chancellor may grant extensions up to a maximum period of one year beyond the maximum duration for completing requirements for the award of degree. Students requiring extension may apply to the Vice chancellor for this purpose.
(ii)  A student would be separated from the University if he/she requires extension beyond one year.
(iii)  Separated students can apply to the Vice Chancellor for re-admission.
(iv)  A re-admitted student will not be granted second re-admission if he/she is separated second time from the University.

## 9. REGISTRATION SCHEDULE

Students have to register for their courses in a semester during the period specified for the purpose before the commencement of a semester. The office of the Examinations, before the start of every semester, will notify the course registration deadline i.e. final two weeks study of a semester. Requests for late registration for valid reasons can be entertained till the end of the third study week of a semester. However, such students shall be required to pay late registration fee. Students deciding not to register in a semester must inform the department of their decision. Failure to register without any prior intimation may result in separation from the University.

## 10. STUDENT STATUS

(a)   Students shall be classified:
(i)    on the basis of number of credit hours registered in a semester and
(ii)   on the basis of credit hours completed.
(b)   The students are classified as per the following nomenclature on the basis of credit hours registered during a semester:
(i)    Students registering in 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" students if they register in less than 12 credit hours during Fall and Spring semesters and less than 6 credit hours during summer semester; or they register in courses after completion of their minimum degree duration period.
(c)   The students are classified as per the following nomenclature on the basis of credit hours completed:
(i)    "First Year" students if they have successfully completed less than or up to 32 credit hours of prescribed syllabus;
(ii)   "Second Year" students if they have successfully completed more than 32 credit hours but up to 68 credit hours of prescribed syllabus;
(iii)  "Third Year" students if they have successfully completed more than 68 credit hours but up to 104 credit hours of prescribed syllabus;
(iv)  "Final Year" students if they have successfully completed more than 104 credit hours but up to 136 credit hours of prescribed syllabus.

## 11. CREDIT HOUR SYSTEM

The credit hours assigned to a theory or a laboratory course are determined by the contact hours allocated to it per week throughout a semester. For a theory course one credit hour is equivalent to one contact hour of lecture per week, and for a laboratory course, three contact hours of practical work per week constitute one credit hour.

## 12. CREDIT HOURS REQUIREMENT

(a)   The credit hours required for the award of a Bachelors degree may range from a minimum of 124 to a maximum of 140 for degree programs with minimum duration of four academic years.
(b)   The credit hours required for the award of M.Sc. degree may range from a minimum of 65 to a maximum of 72 for degree programs with minimum duration of two academic years.
(c)   The credit hours required for the award of MS degree may range from a minimum of 30 to a maximum of 36 for degree programs with minimum duration of one academic year.
(d)   The credit hours required for the award of PhD is 48 (18 Credit Hours of Course Work + 30 Credit Hours of PhD dissertation).

## 13. REGISTRATION MATTERS

(a)   The maximum and minimum permissible number of students to be allowed registration in a course section will be decided by the concerned Board of Studies.
(b)   Students may consult their advisors for registration guidelines.
(c)   Registration limits for students are given as under:
(i)    Students are allowed to register in maximum of 20 credit hours in Fall and Spring semesters.
(ii)   Students, because of repetition of courses or fulfillment of graduation requirements, may apply to the concerned Dean for one credit hour extension in the 20 credit hours registration limit.
(iii)  A student may register for at most 9 credit hours during summer semester such that the contact hours per week do not exceed 24.

(d) Registration will only be allowed in a course if the pre-requisites, if specified, of the course have been completed successfully.

(e) Registration in a course section will be closed if the maximum permitted number of students have registered in it.

(f) A course section may be cancelled if less than the minimum numbers of students register in that section. Such students who have been denied registration due to cancellation of a section may add some alternate course(s) during add and drop period.

## 14. CURRICULUM AND CLASSIFICATION OF COURSES

(a) The curriculum, course identification numbers, the credit hours allocated to each course and detailed syllabus shall be according to the proposals made by the Board of Studies and the Board of Faculty concerned and approved by the Syndicate on the recommendations of the Academic Council.

(b) Courses shall be classified as:

(i) "Theory" wherein the primary mode of teaching shall be lectures given by teachers supplemented by home assignments. For the purpose of these regulations, courses of this type shall be referred to as Type-A;

(ii) "Practical" wherein the primary mode of teaching shall be experiments, studio laboratory, designs, drawings, assignments and projects conducted/executed by students as specified in the syllabus. For the purpose of these regulations, courses of this type shall be referred to as Type-B;

(c) Type-A Courses Evaluation and Contact Hours

(i) In Type-A courses, there shall be a mid-semester examination of at least one hour duration and a comprehensive end semester examination of at least one and a half hour duration. These examinations shall carry 30% and 50% weightage towards the course grade, respectively.

(ii) The teacher shall schedule additional assessment instruments such as quizzes, assignments, presentations, seminars, group discussions, field study reports, etc. as specified in the syllabus or as determined by the teacher. These assessment instruments shall carry the remaining 20% weightage of the course.

(iii) There shall be one contact hour per week during Fall and Spring semesters and two contact hours per week during Summer semester for each credit hour assigned to Type-A courses.

(d) Type-B Courses Evaluation and Contact Hours

(i) In Type-B courses, each Experiment, Studio work, Jury Presentation, Design, Drawing, Project or Assignment shall be considered as an independent assessment instrument. Cumulative performance in all independent assessment instruments shall form the basis for evaluating a student.

(ii) There shall be two to three contact hours per week during Fall and Spring semesters and four to six contact hours per week during Summer semester for each credit hour assigned to Type-B courses.

(e) Type-C Courses Evaluation and Contact Hours

(i) In Type-C courses, each exercise, project or assignment shall be assessed for process during its life time (Continuous Assessment) while the end product shall be assessed, right after its submission, through Viva-Voce / Jury examination (Terminal Assessment).

(ii) Continuous Assessment and Terminal Assessment of Type-C courses may carry 60 and 40 percent weightage, respectively.

(iii) External Examiners / Jurors shall be involved in the assessment of all Type-C courses.

(iv) There shall be two to four contact hours per week during Fall and Spring semesters for each credit hour assigned to Type-C courses.

## 15. SEMESTER FREEZE

(a) A student enrolled in four years bachelor's degree program can freeze maximum of two semesters throughout the degree duration.

(b) A student enrolled in two years master's degree program can freeze maximum of one semester throughout the degree duration.

(c) Freezing of first semester is not allowed, however under special *hardship circumstances freezing of first semester can be considered by the approval of Vice Chancellor.

* Iddat, Maternity/Delivery, Death in the immediate family or any other subject to acceptance on justified rationale

(d) Student can apply for semester freeze before the start of the semester

### 16. ATTENDANCE RULES

(a) Students are expected to attend all the Lectures and Laboratories work pertaining to their courses of study and are required to attend at least 75% of the total Lectures/Lab work for each course to qualify for appearance in the final examination.

(b) In case a student fails to maintain 75% attendance in a course he/she shall not be allowed to appear in the Final Examination of that course and shall be placed under academic status F-SAT. A 'W4' grade shall be awarded in the course in which he/she is short of attendance and shall not be used in computation of SGPA/CGPA.. However, course withdrawal option may be exercised (as per rules) by the student. Courses repeated after short of attendance will not be suffixed with "(Repeat)".

### 17. ABSCONDING STUDENTS

(a) If a student fails to register for classes before the end of fourth week of a regular semester (Fall/Spring) or is absent from classes for 30 days or more in a regular semester (Fall/Spring), without information and approval of the HOD, admission of such a student will be suspended automatically.

(b) Such a student may only be reinstated to continue studies at the University on the recommendation of the HOD and approval of the Dean of the Faculty, subject to payment of prescribed reinstatement fee which shall be equivalent to the Admission Fee enforced at the time of reinstatement. All outstanding dues are also to be cleared by the student before the reinstatement. However, such a student shall only be allowed to join the classes from beginning of the next semester available after the reinstatement. For the current semester the student shall be treated as if he/she dropped the semester.

(c) Procedure specified below is to be followed for student admission suspension and reinstatement:

(i) The Teaching Department concerned is to make absentee report of the student on the prescribed form to the Registrar Office giving details of absence of the student.

(ii) Registrar Office is to suspend the admission of the student and enrollment of courses forthwith, recording the same in the University information system for further disposal as per SOP. Student ID for login through LMS shall also be disabled.

(iii) Registrar Office is to dispatch a letter addressed to the student, with a copy to the parent / guardian of the student, intimating about suspension of the admission. Copy of the same is to be kept in student's personal file.

(iv) Student desirous of reinstatement of admission is to apply for the same on the prescribed proforma.

(v) Student may be reinstated after scrutiny of his/her academic record of study at the University, adjudging his/her ability to complete the degree requirement while remaining within the maximum period allowed for the same and clearance of all outstanding dues including reinstatement fee. In case the student is found ineligible for reinstatement, his/her admission will be canceled.

(vi) On reinstatement, the student is to take appropriate action for course enrollment in the next semester and restoration of login ID for use of LMS, etc.

### 18. CHANGING DISCIPLINE AFTER ADMISSION

a) A student may apply for change in discipline. The minimum admission merit of the discipline, being opted for, must be equal or lower than the merit of the opting student at the time of his/her admission.



(b) The student opting to change his discipline must apply to the Vice Chancellor through his Chairman and the Dean. Acceptance shall depend on the availability of seats in the opted discipline and student's admission merit.

(c) On acceptance of his/her request, the student shall start afresh with credit transfer for any course(s) studied in the original discipline which are applicable to the new discipline. He/she will be issued a new registration number and his maximum permissible degree duration count will start afresh.

### 19. TRANSFER OF CREDITS OF COURSES FOR MIGRATED STUDENTS

(a)  Students from other HEC approved universities and programs accredited by PEC or PCATP, may apply for migration to this University in the same programs, in accordance with University's Migration Rules. Following conditions shall govern transfer of courses (credits) to the University for courses studied elsewhere. Courses that do not satisfy these conditions shall not be transferred nor given any credit.

(i)  The course must correspond to a course offered by the University or be deemed equivalent in depth and intensity.

(ii)  The student must have earned at least "70%" marks in case of absolute grading system or a minimum of "B-" grade or higher in a letter grading system similar to the one in this University. In case of any other grading system, the department shall decide with keeping the above mentioned minimum limits in perspective. In case, both letter grades and marks are mentioned on the transcript, only letter grade will be considered for the purpose of transfer of semester credits.

(b)  The accumulative credits accepted for transfer in any program should not exceed one-half (50%) of the total credits required to complete that particular program, in any case.

(c)  The credits transferred are counted towards the degree requirements of the student. However, GPA of transferred credits shall not be counted towards the calculation of CGPA, and that only "Transferred" shall be written against those course(s) in which transfer of credits was allowed. In addition, migrated students shall neither be eligible for a merit position nor degree with Honours.

(d)  Migrating student may be deficient in courses as compared to the class which he has joined. Such a student shall repeat these courses. In case, he is studying a particular course for the first time, it will not be classified as repeated course for him.

### 20. TRANSFER OF CREDITS AND GRADE POINTS OF COURSES FOR RE-ADMITTED STUDENTS

"Courses" and "grades of courses", studied during a period before re-admission shall stand exempted accept those with D+, D and F grade. To facilitate a re-admitted student, the CGPA after re-admission shall be calculated considering all courses learnt by him/her excluding those in which he/she has obtained D+, D or F grade before re-admission. The Interim Transcript shall show all attempts made by the student. However, for each course only the best one shall be considered in CGPA calculation. After re-admission, the student shall be placed in the semester recommended by the department. A re-admitted student shall not be allowed to repeat a course with grade "C" or above. Repetition of course with "C-" grade, before re-admission, is permitted. In addition, re-admitted students shall neither be eligible for a merit position nor degree with Honours.

### 21. TRANSFER OF CREDITS OF COURSES FOR DOUBLE DEGREE STUDENTS

Credit hours of courses, as recommended by the concerned department, in which they have earned a minimum of 40% marks or a minimum grade of "C" (as the case may be) during their first degree program within the University shall stand transferred and they shall be placed in the semester recommended by the department. The credits transferred are counted towards the degree requirements of the student. However, GPA of transferred credits shall not be counted towards the calculation of CGPA, and that only "Transferred" shall be written against those course(s) in which transfer of credits was allowed. In addition, double degree students shall neither be eligible for a merit position nor a degree with Honours.

### 22. EXCHANGE STUDENTS

Foreign students under student exchange program will be enrolled for any semester or for any single course and university will issue transcript with letter grades at the end of the semester.

### 23. TRANSFER OF CREDITS OF COURSES FOR EXCHANGE STUDENTS

(a)  Following conditions shall govern transfer of courses (credits) to the University for courses studied elsewhere as Exchange students under an HEC or University approved scheme. Courses that do not satisfy these conditions shall not be transferred nor given any credit.

(i)  The course must correspond to a course offered by the university or be deemed equivalent in depth and intensity.

(ii)  The student must have earned at least "40%" marks in case of absolute grading system or a minimum of "C" grade or higher in a letter grading system similar to the one in this University.

In case of any other grading system, the department shall decide with the above minimum limits in perspective. In case, both letter grades and marks are mentioned on the transcript, only letter grade will be considered for the purpose of transfer of semester credits.

(b) The credits transferred are counted towards the degree requirements of the student. However, GPA of transferred credits shall not be counted towards the calculation of CGPA, and that only "Transferred" shall be written against those course(s) in which transfer of credits were allowed. In addition, such students shall neither be eligible for a merit position nor degree with Honours.

## 24. TEMPORARY STUDENTS

(a) University may enroll a duly qualified person as Temporary Student on the payment of the prescribed course fee and on the recommendation of the course teacher and the Head of the Department concerned for up to 9 credit hours of courses in a semester.

(b) A temporary student will not be eligible for award of degree. However, the University shall issue transcript with the letter grades earned by the temporary student at the end of the semester.

(c) Temporary student will be assigned a temporary registration number and registered according to rules and regulations for regular students but will not be classified as regular student.

(d) Courses completed successfully as temporary student may be used for credit towards a degree program at the University within two years.

(e) Temporary students shall have no special claim or right for admission into a degree program. In order to be admitted as a regular student in a degree program they shall have to meet the eligibility and merit criteria for admission into the program.

## 25. EQUIVALENT COURSES AT KFUEIT

Courses being taught at KFUEIT can be made equivalent if their contents or type is same.

(a) Content wise equivalent courses
Inter departmental courses/courses from within the department are equivalent if they all have same contents and are of same type. This is applicable to core courses and university electives included in plan of studies.

(b) Logically equivalent courses
Elective courses of any program plan of studies are logically equivalent if they belong to same category and they can fulfil degree requirements in replacement of each other. Logically equivalent courses studied by student may not be considered as repeat.

## 26. INTERPRETATION

If any question arises regarding the interpretation of these regulations the matter shall be deliberated by the academic administration consisting of Head of the Department, Controller of Examinations, Registrar, Deans and Vice Chancellor and their decision thereon shall be final.

## 27. REMOVAL OF DIFFICULTIES

If any difficulty arises in giving effect to any of the provisions of these regulations, the Vice Chancellor in individual cases may make such decision, not inconsistent with the spirit of these regulations, as may appear to necessary for the purpose of removing the difficulty, provided that such a decision is not ultra vires of the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

# EXAMINATION REGULATIONS

## 1. SHORT TITLE

These regulations shall be called the Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan Examination Regulations 2019.

## 2. COMMENCEMENT

These regulations shall come into force at once on approval of the Syndicate.

## 3. APPLICATION

These regulations govern the system of examinations at the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan.

## 4.  DEFINITIONS

(a)  Masculine gender used in the following regulations implies male students as well as female students.

(b)  The term faculty member / instructor / teacher when mentioned in these regulations would refer to the concerned faculty member / instructor / teacher, if not mentioned as such.

(c)  The mode of instructions and examinations shall be English for all courses except Islamic Studies, Urdu and Pakistan Studies for the medium of instructions and examinations may be either Urdu or English.

(d)  The expressions used in these regulations, unless otherwise specified, or unless there is anything repugnant to the Act and Statutes, shall have the meanings as follows:

(i)  "Academic Council" means the Academic Council of the University as specified in the charter.

(ii)  "Academic Head" or "HOD" means Head of a Teaching Department of the University.

(iii)  "Academic Program" means a program of studies, which leads to the award of a University degree to the students, after successful completion of all its requirements.

(iv)  The term "Academic Year" refers to the period of study at the University spread over one calendar year period. Academic year is further divided into two regular semesters, Fall and Spring.

(v)  "Act" means The Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

(vi)  "Board of Faculty" means the Board of Faculty for each faculty of the University.

(vii)  "Board of Studies" means the Board of Studies for each department of the University.

(viii) "Contact Hour" means one hour, spent on academic and research related activities including instructional work/tutorials, laboratory work (practical), research work, projects, seminars, workshops, internships, etc. during the course of studies at the University.

ix.  "Controller of Examinations" means the Controller of Examinations (CoE) of the University.

x.  "Co-requisite" refers to courses that must be registered simultaneously if studied for the first time. During repetition, simultaneous registration of such courses is not necessary.

xi.  "Credit Course" means a course of study whose grade points shall be used in calculating student's CGPA.

xii.  "Credit Hour (Cr Hr)" means a unit of academic credit during a semester. Each credit hour is related to a one or more "Contact hours per week" according to course type and the semester in which it is offered as defined in these regulations.

xiii.  "Cumulative Grade Point Average (CGPA)" means the summation of grade points of all credit courses divided by the total number of credit hours taken by a student, i.e.
"CGPA"$=(\sum P \times N)/(\sum N)$
Where P represents grade point assigned to a letter grade scored by the student in a course and N represents the number of credit hours associated with the course.

xiv.  "Dean" means the Chairman of a Faculty of the University.

xv.  "Faculty" means a Faculty of the University.

xvi.  "Government" means the Government of Punjab.

xvii.  "Grade" means a letter grade indicating the quality of students' academic performance.

xviii. "Grade Point" means number of points representing the letter grade obtained by a student in a course.

xix.  "Grade Points of a Credit Course" is the product of grade points representing the letter grade scored by the student in a course and the number of credit hours assigned to the course.

xx.  "Non Credit Course" means a course of study, successful completion of which shall not be a requirement for the degree.

xxi.  "Pre-requisites" refer to courses that must be successfully completed prior to registration in a course requiring these pre-requisites.

xxiii. "Probation" means that a student is deficient in academic standards and is likely to be separated from the program.

xxiv. "Registrar" means the Registrar of the University.

xxv. "Statutes", "regulations" and "rules" mean prescribed statutes, regulations and rules made under the Act.

xxvi. "Semester" means an academic period, in which one set of courses in any discipline of studies is offered.

xxvii. "Semester Grade Point Average (SGPA)" means the summation of grade points of all credit courses divided by the total number of the credit hours taken by a student during a semester.

xxviii. "Separated" means that a student is considered unsuitable for further studies and shall be de-registered from University rolls.

xxix. "Course" means a topic or subject related to an academic program, which is to be studied by a student for a fixed number of credit hours during a semester. Each course shall carry a specific discipline code and number.

xxx. "Teacher" means Professor, Associate Professor, Assistant Professor, Lecturer, Lab Engineer and Visiting Faculty engaged whole time or part time by the University for teaching, and any other person as may be declared to be the teacher.

xxxi. "Teaching Department" means a teaching department established and maintained by the University.

xxxii. "Tutor" refers to a teacher appointed as an advisor and counselor to a group of students and the term "Tutorial" refers to a scheduled session with their tutor.

xxxiii. "University" means the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan.

xxxiv. "Vice Chancellor" means Vice Chancellor of the University.

(e) All other words and expressions used, but not defined herein, shall have the same meanings as assigned to them in the Act.

## 5. EXAMINATIONS OFFICE

This office of Controller of Examinations is responsible for preparing examination schedules, formulation and implementation of exam regulations, holding of semester's examinations, maintenance and compilation of results issuance of semester result reports, transcripts, certificates and degrees.

## 6. DEGREE REQUIREMENTS

(a) To earn 16 years of education degree, a student must successfully complete the number of credit hours as prescribed by the plan of study of the degree program in which he/she is enrolled. At the time of graduation, the Cumulative Grade Point Average (CGPA) should not be below 2.00.

(b) To earn 18 years of education degree, a student must successfully complete the number of credit hours as prescribed by the plan of study of the degree program in which he/she is enrolled. At the time of graduation, the Cumulative Grade Point Average (CGPA) should not be below 2.50.

## 7. COMPREHENSIVE EXAM

In addition to fulfillment of CGPA and credit hours requirement, student has to pass a comprehensive exam of his/her department (with minimum of 50% or above) to qualify for award of degree and final transcript.

## 8. INTERNSHIP

The student must has done an internship in his/her academic period in order to be eligible for award of degree. However, this internship would be of non-credit Hours.

## 9. STUDENT EVALUATION

Students are evaluated by mid-semester exam, home assignments, quizzes, case studies, course project, laboratory reports, oral tests and the end semester examination. The weightage allocated to each assessment item depends upon the nature of the course.

## 10. STUDENT ENROLLMENT

A student enrolled in a semester and active throughout the semester will be considered eligible for being permitted to appear in the mid semester and end semester examinations.

## 11. AWARD OF LETTER GRADES

The course teacher, having interacted with the students, taught them and having assessed them over the semester, shall award letter grades to the students. Chairman of the concerned degree awarding department will be consulted while finalizing the letter grades. Letter grades in each Type-A course (where class size is minimum of 25) shall be awarded on a relative scale whereas, letter grades in Type-B and Type-C courses may be awarded on an absolute scale, if deemed appropriate by the course teacher. The student who obtains zero marks in end semester exam shall be awarded F grade and excluded while awarding relative grades in a course.

## 12. RELATIVE GRADING METHOD

A number of different relative grading schemes may be used at the University. Two of the acceptable schemes are explained below. Other schemes may be used with the approval of the Dean of the Faculty.

(a)  Relative Grading Based on Mean and Standard Deviation on a Normal Distribution Curve
Following steps in awarding letter grades on a relative scale are to be followed:

(1)  Minimum marks threshold linked to content mastery shall be established for award of a passing letter grade. Students earning marks below this threshold shall be awarded "F" grade;

(2)  Expected maximum marks threshold shall also be established. Student(s) crossing the maximum threshold, if any, will be awarded "A+" grade. The grade points of "A+" and "A" are same. As such, it is expected that only exceptional students demonstrating outstanding results are given recognition by award of this grade.

(3)  Students earning marks between the maximum and minimum thresholds are listed in descending order of merit and the average (x) and standard deviation ($\sigma$) is computed for the set of marks obtained by students.

(4)  Passing letter grades are awarded according to the table given below, with "A" being the highest passing grade and "D" being the lowest passing grade.

### Table: Letter Grades and Corresponding Grade Points

| A+ | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | F |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 4.00 | 4.00 | 3.70 | 3.30 | 3.00 | 2.70 | 2.30 | 2.00 | 1.70 | 1.30 | 1.00 | 0.00 |

(5)  The following ranges for the letter grading are recommended and the detail is also shown in the below figure:

A+ will be assigned to above $\bar{x}+2\sigma$

A will be assigned to the range between $\bar{x}+3\sigma/2$ and $\bar{x}+2\sigma$

A-will be assigned to the range between $\bar{x}+\sigma$ and $\bar{x}+3\sigma/2$

B+ will be assigned to the range between $\bar{x}+\sigma/2$ and $\bar{x}+\sigma$

B grade will be assigned to the mean and spread in 1st half of the standard deviation i.e. B=$\bar{x}+\sigma/2$

B- will be assigned to the range between $\bar{x}-\sigma/2$ and $\bar{(x)}-\sigma$

C+ will be assigned to the range between $\bar{x}-\sigma$ and $\bar{x}-4\sigma/3$

C will be assigned to the range between $\bar{x}-4\sigma/3$ and $\bar{x}-5\sigma/3$

C- will be assigned to the range between $\bar{x}-5\sigma/3$ and $\bar{x}-2\sigma$

Similarly, below $\bar{x}-2\sigma$ D and fail grades shall be assigned

D grade shall not fall below 30



$\bar{x}-3\sigma \quad \bar{x}-2\sigma \quad \bar{x}-\sigma \quad \bar{x} \quad \bar{x}+\sigma \quad \bar{x}+2\sigma \quad \bar{x}+3\sigma$

(6)   It is not essential that every class should have all letter grades awarded, that is, it is possible that a class does not have any student below the minimum threshold; Or in another scenario in which no student, in the opinion of the instructor, is eligible for any grade. There may be cases where no student qualifies for some intermediate grade.

(7)   An upper limit on percentage of students in a course who can earn a particular passing grade may be placed, if required.

(b)   Relative grading using Normalization with Respect to Highest Score
Teacher may normalize absolute grades in order to incorporate aspects of both absolute and relative grading methods, if felt necessary. The normalized absolute grade levels are set as follows:

(i)   Letter grades in type-A courses, which include theoretical credits, shall be awarded on a relative scale. If maximum marks obtained by a student in any type-A course are "X", minimum levels for letter grades become:

$A \geq 0.85X$
$A- \geq 0.80X$
$B+ \geq 0.75X$
$B \geq 0.71X$
$B- \geq 0.68X$
$C+ \geq 0.64X$
$C \geq 0.61X$
$C- \geq 0.58X$
$D+ \geq 0.54X$
$D \geq 0.50X$
$F \geq 0$



(ii)   A+ is the highest passing grade and D is the lowest passing grade. However, it is expected that only exceptional students demonstrating outstanding results are given recognition by award of A+ grade.

(iii)   In type-B courses, which include laboratory credits, letter grades can be assigned on relative or absolute scale whichever is deemed fit by the course teacher.

(c)   Absolute Grading Method
For absolute grading scale, following grade boundaries are to be used:



| | |
|---|---|
| A+ | 95 and above |
| A | 86-94 |
| A- | 80-85 |
| B+ | 76-79 |
| B | 72-75 |
| B- | 68-71 |
| C+ | 64-67 |
| C | 60-63 |
| C- | 57-59 |
| D+ | 54-56 |
| D | 50-53 |
| F | Below 50 |

(d)   The course teacher may award an "F" grade to a student if he is convinced, while checking the answer script of mid or end semester examination that the student has cheated. The course teacher will give opportunity to the student to defend himself before award of the "F" grade.

(e)  If a teacher or HoD is convinced that students in a course have colluded to influence the outcome or grades of a course or limited attempts on assessment items of a course (exams, homeworks, quizzes, etc.) so as to lower the class average or to limit the highest score, the teacher may use an absolute scale for awarding the letter grades.

**13.  CONVERSION OF CGPA INTO PERCENTAGE OF MARKS ON THE SCALE OF 4.0**

Whenever any party from outside the University requires equivalent percentage of SGPA/CGPA, the following equivalence of SGPA/CGPA and percentage is to be used:

| CGPA | % Marks |
|------|---------|
| 3.63-4.00 | 90-100 |
| 3.25-3.62 | 80-89 |
| 2.88-3.24 | 70-79 |
| 2.50-2.87 | 60-69 |
| 1.80-2.49 | 50-59 |
| 1.00-1.79 | 40-49 |
| 0.00-0.99 | Below 40 |

If the CGPA falls in between any range, then the percentage has to be defined by linear interpolation between two extreme limits. For example, if the CGPA of a student is 2.80, it falls in range 60-69, percentage will be calculated as follows:

| | |
|---|---|
| X1=2.50 | Y1=60 |
| X2=2.80 | Y2=? |
| X3=2.87 | Y3=69 |

$$Y2= [(X2-X1)(Y3-Y1)/(X3-X1)]+Y1 = 67.3\%$$

**14.  GPA COMPUTATION METHOD**

The Semester Grade Point Average (SGPA) and Cumulative Grade point Average (CGPA) shall be computed according to the following formulae:
$SGPA=\Sigma(GPx*CHx)/\Sigma CHx$
x = 1 to n, where n is the number of courses in the semester for which SGPA is to be computed.
$CGPA=\Sigma(GPy*CHy)/\Sigma CHy$
y = 1 to m, where m is the number of total courses covered in all semesters up to the semester for which CGPA is to be computed.

**15.  AUTHORITY  TO COMPUTE RESULTS**

Grade Points (GP) in each course, Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of each student shall be computed and notified by the Controller of Examinations at the end of each semester.

**16.  WITHDRAWAL FROM A COURSE**

(a)  A student may withdraw from a course(s) if he/she feels that he/she cannot complete it and continuing with it will adversely affect all of the other courses also.  The HoD must be informed by the student through a written request on the prescribed form regarding his/her intention for withdrawal from a course. Non-attendance will not constitute an official withdrawal
.

### Withdrawal Before End of Second Week ("W0" Grade)

(b)    After being registered in any semester, a student can Add/Drop any course with the permission of Advisor/HoD till the end of second study week. Such withdrawn courses shall be identified with status "W0", and neither will be shown on transcript nor will affect the SGPA.  Courses repeated after such withdrawal will not be suffixed with "(Repeat)" when shown on the transcript.

### Withdrawal Before End of 10th Week ("W1" Grade)

(c)    With the permission of teacher and HoD/Advisor, a student can withdraw from any course till the end of 10th study week and there will be no fee refund. Such course will be identified with status "W1" and neither will be shown on transcript nor will affect the SGPA.  Courses repeated after such withdrawal will not be suffixed with "(Repeat)" when shown on the transcript.

### Withdrawal After 10th Week ("W2" Grade)

(d)    With the permission of teacher and HoD/Advisor, a student can withdraw from any course after 10th study week but before final exam and there will be no fee refund. Such withdrawn courses shall appear in the transcript with a letter grade "W2", and shall not be used in computation of SGPA. Courses repeated after such withdrawal will not be suffixed with "(Repeat)" when shown on the transcript.

### Administrative Withdrawal ("W3" Grade)

(e)    A student registered in a course may not be permitted to continue due to any disciplinary action. Such student shall be placed under "W3" academic status. It shall appear in the transcript as such, and shall not be used in computation of SGPA. Courses repeated after forced withdrawal will not be suffixed with "(Repeat)" when shown on the transcript. A student who does not drop a course nor appears in any assessment instrument will not be eligible for "W3" grade and will be awarded an "F" grade instead.

### Withdrawal due to short of attendance ("W4" Grade)

(f)    If a student is short of attendance in any course, he/she shall be placed under enrollment status "F-Sat". Such courses shall appear in transcript with letter grade "W4" and shall not be used in computation of SGPA/CGPA.

### 17.    AWARD OF "I" AND "IP" GRADES

### Incomplete "I" Grade

(a)    A student, who because of illness or any other acceptable reason fails to complete the required instruments in any course may be awarded an "I" (Incomplete) grade as an interim grade. The student having less than 75% attendance will not be eligible for award of this grade. This grade shall appear in the transcript temporarily until it is replaced by the actual grade and will not be treated as "F" grade. The student receiving such a grade shall make up the unfinished portion of his course to the satisfaction of the faculty member who has awarded this grade, and shall be given a letter grade as per regulations at the discretion of the faculty member without prejudice to the previous grade "I". In case, the student fails to complete the unfinished portion within the following semester his/her "I" grade would be converted to "F" grade by the Controller of Examinations. The responsibility for completing the unfinished portion and lies with the affected student.

### In Progress "IP" Grade

(b)    Course(s) that spread over more than one semester maybe graded as "IP" until completion of these courses. This grade shall be recorded in the transcript and will not be treated as "F" grade. First portion of such course maybe graded as "IP" if the department decides to award the final letter grade upon completion of the second portion. It shall appear in the transcript as such, and shall not be used in computation of SGPA/CGPA and total credit hours completed till that time. However, this IP grade will be replaced by the original grade when final grade is awarded. Upon completion of this course the SGPA of previous semester(s) and credit hour count will be updated as well.

## 18. REPETITION OF COURSES

(a) A student is permitted to repeat a course to improve his/her grade in the course during a  semester within their maximum credit hours registration limit and has to pay the prescribed per credit hours fee.

(b) Separate repetition of Type B part or Type A part of a course, which is combination of Type A and Type B, is permitted.

(c) Only those students who fail to qualify in a course, have obtained a D, D+, C- or C grade shall be allowed to repeat a course.

(d) A student can repeat a course in summer semester or in a regular semester with another session.

(e) In case of repetition of a course, the better earned grade shall be used in computing the CGPA on the transcript.

(f) The student has to repeat course with F grade and in addition to this, he is allowed to improve maximum of five courses in an eight semester degree program. However, this limit applies to type-A theoretical courses only.

(g) The student, after re-admission, is permitted to repeat five courses irrespective of those repeated before re-admission.

## 19. ACADEMIC WARNING, PROBATION AND SEPARATION

(a) A student will be placed on Warning if his/her SGPA falls below 2.0 in any semester with his/her CGPA remaining greater than 2.0.

(b) A student will be placed on Probation if his/her CGPA falls below 2.0 after any semester.

(c) A student will be separated from the University if he remains on probation for two consecutive semesters.

(d) Separated students can apply to the Vice Chancellor for re-admission.

## 20. STUDENT'S STATUS AND ACADEMIC DEFICIENCIES AFTER SUMMER SEMESTER

(a) After summer semester, student can't be placed under academic status "Warning" if his/her semester grade point average falls below 2.00.

(b) No probation decision shall be made based upon the CGPA attained by the student at the end of summer semester.

(c) If student is on probation after Spring semester, this probation can be removed after summer semester if CGPA becomes greater than 2.00.

(d) If student is on probation after Spring semester he/she can't be separated after summer semester if CGPA remains below 2.00 and has another chance to improve CGPA in Fall semester.

(e) If a student is separated after Spring semester and succeeds in improving his/her CGPA in summer semester (ie., greater than or equal to 2.00), his/her status of separation can be removed.

## 21. AWARD OF DEGREE AND MERIT POSITION

(a) Students who are eligible for the award of degree are required to submit a Degree Requirements Completion Form to their respective chairman for onward submission to the Controller of Examinations. Degree award status would be decided only after receipt of this form.

(b) Students shall qualify for the award of degree if they earn a minimum CGPA of 2.0 for BS and M.Sc. Programs and 3.0 for MS/PhD programs and they satisfy the following conditions:

(i) Have no compulsory outstanding course with "W0", "W1", "W2", "W3","W4","I", "IP" and "F" grades during all semesters of a degree program.

(ii) Have repeated elective courses in which "W0", "W1", "W2", "W3","W4","I" , "IP" and "F" grades have been earned or have studied alternate elective courses in lieu of these to fulfill the credit hour requirements.

(iii) Have completed the prescribed number of credit hours.

(c) Students shall qualify for a "Degree with Honours" if they satisfy the following conditions:

(i) Have earned a CGPA of 3.70 or above out of a maximum of 4.00;

(ii) Have not repeated a course;

(iii) Have not withdrawn from a course with a "W1", "W2"."W3" or "W4" grade; and

(iv) Have not earned an 'F' grade in any core or elective course during the course of study.

(d) Medals and merit positions will only be awarded to students having earned degree with honours. The awards will be based on the CGPA earned at the time of graduation. Comparison will be made within the students of same entry session graduating in the minimum permissible duration. Immigrating and re-admitted students will not be eligible for any medal or merit position.

## 22. DEAN'S HONOUR ROLL

At the end of each semester, there shall be a "Dean's Honour Roll" of students earning a Semester GPA of 3.7 and above without any "W2", "W2", "W3", "W4" or "F" grade while registered in at least 15 credit hours during that semester. There shall not be any Dean's Honour Roll for summer semester result.

## 23. STUDENT GRIEVANCES

(a) A student may file a grievance petition with the Chairman of his/her department about any course instructor or grades or for any other issue. The Chairman will form a 3 members departmental committee headed by a senior faculty member to redress the grievance. It will be mandatory on the committee to hear both sides (student and the teacher), and give the final decision within (05) five working days or before the start of registration for the new semester, whichever comes earlier. The decision of the committee will be deemed final and will be binding on all parties.

(b) In respect of grade a student must submit the grievance application, if any, in writing to the Head of the Department within (07) seven working days of the receipt of the grade. The Head of Department shall forward the grievance application to the committee.

## 24. RECHECKING OF EXAMINATION SCRIPT

(a) The student can apply for re-checking of exam answer book within seven days after result announcement.

(b) The answer book of a candidate shall not be re-assessed under any circumstances.

(c) Whereas the re-checking does not mean re-assessment/re-evaluation/re-marking of the answer book, the examination department can arrange for re-checking of examination script. The Controller of Examination or any officer or re-checking committee appointed shall see that:

(i) There is no computational mistake in the grand total on the title page of the answer book.

(ii) The total of various parts of a question has been correctly made at the end of each question.

(iii) All totals have been correctly brought forward on the title page of the answer book.

(iv) No portion of any answer has been left un-marked.

(v) Total marks in answer book tally with the marks sheet.

(vi) The hand-writing of the candidate tally in the questions/answer book.

(d) The candidate or anybody on his/her behalf has no right to see or examine the answer books for any purpose.

(e) The marks of student could even decrease in light of 21(b) above. In the event of reduction of marks the record shall be corrected accordingly and revised transcript will be issued.

(f) In case if any observation related to above is found, the Examination Department shall route the recommendations through the Dean to the Head of Department. Finally communicated to concerned teacher, who can only make necessary actions. In case that faculty member is no longer available or cannot be reached, the department Chairman has the authority to evaluate the situation, if required.

When a grade is to be changed, the Chairman shall forward the case to the Dean with justification for change. The result will be modified after approval of the Dean.

**25.   DAMAGED/LOST ANSWER BOOK**

In an exceptional case where an answer script is damaged, lost or destroyed due to unavoidable circumstances, then the student will be given following options:

(i)     Average marks shall be awarded to the student in that course.

(ii)    In case of end semester examination, if the candidate so desires, he/she shall be given another chance as a special case to take the Examination in that course in the next examination and no examination fee shall be charged from the student.

(iii)   In case of internal assessment, if the candidate so desires, he/she shall be given another chance as a special case to take the make-up assessment in that course in the same academic session.

**26.   EVALUATION PROCESS OF COURSES**

**(a)   Evaluation of Type-A Courses**

(i)     For mid and end semester examination of Type-A courses, the teacher of a course shall set the question paper of that course, supervise its examination, mark the answer books and prepare the award list. Any teaching resource provided to assist a teacher cannot be tasked to mark mid and end semester examination answer books.

(ii)    Every teacher of Type-A courses shall return the marked quizzes, assignments, etc. and mid semester examination scripts to the students for review, and in case of presentations etc. communicate the earned score to the student within one week of the event. Mid-semester examination scripts, however, would be recovered from the students and deposited with the chairman concerned.

(iii)   At the end of scheduled teaching period of a semester but before commencement of the end semester examination, the teacher shall prepare and display the Interim Award List. Composition, display, correction, and reporting requirements/procedures of Interim Award List shall be as prescribed in these rules.

(iv)    Teachers would mark the end semester examination scripts, and prepare and display complete Award List within one week after the examination of the course.

(v)     The students may be shown the end semester examination marked scripts before submission of Comprehensive Award List to the Controller of Examinations, if they so desire.

**(b)   Evaluation of Type-B Courses**

(i)     Teachers of Type-B courses shall keep all students informed of their performance at every stage in each category of task performed. Immediately after the end of each stage/assessment event, teachers shall prepare and communicate the earned score to the student in that stage/assessment event.

(ii)    At the end of semester and before the end of examination period, teachers shall prepare and display the Interim Award List. Content and other requirements regarding Interim Award List shall be as prescribed in these rules.

(iii)   After following the procedures and requirements regarding Interim Award List, the teachers shall prepare and display complete Award List, within one week after the end of scheduled teaching period.

**(c)   Evaluation of Type-C Courses**

(i)     Teachers of Type-C courses shall keep all students informed of their performance at every stage in each category of task performed.   Immediately after the end of each stage/assessment event, teachers shall prepare and display a list of earned score of each student in that assessment instrument.

(ii)    At the end of first of the two semesters of a Type-C course and before the end of examination period, teachers would prepare and display an Intermediate Award List. This list would be similar to the Comprehensive Award List of Type-A and Type -B courses except that letter grade assignment based upon this list will be limited to "IP" Grade.

(iii)   At the end of second of the two semesters of a Type-C course and before the end of examination period, teachers shall prepare and display the Interim Award List. Content and other requirements regarding Interim Award List shall be as prescribed in these rules.

(iv)    Within one week of the conduct of Viva-voce/Jury examination, internal and external examiners shall prepare and display complete Award List.

### 27.  INTERIM AWARD LIST

(a)  Interim Award List would show the percentage as well as weighted score of each stage/assessment instrument of that course including the mid-semester examination in case of Type-A courses.

(b)  The Interim Award List will be communicated to all students via electronic means or/and displayed on the Notice Boards for at least five working days to permit students to point out any anomalies, errors, omissions etc. in the list.

(c)  The teachers shall give due consideration to any anomalies, errors, omissions etc. in the list pointed out by any student, and may correct the list.

(d)  Any further processing of the list shall be carried out only after it has been displayed on the Notice Boards for the mandatory period and decisions regarding all matters pointed out by students have been taken.

### 28.  COMPREHENSIVE AWARD LIST

The Comprehensive Award List shall show, for each student:

(a)  The weighted combination of the Interim Award and End Semester Examination award in percentage format and Letter Grades corresponding to the comprehensive award.

(b)  Sealed Comprehensive Award List will be submitted to the Controller of Examinations by the concerned teacher duly vetted by the Chairman of the Department.

### 29.  DELAY IN SUBMISSION OF RESULTS

After passage of 6 working days from the date of scheduled final examination period, Controller of Examinations will submit a report to the Vice Chancellor on the status of submitted results. The Vice Chancellor will decide on the disposal of teachers failing to submit their results within the prescribed time.

### 30.  CONDUCT OF EXAMINATION OF TYPE A COURSES UNDER SEMESTER SYSTEM
**Question Papers**

(a)  Question papers for examinations are to be set by the concerned teacher.

(b)  The question paper prepared by the teacher duly vetted by the concerned Chairman of the department should be submitted in a sealed envelope to the Controller of Examinations by the prescribed date.

### 31.  CONDUCT OF MID AND END SEMESTER EXAMINATIONS

(a)  The Controller of Examinations shall prepare duty roster of teachers or staff as Deputy Superintendent and Invigilators for the conduct of examinations. The number of invigilators will be estimated on the basis of one invigilator for every 25 students.

(b)  The course teacher shall be the Superintendent for the conduct of examination. The Superintendent shall ensure the following:

(i)  All answer books used in the examination are signed or initialed. The teacher may require the students to answer on the question paper itself. No other answer books are to be used in these cases.

(ii)  Answer books are issued to the invigilators 5 minutes before the commencement of the examination and retrieved at the end of the examination.

(iii)  The absentee report, if any, is prepared and forwarded to the Chairman's office at the end of each examination.

(c)  Teachers or Staff acting as invigilators shall ensure the following:

(i)  Students are identified through means such as University identification card or a valid photo ID.

(ii)  Students are warned against the use of unfair means and have been advised to surrender mobile phones, notes, papers or other unauthorized material before the commencement of the examination.

(iii)   Students are not allowed to talk with or copy from other students during the examination.

(iv)   No student is allowed to join the examination 30 minutes after its commencement.

(v)   No student is allowed to submit the answer sheet and leave the examination room within 30 minutes of commencement of examination. Visits to toilets are carefully controlled.

(vi)   The question papers and answer books of a student detected using unfair means or assisting another candidate, are taken away and the matter is reported to the Vigilance/Unfair Means Committee. The superintendent records all available evidence to be used as written proof later on.

(vii)   Students write their registration numbers, name and class on the front cover of each additional answer sheet used. If more than one answer book is used, these are stapled together.

(d)   The course teachers, being the Superintendent(s), shall:

(i)   Supervise distribution of the question papers to the students according to the schedule published.

(ii)   Be available in the examination center during examination of their course to clarify any query and to collect answer books after the examination. In case of multiple examination centers, they must remain available near the centers.

(iii)   Report any incidence of unfair means or disobedience or rowdy-ism detected in the examination center to the Vigilance/Unfair Means Committee for processing under rules governing use of unfair means during examinations. The report must include collected evidence (if any), written and signed statement by the invigilator detecting the incidence and of the candidate(s) found involved.

(e)   The Vice Chancellor will constitute Vigilance and Unfair Means committees to overlook the conduct of examinations, report cases of unfair means usage and penalize students according to committee guidelines.

## 32.   INDISCIPLINE IN THE EXAMINATIONS

(a)   Any candidate found guilty of any of the following shall have his/her case submitted to Unfair Means Committee for recommendation of disciplinary action:

(i)   Removes a leaf from his/her answer book, the answer book shall be cancelled.

(ii)   Submits Forged or fake documents in connection with the examination.

(iii)   Commits impersonation in the examination.

(iv)   Copies from any paper, book or notes.

(v)   Mutilates the Answer Book.

(vi)   Possesses any kind of material, which may be helpful to his/her in the examination.

(vii)   Refuses to obey the invigilation staff or refuses to follow the instructions issued by the University in connection with the examination.

(viii)   Misbehaves or creates any kind of disturbance in or around the examination center.

(ix)   Uses abusive or obscene language on the answer script.

(x)   Possesses any kind of weapon in or around examination center.

(xi)   Possesses any kind of electronic device which may be helpful in the examination.

(b)   His/her case shall result in penalties keeping in view the nature and intensity of offence.

(i)   Cancellation of paper.

(ii)   Suspension from program for one semester.

(iii)   Heavy and light fine.

(iv)   Expulsion from the University.

(v)   Any other penalty.

## 33.   DISPOSAL OF ANSWER SCRIPTS

Answer sheets of mid-semester and end-semester examinations will be stored in the Examinations Department for one semester after declaration of result of a semester. The answer sheets would be disposed of subsequently in a suitable manner as decided by the Controller of Examinations.

### 34. FINAL RESULTS AND TRANSCRIPTS

The recording of result on final transcript will be according to the following:

(a) The transcript will be chronological showing all courses registered in each semester and corresponding grades earned.

(b) All "I" grades would be replaced by the grade earned or "F" grade if requirements have not been completed.

(c) "IP" grade in a course or sequel of courses would be shown in the semester(s) in which it has been awarded. It will not be counted towards computation of SGPA or CGPA in these semesters.

(d) The semester grade awarded in a course, which is a follow up of a course in which "IP" has been awarded in previous semesters, would be counted towards computation of semester GPA and CGPA by considering the total credit hours assigned to the course or a sequel of courses.

(e) Elective courses in which the student has earned "F" grades may not be counted towards computation of CGPA if alternate elective courses have been studied in their place. This will not be done automatically. The student must apply to the Controller Examination to avail this facility.

### 35. RESULT DECLARATION BY EXAMINATION DEPARTMENT

A student would be able to see his course grades on the Examination portal as soon as those have been submitted by the teachers to the Controller of Examinations. The status of these results would be "Provisional". When all results have been received by the Examinations Department, official results would be declared within one week following due process of scrutiny and verification. The status of these results would change to "Confirmed" after declaration.

### 36. MAKEUP EXAM POLICY

(a) Following makeup exam policy is to be used at the University in which a student will be provided an opportunity for Makeup Exam in lieu of a missed exam for the following reasons:

(i) in case of death of very close blood relative.

(ii) in case of severe illness or bodily injury, preventing from appearing in the exam.

(iii) in case of an emergency situation beyond the control of the student, which prevents him / her from appearing in the exam.

(b) In all of the above cases, student has to pay the prescribed fee for makeup exam.

(c) Important Guidelines for the Makeup Exam Process

(i) In all above mentioned cases the student has to report to the examination office within one week of the conduct of regular exam.

(ii) The request of a student, will be considered only after the recommendation of the concerned Teacher and HoD, and finally approved by the Dean of the Faculty / Controller of Examination.

(iii) In case of blood relative's death, the student has to provide Death Certificate along with Makeup Exam application.

(iv) In case of illness or injury, the student must provide the Medical Certificate duly signed by the Medical Superintendent.

(v) In case of illness, if the student himself / herself, is unable to report to the examination office within the given time, then he / she has to arrange the submission of the justification certificate signed by the competent medical authority.

(vi) After approval, the Makeup Exam will be conducted within one week.

(vii) No request for Makeup Exam, will be entertained after two weeks of conduct of regular exam.

### 37. Medical Certificate

Medical certificate from a registered medical practitioner duly endorsed by the University Medical Officer is acceptable for the examination purposes in the University.

| | | | | |
|---|---|---|---|---|
| 1. | Makeup Exam | 5. | Final Transcript |
| 2. | Duplicate Transcript Issuance | 6. | Dublicate Final Transcript |
| 3. | Re-checking of Examination Transcript | 7. | Degree Issuance Fee |
| 4. | Late Course Registration Fee | | |

37. **INTERPRETATION**

If any question arises regarding the interpretation of these regulations the matter shall be deliberated by the academic administration consisting of Head of the Department, Controller of Examinations, Registrar, Deans and Vice Chancellor and their decision thereon shall be final. In all cases where the regulations are silent, the decision of the Vice Chancellor shall be final.

38. **REMOVAL OF DIFFICULTIES**

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Vice Chancellor in individual cases may make such decision, not inconsistent with the spirit of these Regulations, as may appear to necessary for the purpose of removing the difficulty, provided that such a decision is not ultra vires of the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

39. **OTHER SPECIAL PROVISIONS**

(a) The University authorities reserve the right to make any changes in the existing regulations, rules, fee structure and courses of study that may be considered necessary at any time without prior notice.

(b) No student is allowed to maintain simultaneous enrollment in any other program of studies in the University or any other educational institution within or outside Pakistan, unless permitted by the competent authority as an exchange student.

(c) In case a student enrolled in this University is found to be a regular student of some other University/institution whether local or foreign, his admission in this University shall be canceled.

(d) Students are required to know the rules and regulations mentioned in the prospectus and notified time to time. Ignorance of rules and regulations does not absolve them of their responsibilities and shall not be accepted as an excuse.

(e) The Vice Chancellor has been authorized by the Syndicate, on the recommendations of the Deans, to make amendments in these regulations and remove any difficulties faced during implementations of these regulations.

## STUDENT DISCIPLINE REGULATIONS

## PART (A)– CODE OF ETHICS AND CONDUCT FOR STUDENTS

1. **SHORT TITLE**

These regulations shall be called the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan regulations for student conduct and discipline 2019.

2. **COMMENCEMENT**

These regulations shall come into force at once on approval of the Syndicate.

3. **APPLICATION**

These regulations govern the conduct and discipline of students of the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan.

4. **PREAMBLE**

The student community at a university overwhelmingly represents the youth of a nation. Their capacity and ability to play their roles effectively in diverse professional fields and businesses essentially depends on the quality of education imparted to them. Education has been recognized as the most dynamic catalyst to people's professional, personal and moral development. Sheer professional education in a diversity of disciplines cannot cope with the social and moral challenges of societies, unless it is tempered with adequate moral grooming. Every university worth its name, therefore, puts due premium on developing in its student community the values of decent moral behaviour. KFUEIT firmly believes in and is committed to promoting the growth of ethically responsible students and future professionals in all disciplines by inculcating in them adherence to the highest standards of academic integrity and overall ethical conduct.

The university endeavours to develop a sense of individual responsibility on the part of each member of its community and seeks to enhance active participation of all segments, faculty, students, administration, in maintaining such standards, towards fostering and sustaining an environment of honour and trust across the spectrum. While representing himself or herself as a member of KFUEIT community, the student will maintain the highest standards of honesty and integrity. He/she will strive for these standards in his or her representations, academic pursuits, and respect for the property and individual rights of others. The student will uphold and actively follow the specific principles described in the Code.

The purpose of a code of ethics within an organization is to define acceptable standards and provide general principles of professional behaviour which should be followed by members of the organization in order to act in an appropriate moral way and to preclude misconduct. In other words, a code of conduct outlines for the members of an organization how to become true professionals by applying ethical concepts in everyday professional practice, thus enriching their respective assignments. Whereas without an institutional code of ethics, it remains impossible for an organization or institution to regulate the ethical conduct of its members across the spectrum. As a progressive and forward-looking institution, Khwaja Fareed University of Engineering and Information Technology (KFUEIT), Pakistan ardently believes in nurturing in its students wholesome ethical discipline with a focus on inculcating in them the virtues of diligence, service, integrity, fairness, decency, respect, competence and excellence.

The KFUEIT Code of Ethics and Conduct for students flows from a set of values which include our core values as well as other universally accepted values. The KFUEIT core values embody our vision and mission. These core values permeate all our activities and form a benchmark to judge our efforts against. These core values are the qualities that we want to maximize in our students, faculty, officers and non-teaching staff. Furthermore, we believe that these core values will allow us to transform our society into an advance one. Our core values are based on our acronym so that they are easy to remember for us. Our core values are:

K: **Knowledge-able**
F: **Faithful**
U: **Useful**
E: **Eco-friendly**
I: **Innovative**
T: **Tolerant**



A look at the shades/leadership of meaning conveyed by these core values will help us and others understand fully the impact that we intend these core values to have on our students, faculty, officers and non-teaching staff.

**Knowledge-able:** means well informed; learned; with great knowledge; well read; well educated; widely read; erudite; scholarly; cultured; cultivated; enlightened; aware.

**Faithful:** means strict or thorough in the performance of duty; true to one's word; promises; vows; etc.; steady in allegiance or affection; loyal; constant; reliable; trusted; or believed; adhering or true to fact; a standard; or an original; accurate.

**Useful:** means able to be used for a practical purpose or in several ways; functional; practical; handy; neat; convenient; utilitarian; utility; helpful; applicable; serviceable; of use; of service; beneficial; advantageous; helpful; worthwhile; profitable; gainful; rewarding; productive; constructive; effective; efficacious; valuable; fruitful; of help; of assistance. Thus KFUEIT faculty, officers, body of students and the members of staff have an obligation to serve the cause of education in their respective spheres. They should seek to elevate the University to others above self-interest by drawing on their knowledge, values, and skills.

**Eco-friendly:** literally means earth-friendly or not harmful to the environment. This term most commonly refers to products that contribute to green living or practices that help conserve resources like water and energy. Eco-friendly products also prevent contributions to air, water and land pollution.

**Innovative:** means featuring new methods; advanced and original; introducing new ideas; original and creative in thinking; original; innovatory; innovational; new; novel; fresh; unconventional; unorthodox; unusual; unprecedented; avant-garde; experimental; inventive and ingenious.

**Tolerant:** means showing willingness to allow the existence of opinions or behavior that one does not necessarily agree with; open-minded; forbearing; unprejudiced; unbiased; unbigoted; broad-minded; patient; magnanimous; sympathetic; understanding; charitable and lenient.

Furthermore, KFUEIT also subscribes to other universally accepted values such as social justice, dignity and worth of the person, importance of human relationships, integrity, and competence. These values further aim to identify the ideals to which students as well as faculty, officers and non-teaching staff of the University should aspire.

**Social Justice:** In their respective spheres, every member of the university is responsible to promote sensitivity to and knowledge about oppression and cultural and ethnic diversity. They must have access to needed information, services, and resources; equality of opportunity; and meaningful participation in decision-making at appropriate levels.

**Dignity and Worth of the Person:** It is incumbent on faculty, students and administrators to treat one another in a caring and respectful manner, deferring to individual differences, as well as cultural and ethnic diversity. They should be cognizant of their dual responsibility to the university and to the broader society.

**Importance of Human Relationships:** Relationships between and among people promote understanding and harmony, paving the way for creating and sustaining wholesome work environment. KFUEIT students as well as faculty, officers and non-teaching staff owe both to their own advantage and the larger interest of the university and society to strengthen relationships in a purposeful effort to promote, restore, maintain, and enhance the collective well-being of individuals, families, the organization, and the civil society at large.

**Integrity:** It is expected of KFUEIT faculty, students, and administrators to be aware of the University's mission, values, ethical principles, and ethical standards and demonstrate ethical behaviour consistent with them. They must act honestly and responsibly and promote ethical practices within the organizations with which they are associated.

**Competence:** KFUEIT students must continually seek to enhance their professional knowledge and skills. They should also aspire to contribute to the knowledge in their own ways and manners.

**Discipline and Respect for Law:** Discipline is a cardinal law of nature visible, among other things, in the orderly working of celestial bodies. Discipline is necessary in all walks of life, and forms the core of other virtues like punctuality, cleanliness and dress-code. If people do not observe discipline, the entire social fabric would crumble like a house of cards. All along physical discipline, far more important are the virtues of moral and intellectual discipline. Moral and intellectual disciplines show in the sublime traits of self-restraint, honesty, fortitude, forbearance, integrity and courage. No society or organization can function and prosper smoothly unless its members demonstrate a sense of sound discipline. Discipline is necessary for becoming good citizens and, more importantly, good human beings. Respect for law, which means not merely not doing something negative but actually doing something positive, is a manifest expression of discipline. In fact, discipline and respect for law are the distinguishing features of civilized societies across the globe. KFUEIT urges its entire community of members to observe in letter and spirit the University discipline. Respect for authority, strict observance of the rules and regulations of the University, as well as due respect to law of the land are expected all times in all situations.

While it is desirable that students should acquaint themselves with the KFUEIT Student Code of Ethics and Conduct in entirety to deepen their understanding, they are specifically required to study the code of conduct and internalize the guidelines provided therein. Significant violation or persistent deviation from this Code of Ethics and Conduct by a University student will constitute misconduct and will be a cause for disciplinary action. An appropriate mechanism built around appropriate procedures along with suitable corrective actions exists at the University to deal with such deviations and violations of the prescribed code of ethics and conduct.

5.   **JURISDICTION**
     This code applies to the on-campus conduct of all registered students, including the individuals using university academic resources. The code also applies to the off-campus conduct of students in direct connection with:
(a)   Academic course requirements or any credit-bearing experiences, such as internships, field trips, study abroad, or student teaching;
(b)   Any activity supporting pursuit of a degree, such as research at another institution or a professional practice assignment;
(c)   Any activity sponsored, conducted, or authorized by the university or by registered student organizations;
(d)   Any activity that causes substantial destruction of property belonging to the university or members of the university community, or causes or threatens serious harm to the safety or security of members of the university community; or
(e)   Any activity in which a police report has been filed, a summons or indictment issued, or an arrest has occurred for a crime of violence.
     This code governs all campuses of the University. However, students attending at regional campuses, centres, or institutes are advised to consult their local resources for additional information or rules pertaining to those locations.
     The University reserves the right to administer the code and proceed with the hearing process even if the student withdraws from the university, is no longer enrolled in classes, or subsequently fails to meet the definition of a student while a disciplinary matter is pending.
     Students continue to be subject to city, state laws while at the University, and violations of those laws may also constitute violations of the code. In such instances, the University may proceed with university disciplinary action under the code independently of any criminal proceeding involving the same conduct and may impose sanctions for violation of the code even if such criminal proceeding is not yet resolved or is resolved in the student's favour.

6.   **DEFINITIONS**
(a)   "University premises" includes all lands, buildings, facilities, and resources owned, leased, managed, or operated by the University.
(b)   "Student" includes an individual who has paid an acceptance fee, registered for classes, or otherwise entered into any other contractual relationship with the University to take instruction, conduct research or undertake project.
(c)   It further includes persons who are eligible to receive any of the rights and privileges afforded a person who is enrolled at the university, including, but not limited to, those individuals admitted to the University and attending orientation programmes.
(d)   Student status lasts until an individual graduates, is dismissed, or is not in attendance for two (2) complete, consecutive semesters.
(e)   "Student" also includes registered student organizations.

7.   **PROHIBITED CONDUCT**
     Any student found to have engaged, or attempted to engage, in any of the following conduct while within the University's jurisdiction, will be subject to disciplinary action by the University. Any student who abandons an attempt or prevents the prohibited conduct from occurring under circumstances that demonstrate a complete and voluntary renunciation of the prohibited conduct will not be subject to disciplinary action by the University.
I.   **Academic Misconduct**
     Any activity that tends to compromise the academic integrity of the University or subvert the educational process. Examples of academic misconduct include, but are not limited to:
(a)   Violation of course rules as contained in the course syllabus or other information provided to the student;
(b)   Knowingly providing or receiving information during tests/ examinations; or the possession and/or use of unauthorized materials during those examinations (including mobile phones or written material);
(c)   Knowingly providing or using unauthorized assistance in the laboratory, on field work, in studies or on a course assignment;
(d)   Submitting plagiarized work for an academic requirement. Plagiarism is the representation of another's work or ideas as one's own; it includes the unacknowledged word-for-word use and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use of another person's ideas;

(e) Submitting substantially the same work to satisfy requirements for one course or academic requirement that has been submitted in satisfaction of requirements for another course or academic requirement without permission of the instructor of the course for which the work is being submitted or supervising authority for the academic requirement;

(f) Falsification, fabrication, or dishonesty in creating or reporting laboratory results, research results, and/or any other assignments;

(g) Serving as, or enlisting the assistance of, a substitute for a student in any graded assignments;

(h) Alteration of grades or marks by the student in an effort to change the earned grade or credit;

(i) Alteration of academically related University forms or records, or unauthorized use of those forms or records;

(j) Engaging in activities that unfairly place other students at a disadvantage, such as taking, hiding or altering resource material, or manipulating a grading system; and

(k) Violation of programme regulations as established by departmental committees and made available to students.

(l) Violation of instructions/guidelines included in the University/institutional/students' handbook etc.

## II. Endangering Health or Safety

(a) Endangering behaviour: Taking or threatening action that endangers the safety, physical or mental health, or life of any person, or creates a reasonable fear of such action. Relationship violence or intimate partner abuse may constitute endangering behaviour.

(b) Stalking: Engaging in a pattern of unwanted conduct directed at another person that threatens or endangers the safety, physical or mental health, or life or property of that person, or creates a reasonable fear of such a threat or action.

(c) Sexual harassment: Sexual harassment of fellow students and other people on the campus. Sexual harassment includes sexual advances, sexual solicitation, requests for sexual favours, and other verbal or physical conduct of a sexual nature.

(d) Indecent exposure: Defined as the exposure of the private or intimate parts of the body in a lewd manner in public or in private premises when the accused may be readily observed.

## III. Destruction of Property

Actual or threatened damage to or destruction of university property or property of others, whether done intentionally or with reckless disregard.

## IV. Dangerous Weapons or Devices

Storage or possession of dangerous weapons, devices, or substances including, but not limited to, firearms, ammunition, or fireworks.

## V. Dishonest Conduct

Dishonest conduct, including, but not limited to: knowingly reporting a false emergency; knowingly making false accusation of misconduct; misuse or falsification of university or related documents by actions such as forgery, alteration, or improper transfer; submission of information known by the submitter to be false to a university official.

## VI. Theft or Unauthorized Use of Property

Theft, or the unauthorized use or possession of university property, services, resources, or the property of others.

## VII. Failure to Comply with University or Civil Authority

Failure to comply with legitimate directives of authorized university officials, law enforcement or emergency personnel, identified as such, in the performance of their duties, including failure to identify oneself when so requested; or violation of the terms of a disciplinary sanction.

## VIII. Drugs

Use, production, distribution, sale, or possession of drugs in a manner prohibited under law. This includes, but is not limited to, the misuse of prescription drugs.

## IX. Alcohol

Use, production, distribution, sale, or possession of alcohol in any manner.

**X.   Unauthorized Presence**

Unauthorized entrance to or presence in or on university premises.

**XI.   Disorderly or Disruptive Conduct**

Disorderly or disruptive conduct that unreasonably interferes with university activities or with the legitimate activities of any member of the university community.

**XII.   Hazing**

Doing, requiring, or encouraging any act, whether or not the act is voluntarily agreed upon, in conjunction with initiation or continued membership or participation in any group that causes or creates a substantial risk of causing mental or physical harm or humiliation. Such acts may include, but are not limited to, use of alcohol, creation of excessive fatigue, and paddling, punching or kicking in any form.

**XIII.   Abuse of Student Conduct System**

Abuse of any university student conduct system, including but not limited to:
(a)   Failure to obey the summons or directives of a student conduct body or university official;
(b)   Falsification, distortion, or misrepresentation of information before a student conduct body;
(c)   Disruption or interference with the orderly process of a student conduct proceedings;
(d)   Knowingly instituting of a student conduct proceeding without cause;
(e)   Discouraging an individual's proper participation in, or use of, a university student conduct system;
(f)   Influencing the impartiality of a member of a student conduct body prior to, and/or during the course of a student conduct proceeding;
(g)   Harassment and/or intimidation of a member of a student conduct body prior to, during, and/or after a student conduct proceeding;
(h)   Failure to comply with one or more sanctions imposed under the code of student conduct; and
(i)   Influencing another person to commit an abuse of a university student conduct system.

**XIV.   Violation of University Rules**

Violation of other published university regulations, guidelines, policies, or rules, or violations of federal, state, or local law. These university regulations, guidelines, policies, or rules include, but are not limited to, those which prohibit the misuse of computing resources, sexual harassment, rules for student groups or organizations, and residence hall rules and regulations.

**XV.   Riotous Behaviour**

Participation in a disturbance with the purpose to commit or incite any action that presents a clear and present danger to others, causes physical harm to others, or damages property. Proscribed behaviour in the context of a riot includes, but is not limited to:
(a)   Knowingly engaging in conduct designed to incite another to engage in riotous behaviour; and
(b)   Actual or threatened damage to or destruction of university property or property of others, whether done intentionally or with reckless disregard; and
(c)   Failing to comply with a directive to disperse by university officials, law enforcement, or emergency personnel; and
(d)   Intimidating, impeding, hindering or obstructing a university official, law enforcement, or emergency personnel in the performance of their duties.
(e)   Political, sectarian or ethnic activism in the form of gatherings, demonstrations, walks or riots on university premises

**XVI.   Recording of Images without Knowledge**

Using electronic or other means to make a video or photographic record of any person in a location where there is a reasonable expectation of privacy without the person's prior knowledge, when such a recording is likely to cause injury, distress, or damage to reputation. This includes, but is not limited to, taking video or photographic images in shower/locker rooms, residence hall rooms, and restrooms. The storing, sharing, and/or distributing of such unauthorized records by any means is also prohibited.

# PART B — ENFORCEMENT OF STUDENT CODE OF ETHICS AND CONDUCT

**8.    AUTHORITY TO CHECK FOR ACTS OF INDISCIPLINE**

All faculty members, administrative staff, support staff and students will be expected to monitor the observance of this code of conduct and report any such disregard or violations to relevant University authorities for taking appropriate action/remedial measures. Matters of indiscipline would be referred to the University authorities, which are authorized to check indiscipline matters and decide as per University rules, regulations and policy. Parents of those students who disobey authority and violate the code of conduct will be informed. Students may be held accountable for the acts of misconduct of their guests while on University premises or at University-sponsored activities. Students who are charged with violations of this Code of Conduct are subject to disciplinary action as per University rules/regulations/Statutes.

Every member of the Faculty shall have the power to check any disorderly or improper conduct of, or any breach of the regulations, by students in any part of the University or outside when the visit is sponsored or organized by it. Misconduct in a classroom when a student is under the charge of a teacher shall not be allowed and a punitive action such as a fine, removal from the classroom or a punishment of greater magnitude may be imposed as decided by the authority so empowered.

**9.    STUDENT DISCIPLINE COMMITTEE**

The Vice Chancellor may constitute, and revise from time to time, a Student Discipline Committee. The Student Discipline Committee is to act as an inquiry committee to investigate reported cases of violation of discipline and code of conduct by students of the University and make its recommendations in accordance with University rules and regulations. In cases referred to the Student Discipline Committee, after due inquiry, it will recommend the punishment according to the gravity of the case after giving full opportunity to the defaulter to give his/her point of view before recommending the punishment.

**10.    PROCEDURE IN CASE OF BREACH OF DISCIPLINE**

A teacher, a staff member or officer in whose presence or in relation to whom an act of indiscipline has been committed or who gets to know of such an act, may deal with the case himself/herself, or if in his/her view the case is one which can be more appropriately dealt by another authority or which warrants a penalty of greater magnitude than he/she is competent to impose, shall refer the case to the President Student Discipline Committee.

**11.    CASE REFERRALS**

All cases of serious breach of discipline will be referred to the Student Discipline Committee for investigation . A case should be submitted as soon as possible after the alleged violation takes place, preferably within 24 hours of the violation. Those referring cases are normally expected to serve as complainant and to present relevant evidence in disciplinary hearings before the Student Discipline Committee.

**12.    PROCEDURE FOR DISCIPLINARY HEARING**

(a)    A disciplinary hearing is a formal process conducted by the University Student Discipline Committee. This formal process is designed to gather and consider relevant information regarding the alleged violation(s) of the Student Code of Ethics & Conduct and to determine and recommend a punishment. Every effort will be made to expedite proceedings pursuant to allegations within a reasonable period.

(b)    When a case against a student is referred to the Student Discipline Committee, it may, with the approval of the Dean of the Faculty, if it deems fit, suspend the student from the classes till the finalization of the case.

(c)    The Discipline Committee shall submit its report to the HOD in four parts i.e. Summary of the Case, Proceedings, Findings and Recommendations. The report shall attempt to document, as much as possible, the matters relevant to the case and the inquiry as conducted by the Discipline Committee.

(d)    If the Awarding Authority for the punishment recommended by the Discipline Committee is the Dean/VC, the HOD shall forward the report to the Dean with his/her recommendations. If the case involves students from more than one department then all of the HODs concerned shall make their recommendations.

(e)    If the Discipline Committee recommends Rustication/Expulsion of the student or any other major punishment, the Dean shall forward the report to the Vice Chancellor with his/her recommendations.

In all cases where penalties are awarded by the President Student Discipline Committee/HOD/Dean, the report shall be forwarded to the Vice Chancellor for information.

## 13. PUNISHMENT OR PENALTY FOR ACTS OF INDISCIPLINE

(a)   Punishment or penalty for acts of indiscipline shall be according to the gravity of the case and may be any one or more of the following:

### Minor Punishments

(i)    Warning in writing: Notice to the offender, verbally or in writing, that continuation or repetition of prohibited conduct may result in further disciplinary action.

(ii)   Probation: Probation for a specific period.

(iii)  Fine: Fine which may amount up to Rs. 10,000/- as per shadule.

(iv)   Hostel Suspension/Permanent Removal: Expulsion from the hostel for a specified period, or permanent removal from the residence hall.

(v)    Withholding of certificate: Withholding of a certificate of good moral character.

(vi)   Removal of privileges: Deprivation from the privileges enjoyed by the students.

(i)    F Grade: Award of "F" grade in a paper or course.

### Major Punishments

(i)    Fine: Fine which may amount up to Rs. 25,000/- it must be in shadule.

(ii)   Exam Result: Cancellation of examination result.

(iii)  Rustication: Rustication from the University for a specific period.

(iv)   Degree: Non conferment of degree/transcript.

(v)    Expulsion: Expulsion from the University.

### Other Punishments

Other sanctions or a combination of above mentioned punishments as deemed appropriate may also be prescribed.

(b)   A student guilty of an act of indiscipline shall be liable to the penalties specified in the table below or promulgated through written orders/notifications with the indicated Awarding and Appellate Authorities:

| S. No | Penalty | Awarding Authority | Appellate Authority |
|---|---|---|---|
| 1 | Exclusion for classroom, Laboratory, Workshop or field work for the periods concerned, for not more than four such consecutive periods. | Teacher In-charge | Head of Department |
| 2 | Exclusion from the game or the Field for not more than one week. | In-charge of the Game | Head of Department |
| 3 | Exclusion from Instructional or Sports Tour or Survey Camp. | Teacher In-charge/Head of Department/Chairman | Dean |
| 4 | Exclusion from the Department for a period not exceeding two weeks. | Head of Department/ Chairman | Dean |
| 5 | Exclusion from the Library for not more than two weeks. | Chairman/Library Committee | Dean |
| 6 | Exclusion from all classes or any class in any faculty for a period not exceeding two weeks. | Dean | Vice Chancellor |
| 7 | Exclusion from the Hall of residence for a period not exceeding six months. | Resident Tutor | Warden |
| 8 | Exclusion from the Hall of residence for a period not exceeding one year. | Senior Warden/Warden/ Director Student Affairs | Vice Chancellor |
| 9 | Suspension or removal from a position of authority in a hall of Residence. | Resident Tutor/ Senior Warden/Warden | Vice Chancellor |
| 10 | Suspension or removal from a position of authority in the Students Union or Student Society. | Director Student Affairs | Vice Chancellor |

| S. No | Penalty | Awarding Authority | Appellate Authority |
|-------|---------|--------------------|--------------------|
| 11 | Suspension or removal from a position of authority in the University Sports. | President Sports Committee | Vice Chancellor |
| 12 | Cancellation or Remission of fee or University Scholarship. | Dean | Vice Chancellor |
| 13 | Fine up to Rs. 1000/- | Lecturer/ Resident Tutor | HOD/Warden |
| 14 | Fine up to Rs. 2000/- | Warden | Vice Chancellor |
| 15 | Fine up to Rs. 3000/- | Assistant Professor | Dean |
| 16 | Fine up to Rs. 5000/- | Chairman of Teaching Department/ Professor/ Senior Warden/Director Student Affairs | Vice Chancellor |
| 17 | Fine not exceeding Rs. 10,000/-. | Dean | Vice Chancellor |
| 19 | Rustication for one or more semester. | Vice Chancellor | – |
| 20 | Expulsion from the University | Vice Chancellor | – |
| 21 | Any other major punishment | Vice Chancellor | – |

## 14. APPEALS

(a) An appeal against the penalty may be filed by the student with the Appellate Authority within 30 days of announcement of the punishment. No appeal by a student shall be entertained unless it is presented within 30 days from the date of communication of the decision, provided that the Vice Chancellor may, for valid reason(s), extend this period.

(b) No appeal shall be accepted against the decision of an authority imposing a penalty other than rustication or expulsion except on the grounds that such authority imposed a penalty which it was not competent to impose.

(c) An appeal on the grounds that an authority imposed a penalty which it was not competent to impose, shall lie with the body or person of higher authority than the one who imposed the penalty.

## 15. RUSTICATION

(a) Rustication may be awarded up to a maximum of 3 years. The penalty when imposed on a student shall always mean a minimum loss of one semester as far as his/her appearance in the examinations is concerned. The actual period of absence from the University will, however, depend upon the time of the academic year when the penalty is imposed.

(b) The student under rustication will have the option of rejoining the University at the beginning of the semester/academic year after the completion of rustication period, provided suitable courses are available in the regular semester's list of courses being offered. It shall be obligatory on the part of the University to re-admit the student if he/she wishes to rejoin.

(c) No fee shall be charged from a rusticated student for the time period during which his/her name remained struck off the rolls. However, the previously deposited fee will not be refunded.

(d) No student shall be rusticated from the University unless he/she has been allowed a reasonable chance of defence against the accusations.

## 16. EXPULSION

(a) The Dean of the Faculty shall report the name of the student who has been found guilty of an offence warranting expulsion to the Vice Chancellor stating the reasons for the proposed action, who will then have the authority to sanction expulsion after allowing reasonable chance to the student to defend himself/herself against the expulsion.

(b) The name of the expelled student will immediately be removed from the University rolls, and fee for remaining month(s) of the semester will not be refunded.

(c) A student expelled from the University will not be re-admitted to any of the University's constituent or affiliated units.

(d) Cases of expulsion will be registered in University records and announced to all constituent and affiliated units.

**17. COMPENSATION FOR LOSS**

The Dean of the Faculty, or any teacher or officer to whom he may delegate the powers, may instruct a student to pay compensation for any loss or damage to property belonging to the University, public authority, a fellow student or an employee of the University, caused by a willful act or gross negligence of the student. If the student does not pay such compensation within a specified period, the Dean of the Faculty will proceed against the student in the manner as prescribed in these regulations.

**18. INTERPRETATION**

If any question arises regarding the interpretation of these regulations the matter shall be deliberated by the academic administration consisting of Head of the Department, Controller of Examinations, Registrar, Deans and Vice Chancellor and their decision thereon shall be final. In all cases where the regulations are silent, the decision of the Vice Chancellor shall be final.

**19. REMOVAL OF DIFFICULTIES**

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Vice Chancellor in individual cases may make such decision, not inconsistent with the spirit of these Regulations, as may appear to necessary for the purpose of removing the difficulty, provided that such a decision is not ultra vires of the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

**CREDITS:** This Code of Ethics & Conduct borrows heavily from the Code of Ethics of National University of Sciences & Technology, Pakistan which in turn is based on a number of other documents that are cited therein.

## SCHOLARSHIPS REGULATIONS

**1. SHORT TITLE**

These regulations shall be called the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan Scholarships Regulations 2019.

**2. COMMENCEMENT**

These regulations shall come into force at once on the approval by Syndicate.

**3. APPLICATION**

These regulations shall govern the award of all the Merit and Need-based Scholarships at Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan.

**4. PREAMBLE**

The University in accordance with the Act shall assist the needy students in obtaining the financial assistance and scholarships in order to continue their studies and academic activities at the University. Furthermore, the University shall also assist high-achieving students in obtaining recognition and financial reward for their excellence and meritorious performance in academic and research activities.

**5. BUDGETARY ALLOCATION FOR SCHOLARSHIPS**

(a) In order to provide adequate funds in the annual budget for scholarships, 10% of the total tuition fee revenue at the University will be allocated for Scholarships and Fee Concession.

(b) It would be ensured that the scholarships on need-basis or merit-basis shall cover a minimum of 10% of the student population in each Academic Year.

**6. SCHOLARSHIPS COMMITTEE**

The Vice Chancellor shall constitute, and may revise from time to time, a Scholarships Award Committee with members from faculty and officers of the University at university level. Heads of academic departments shall constitute Scholarship Committees at department level from faculty

and officers of their Departments. The Scholarship Committees at department level shall conduct the interviews of the applicants for scholarships and submit their recommendations to the Scholarships and Financial Assistance Department for further proceding. Scholarship Award Committee at University level may review the recommendations submitted by Department Scholarships Committees by conducting meetings whenever necessary, for the cases of merit, need-based or any other scholarship advertised by the Scholarships and Financial Assistance Department. The Director Scholarships and Financial Assistance Department shall be responsible for submitting final recommendations to the Worthy Vice Chancellor for approval.

**7.    SCHOLARSHIPS AND FINANCIAL ASSISTANCE DEPARTMENT**
There shall be Scholarships and Financial Assistance Department established at the University, which shall be responsible for the following:

(i)     Advising and counseling the University Students on various scholarships and financial assistance schemes available to them and ensuring that information about the scholarships and financial assistance schemes is widely disseminated throughout the student community using Notice Boards, Electronic Mail, KFUEIT Website, KFUEIT Official Facebook Page and through conducting Seminars and Workshops for Students at KFUEIT.
(ii)    Facilitating Scholarship Committees at department level to process merit, need based or any other scholarship.
(iii)   Maintaining records related to various scholarships schemes in a reliable manner.
(iv)    Attainment of semester budget required to process the Need-based and Merit Scholarship from Finance Department at KFUEIT.
(v)     Coordinating with external organizations for the provision of scholarships and issues pertaining to students of KFUEIT.

**8.    DIRECTOR SCHOLARSHIPS AND FINANCIAL ASSISTANCE DEPARTMENT**
The head of the Scholarships and Financial Assistance Department be called the Director Scholarships and Financial Assistance Department.

Director Scholarships and Financial Assistance Department shall be responsible for the following:

a)      Director Scholarships and Financial Assistance Department shall act as President of the Scholarships Award Committee at University level. The President Scholarships Award Committee will conduct timely meetings of the committee to review the applications received and make recommendations on these applications for the approval of the Vice Chancellor.
b)      Obtaining the advice and instructions of the Vice Chancellor on various Scholarship schemes and conducting official correspondence on behalf of the University and to make sure that University students are rightfully benefitting from these schemes.
c)      Submitting a monthly report to the Vice Chancellor on activities undertaken to fulfill the assigned mission and responsibilities.

**9.    MERIT SCHOLARSHIP**
(a)     Merit scholarship shall be awarded to undergraduate students by the University to top three students obtaining the highest SGPA in each class. Students enrolled in first semester shall be awarded Merit Scholarship on the basis of aggregate marks obtained by the student in admission merit list. In addition to the student being placed among the top three, the SGPA obtained must also be greater than 3.0. Furthermore being, only students carrying full workload as specified in the Plan of Study for the degree are eligible to be considered for Merit Scholarships Award.
(b)     Merit Scholarship shall be awarded to the students of all the undergraduate (16-year) degree programs on per semester basis. For the purpose of Merit Scholarship, each student will be considered as part of a class of students taking same set of courses taught by the same teacher. Assignment of each student to a class shall be done at the beginning of the semester and shall not be generally changed thereafter. In any case, the assigned class of a student cannot be changed for the purpose of Merit Scholarship after the mid-semester examination.
(c)     The amount of merit scholarship shall be a maximum of full tuition fee per semester. After the first semester, its amount will depend upon the SGPA obtained by the top three of the students in previous semester examination. The Merit Scholarship amount awarded to an eligible student will be 100% of semester tuition fee, if his/her SGPA is 4.0 and 0% if his/her SGPA is 3.0 (or lower).

between 0% and 100% of student's semester tuition fee. As an example, a student who is among the top three students and thus is eligible for the Merit scholarship and his/her SGPA is 3.60, he/she will get 60% of tuition fee as Merit Scholarship amount.

(d)    There is no prescribed form for Merit Scholarship application. Computerized Examination Record System of the University will automatically generate the names of deserving candidates for Merit Scholarship Award according to above mentioned criteria.

(e)    Scholarships Award Committee shall submit the cases for award of Merit Scholarship, duly verified by the Controller of Examination, for the approval of the Vice Chancellor.

## 10.    NEED BASED SCHOLARSHIP

(a)    The Need Based Scholarship shall be awarded to the needy, deserving and orphan students of undergraduate (16-years) programs by the University on per semester basis.  Primary criteria for the award of need-based scholarship shall be the need of the student relative to the other applicants. However, applicants need to maintain a SGPA or CGPA of 2.0 to qualify for consideration for the award of need-based scholarship.

(b)    Applications for the Need-Based Scholarship shall be received on a prescribed form to be filled by the needy, deserving and orphan students. All required supporting documents must be submitted by the applicant. Information provided by the applicant in the Need-Based Scholarship Application Form shall strictly be treated as confidential.

(c)    Students of the University shall be informed periodically through a notice for application deadline for the Need-Based scholarships.

(d)    Background Check may be conducted, if deemed necessary, to verify information provided by the applicant in the Need-based Scholarship Application Form. If the Background Check reveals that the applicant has provided false information in the Need-Based Scholarship Application Form. The applicant would stand disqualified from receiving any Need-based Scholarship.

(e)    Applicants for Need-Based scholarship may be required to undergo interview and assessment by the Scholarships Committee at department level and may further be reviewed by Scholarships Award Committee. The final recommendations shall be made by the Scholarships Award Committee in accordance with the budget of University.

(f)    If a special need arises, in a case reported or applied directly to the Vice Chancellor, the Vice Chancellor may award need-based scholarship directly to a needy applicant.

(g)    The amount of the Need Based Scholarship shall be a maximum of full tuition fee of the semester. The Scholarships Award Committee is empowered to decide upon the amount of Scholarship for each applicant according to the financial needs of the applicant, on case to case basis. Award decision taken by the committee shall be considered as recommendations to be put up for the final approval by the Vice Chancellor.

(h)    The scholarship will be reimbursed to University account if the student becomes recipient of any other scholarship and the amount of scholarship received by the student covers his/her financial educational needs. Students will return the amount in university's scholarship account and will submit their receipts to Scholarship and financial assistance department for further process.

(i)    Need-based Scholarships are awarded as Qarz-e-Hasana. The students availing Need-based Scholarship must note that they have a moral obligation to return the amount after they have completed their education, at their convenience, so that these funds might be used in future to help the other needy and deserving students.

(j)     MS/PhD students may be financially supported by the university under the program of Teaching Assistants/ Research Assistants for which policies/rules shall be announced separately.

## 11.    OTHER SCHOLARSHIPS AND FINANCIAL ASSISTANCE SCHEMES

From time to time, other scholarships and financial assistance schemes may be initiated in the University with the support of Philanthropists/government/non-governmental organizations, etc. Such scholarships and financial assistance schemes will be subject to their specific rules. However, the Scholarships and Financial Assistance Department shall announce these scholarships; financial assistance schemes, and review the applications for these scholarships/financial assistance schemes to recommend the award of these scholarships/financial assistance to deserving students in the light of the relevant rules.

## 12.    INTERPERTATION

If any question arises regarding the interpretation of these regulations the matter shall be deliberated by the academic administration consisting of Head of the Department. Controller of Examinations, Registrar, Deans and Vice Chancellor and their decision thereon shall be final.

**13.  REMOVAL OF DIFFICULTIES**

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Vice Chancellor in individual cases may make such decisions, not inconsistent with the spirit of these Regulations, as may appear to necessary for the purpose of removing the difficulty, provided that such a decision is not ultra vires of the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

## LIBRARY REGULATIONS

**1.  BACKGROUND**

Library at Khwaja Fareed University of Engineering & Information Technology was initially housed in a renovated hall with an area of about 2000 square feet. At beginning of the university functions were looked after by administration of University of Engineering and Technology (UET), Lahore. A librarian was assigned from UET Lahore to manage and run KFUEIT library. Until end of year 2016, library had about 4000 books in total with 1000 titles. Today library has 04 premises each of 2600 square feet and has two full time librarians with 04 Assistant Librarians and 04 off staff members. Library at present is being supervised by an assistant professor with additional duty of Chief Librarian. In year 2018 library collection has risen to 14500 books with 6000 titles and 40 journals in print. Library is growing day by day with all resources of a modern Library.

A library is a collection of resources of information accessible to a defined community for referencing or borrowing. It provides physical or digital access to materials of interest for institution community. Library collection can include books, periodicals, newspapers, manuscripts, films, maps, prints, documents, microform, CDs, videotapes, DVDs, e-books, audiobooks, databases, and other formats. A university needs to maintain a multi-disciplinary approach catering faculty, students, researchers and staff. Digital collection is ideally suited to encourage and support both scholarly suited and practical research activities. The main collection is arranged in a sequence of classification numbers which is a means of grouping together books on the same and related subjects. The most common classification system "Dewey decimal classification" is in use here at KFUEIT library.

**2.  OBJECTIVES**

Central Library of KFUEIT intends to play a vital role in achieving objectives of institution like study & teaching, research & extended services, and dissemination of information etc. in addition to departmental library services. We intend to serve our university community in the best possible way providing congenial environment endeavouring:

1.  To get all information relevant to our university community then analyse and store it in a way that is preserving and easy to retrieve when demanded.
2.  To provide required information in a useful manner.
3.  To act as expeditor in provision of latest education and research related extended services for grooming of human Capital of University.
4.  To be pivotal in university by acquiring and disseminating latest knowledge and information through effective acquisition and dissemination encompassing all the faculties and allied services and departments of university.
5.  To continually develop our library, collection and resources, services and facilities through periodic interaction with library advisory board, soliciting feedback from university students and faculty.

**3.  RULES AND REGULATIONS OF CENTRAL LIBRARY OPENING HOURS:**

Library remains open from 08:00 am. to 08:00 pm. (Except on Saturday / Sunday and gazetted holidays).

As university progresses, library timings may be changed on proposal of Chief Librarian and by approval of competent authority.

**CIRCULATION DESK:**

| | | | |
|---|---|---|---|
| Issue / Return | 08:15 | to | 19:45 |
| Prayer Break (Friday) | 12:45 | to | 13:30 |

## 4. ISSUE OF BOOKS (AUTHORIZATION)

The following categories of members shall observe the loan schedule mentioned against each.

| Category | Number of Books | Days |
|---|---|---|
| Vice Chancellor<br>Head of Departments/Professor<br>(Senior management) | 15<br>10 | 120<br>no. of re-issues: 01 |
| (Faculty)<br>Associate/Assistant Professor<br>Lecturer<br>Teaching Assistant/ Lab In charge<br>Visiting Faculty | no. of books in ratio of teaching courses<br>(2 books per course) | return date is semester end date (general reading books as per student borrowing policy) |
| Non-Faculty Members/ Staff<br>Students (under/post grads) | 2<br>2 | 14 - 21<br>14 - 21 |

Library fee (non-refundable)
Number of books for students will be increased as collection in library increases.
Number of days in inverse proportion to no. of books.

## 5. MEMBERSHIP AND LOAN PRIVILEGES:

- Membership of library is only for students and employees of University, which is granted on issuance of library membership card (University Card).
- A membership card will be issued to each member of the library. It is essential to bring membership card for borrowing books. The membership card should be kept securely. The member will be responsible for any book borrowed on his/her membership card or membership number.
- Membership card is non-transferable.
- Change of address / telephone number, or loss & theft of membership card must be reported to the library In charge/library staff immediately.
- University student/employee card is also membership card for Library.
- Reference books, newspapers and periodicals can only be used in the library.
- If any borrowed book is urgently required in library, it may be called back by the Librarian.
- Librarian may withhold or restrict circulation of any book in the library for specific purpose.
- Books will not be reissued on telephone or E-mail. The facility of re-issuance on phone or email may be extended to faculty only.

## 6. OVER DUE FINE:

- Rupees Ten (Rs. 10/-) per day per book will be charged as overdue fine.
- Reminders will be sent to faculty for return/renewal.
- Office assistant of each department for renewal and not-returned.
- Replacement cost if return overdue more than 01 year.
- Overdue fine must be deposited before end of semester otherwise membership will be suspended and fine will be deducted from university security of the member.

## 7. BOOK LOSS:

- Borrowers are responsible for safe return of all borrowed material to library at proper time.
- Book(s) lost, damaged, or mutilated in any way by a member have to be replaced or paid for as per local market price. If book is not available and current price cannot be determined from local market, then double of actual price as per record plus additional 25% as departmental charges will be paid by member. The books paid for will be written-off from stock register.

- The amount as cost of lost or damaged book(s) or material(s) will be credited to KFUEIT University Library's account. Book(s) or other material lost or found to be lost on stock-taking shall be put in library committee for approval to write-off + weed-out. (Open access ~ 3%)
- If any member leaves university without returning books borrowed from library, price of books(s) will be adjusted against his security/dues with university.
- In case a book, which is part of a set, is lost or damaged, borrower will have to replace full set or pay fine equivalent to current price of set + 25% administration charges.
- Borrowers are advised to check books at time of issue and in case of any defect/damage inform library staff.

## 8. GIFTS POLICY:
- Gifts will be accepted at discretion of university librarian. Following are guidelines for accepting any offer of gifts.
- Any material approved by library committee are welcomed which fall within scope of library's collection development policy if they are of academic value and if they contribute significantly to usefulness of current teaching and research collection of library.
- Library would not accept donations that duplicate existing stock, except in case of core reading list material, or any material that is out of date, or in poor physical condition.
- Donations will be accepted without obligations to donors and on understanding that upon receipt material will become property of university library.
- Library will determine most appropriate way to treat any donated material.
- Donations will normally be dispersed and items will be shelved with materials on same subject or in other sequence rather than kept in separate, discrete collections.
- Donated material will have same selection criteria as other library material.
- Library reserves right to dispose of any gift that seems unsuitable or unwanted.
- Low price editions in donation, distribute among students.

## 9. RESERVATION:
- A book required by a member, which is already issued, may be reserved.

## 10. LIBRARY CLEARANCE:
- Student, staff or faculty member leaving university permanently or proceeding on long leave will get clearance certificate from library. His/her final settlement of account shall be made by accounts office on receipt of clearance certificate from library.
- Visiting faculty will get clearance certificate from library at end of every semester. Their honorarium of last month of a semester will be released by accounts office on receipt of clearance certificate from library.

## 11. GENERAL RULES/INSTRUCTIONS:
- No personal belongings are allowed in to library. A special rack is available outside library to keep such things.
- Library staff will not be responsible for precious things kept in handbags, brief cases, etc.
- Readers are allowed to select books from stack. However, they are requested not to disturb arrangement of books in shelves.
- Books once removed from shelves must be placed at nearest table or counter. Reader while in library shall not receive any telephone call.
- Musical instruments not allowed in library.      Zone wise
- Silence must be observed in the library.    Zone wise
- Books, periodicals and newspapers are not to be marked with ink or pencil.
- Tearing out of pages or damaging reading material in any way is strictly prohibited.
- Students are not allowed to visit library without University Identity Cards.
- Any misbehavior, discourtesy or unwillingness to provide services by library staff shall be reported to Chief Librarian.
- A student/member, who infringes rules, shall be liable to disciplinary action.
- In case of violation, violator would be fined that could be Rs: 500/= to 5000/= as per the decision of Chief Librarian. (Fine as per zone, display in library)

## 12. WRITE-OFF LOSSES:

- Librarian shall report all books/non-book material damaged, and/or worn out through wear and tear to competent authority for write off.
- The competent authority may write off losses up to the extent of 3% per annum of the stock.
- Losses written off by the competent authority shall be struck off from the ledgers and the record shall be transferred to the withdrawal register indicating the authority under which the losses were written off.

## 13. STOCKTAKING:

- Stocktaking will be held 2-3 years. During stocktaking lending of books shall remain suspended. All books on loan with borrowers will have to be returned before date notified for this purpose.
- JOURNALS/MAGAZINES:
- Journals/magazines will not be issued. Purchase of impact factor journals will be done on request of HOD and after scrutiny by the Chief Librarian and library committee and approval of the Vice Chancellor.

## 14. EVENTS:

- Trainings will be held by Library for (Research scholars/Faculty on Turnitin, Endnote, SPSS, etc. on request of HODs. Exhibitions, Book Fairs, Seminars and Workshops.
- Orientations for new / fresh intake of students.
- Information Literacy Sessions (For each new academics).

## 15. RESEARCH WORK/ HEC DATABASES:

- All resources about research are available on HEC Website, some restricted databases may be purchased through IP.

- **RULES AND REGULATIONS OF DEPARTMENTAL LIBRARY**
  All rules and regulations for central library will be equally applicable to departmental libraries except mentioned otherwise. .
- Only text books are available in departmental libraries. (Reference, recommended books in central library)

- **INTER-LIBRARY LOANS & AGREEMENTS**
  Library will develop working relations with libraries in region and beyond. In case patron/member needs an item which is not available in KFUEIT library collection, library will attempt to borrow it from other      library within the city/country through inter library loan agreement. (Cost by requester).

## 16. SERVICES
### ACQUISITION:
Following procedure will be adopted for the acquisition of library material.
Material will be selected in following way.
a. Circulation of lists of books and catalog among faculty
b. Demand from faculty on prescribed form duly signed by Head of the Department
c. To acquire balanced and latest collection of books, different booksellers may be asked to send fresh arrivals on approval.
d. Books selected by faculty will be kept in library and other not selected will be sent to the bookseller.
e. Books required by thesis students (e-books, print)
f. KOHA multilingual titles
If bulk purchase is needed, library can arrange a book fair by inviting different booksellers to exhibit their books for selection.
Faculty or course coordinators are required to send lists of new text and reference books duly approved by head of respective department at least 03 months before commencement of a semester.
If a list of required books catalog is sent to library by HOD, library after approval of Chief Librarian, will prepare list of selected books and get approval of Vice Chancellor for purchase. After formal approval purchase order will be placed subject to availability of funds.

17. **CIRCULATION:**
    Circulation will be only from central library.

18. **BOOK BANK:**
    A maximum of 5 different books may be borrowed.
    Books shall be loaned for current semester only. All books shall have to be returned at end of semester irrespective of their date of issue.
    Book rent shall be Rs.10 per day.
    Fine on late fee of each book rent is RS.10 per day.
    Damaged book will not be accepted.
    Double price of book will be charged in case of lost or bring without stamped library book from market.

19. **REFERENCE SECTION:**
    Reference material such as theses/ loose-leaf/publications/ non-printed such as CD-ROMs are for reference purpose only and will not be issued.
    Never write, scribble or cut pages of library material/books.
    Library staff is empowered to stop any unhealthy activity.
    After consulting library material/book leave it on table.

20. **DIGITIZATION OF RESOURCES:**
    Library will execute a plan to digitize resources. [As per material]

21. **INFORMATION TECHNOLOGY SOLUTIONS**

- **LIBRARY MOBILE APPS**
    Mobile apps are a real trend right now, as people have access to their mobile devices constantly. Also, people are spending more time within mobile apps and less time within mobile browsers.  So why not connect with the members in a way they enjoy? University Library will develop a mobile app to extend the library's services outside their physical borders and facilitate the interaction with members.

- **SELF-SERVICE PRINTING, COPYING, AND SCANNING SOLUTIONS**
    It is common knowledge that the digital era has been directly affecting printing services. This is where libraries can be handy for people who don't want to keep a printer at their desk or in office. KHUEIT Library will offer a mechanism for printing on the go through a software. Members walk into the library and print, scan and copy documents without involvement of library staff.

- **PROPOSED INFORMATION TECHNOLOGY SOLUTION (SECURITY)**
    Library of Khwaja Fareed University of Engineering & Information Technology is entirely outfitted with proper understanding of latest hardware to automate its system. Our plan is to identify technologies used in Library Management System / Book Theft Control, Employee in Access Control System, Time Management Systems, Product Management and Assets Tracking based on latest technologies such as RFID, Barcodes, Magnetic and Biometrics. We are planning to adopt all type of hardware devices for Identification of latest methods for security of our Library System.

- **EM SYSTEM**
    The electronic article surveillance (EAS) electromagnetic system creates a low frequency electromagnetic field (fundamental frequencies between 70 Hz and 1 kHz are typically used) between two pedestals at an exit or checkout aisle. The field continuously varies in strength and polarity, repeating a cycle from positive to negative and back to positive. With each half cycle, the polarity of the magnetic field between the pedestals changes. In response to the changing magnetic field created by the transmitter, the magnetic field domain of the tag material abruptly "switches" as the field strength varies past a particular point, whether positive or negative, during each half of the transmit cycle. This abrupt change in the magnetic state of tag material generates a momentary signal that is rich in harmonics (multiples) of the fundamental frequency. Using electronic signal processing techniques, the system identifies that the harmonics are at the right frequencies and levels, and that they occur at the proper time in relation to the transmitter signal. If the criteria are met an alarm occurs immediatly.

- **EM TAGS**

  Library Management System can use the de-activatable and Permanent EM Strip Tags. They are self-adhesive and are suitable for any packaging or hard surfaces. De-activatable tags can be deactivated or activated by the units. De-activatable tags are mainly used for circulation. Permanent tags as the name implies, cannot be deactivated. They can be used mainly in our reference material.

- **ACTIVATOR/DEACTIVATOR**

  It is designed to Activate (Sensitize) or Deactivate (Desensitize) the Library De-activatable strip tags attached to the library materials. Because Act/Deactivation force from the unit is directed towards the book, it will not interfere with any other electronic equipment nearby. The unit is a plug and play machine, so no technician needed to adjust or tune up the unit. The unit could be used on a desk top or placed in a slot made on the library counter.

- **RFID BASED ANTI-THEFT LIBRARY SECURITY SYSTEM**

  Khwaja Fareed University of Engineering & Information places the highest importance to development of its library with a modern 21st century infrastructure and large collection of books and audio-visual resources. Basic tasks in library management include the planning of acquisitions of materials, arranging the acquired materials according to the library classification, de accessioning of materials and borrowing of materials. Among these, the proposed system can automate the following tasks using RFID technology:

1. Accessing number of books at a time
2. Searching a particular book to check its presence in the library
3. Identify the physical location of the book
4. Accounting/Stock verification of the materials

   The RFID based system facilitates the fast issuance, re-issuance and returning of books with the help of RFID enabled modules. It directly provides the book information and library member information to the library management system. It also provides monitoring and searching system. The monitoring module continuously monitors the movement of books across the gates, so that the books taken out without prior issuance will be traced out easily and will alarm the librarians. The searching module provides the fast searching of books using RFID handheld reader. The physical location of the books can be easily located using this module. We at KFUEIT look to deploy this state-of-the-art technique at our library.

   Following features can be implemented in the Library using RFID technology:
1. To remove the manual record keeping of books
2. Identify of books and library members as they move
3. Improved utilization of resources like manpower, infrastructure etc.
4. Less time consumption as line of sight and manual interaction are not needed for RFID-tag reading.
5. To provide two meters read range antennas
6. To minimize the manual intervention
7. To minimize the manual errors
8. To provide the long lasting labels
9. To provide fast and relevant searching of books

22. **LIBRARY PROMOTION**

    This is commonly said that 10% is what you possess while 90% goes how you present it. Library activities will remain in dark if not properly advertised and circulated. In this regard, promotional activities will be encouraged. This will be accomplished by formulation of pertinent mechanisms through which university community will be informed about the resources and services available in library and resource center. Schedule of planned activities will also be disseminated through these mechanisms for publicity and information. Faculty, students and staff of the university may not be aware or familiar with the resources, services and working routine of the library. Orientation sessions will be planned and delivered by library staff and through Office of Director of Student Affairs and individual departments. This activity may be requested any time by a department and must be conducted at start of every session.

**23. FRIENDS OF LIBRARY**

Friends of Library is an initiative proposed by Library Committee. These student members will join library at beginning of each regular academic year and will remain attached for 12 months. Friends of library will be selected from among the students (undergrads) and preference will be given to students of later semesters over early semester. Friends will be volunteers helping with important tasks and projects like dissemination of library information, introduction of resources and services available in library, procedures and working of the library, etc. They will also be handy in case of holding activities like lectures, workshops, book fairs, seminars, etc. arranged by library. Friends will also help attract attention of general public on library services and advocate support and generate execution of its activities. They will promote programs and generate cultural activities for the involvement of university community.

Friends of library will have number of privileges from their membership. They could have advanced registration for activities planned by library, discounts on events (trainings, workshops, seminars, etc.) arranged by library. Friends will be awarded a certificate at the completion of their attachment signed by Chief Librarian.

**24. STUDENT LIBRARY ADVISORY BOARD (SLAB)**

Chief Librarian suggests to introduce an advisory board comprising students (MS/PhD) of the university. This is envisaged that student library advisory board (SLAB) will help to attract the students for utilization of library and its resources. As of today more and more resources are getting digital, and electronic access is getting more common. Potential users of library today are more interested to get access to all the resources on their hand held devices. This compels library to redefine its physical arrangement providing spaces and services to keep attraction of students. SLAB may be helpful in this regard. Members of SLAB coming from the student community can be most relevant resource to develop library to meet the needs of students as desired by the students themselves. SLAB student members will offer suggestions for changes in the library for generation of interest in utilization of library resources and events arranged by library. SLAB will also be an effective tool in developing management responsibilities, team work, volunteer services and inspiration to work for common causes.

SLAB will consist of one student member from each department. Membership will be for one year. President of the board will be elected by members with simple majority and decisions will be through simple majority. President of SLAB will be member of the University Library Committee.

**25. UNIVERSITY LIBRARY ALUMNI FORUM**

As the first cohort of students graduate, University Library Alumni Forum will be activated wherein life membership will be awarded for Rs.1000/. Members will be entitled to the benefits similar to those they left enjoying as the left the university (undergrad/postgrad/faculty/staff).

**26. UNIVERSITY FAREED FORUM**

KFUEIT carries its name from the greatest Sufi poet and scholar of the region. In order to keep his message alive and extend tribute to the great scholar, a virtual forum is proposed which will plan, organize and execute activities under the banner of "Fareed Forum". The forum will provide a platform for dissemination of intellectual, scholarly and professional opinions. Forum will actively explore into contemporary issues whether domestic or international, religious or secular, scholastic or educational.

Composition of the forum will be proposed by the President of the University Library Committee and approved by the competent authority, i.e., the Vice Chancellor. Membership of the forum is purely honorary and there are no financial benefits involved except travel and lodging for external members for participation in the activity when arranged by the forum. External expert member will be selected by the university members in the forum for one year and will be Chairman of the forum. President of the University Library Committee will be Co-Chairman of the forum. University members will be nominated for three years. Forum will plan in advance up to four activity days per calendar year. In each regular semester (Fall & Spring), two activity days will be arranged, one in each half of the semester. Activity dates and times will be finalized in coordination with university societies and Director Student Affairs (DSA).

### 27. UNIVERSITY LIBRARY COMMITTEE

University Library Committee (ULC) constitutes an independent body separate to the library administration. President (head) of the ULC will be nominated by the competent authority, i.e., Vice Chancellor for four years or tended period of time as to the discretion of the competent authority. Keeping in view the representation and involvement of each department, ULC may be reconstituted by the competent authority on proposal of President University Library Committee.

1. Role of ULC is supervision of routine library functions.
2. ULC will make recommendations on the policy matters including but not limited to requirement of staff and accessories for library, library budget, and department wise allocation of library budget.
3. ULC will also allocate department budget in respect of books, journals, furniture and fixtures, etc.
4. ULC will also decide on working hours of the central and departmental libraries.
5. Selection of books, journals and other library material will be put in ULC for perusal.
6. President of the ULC will put recommendations of the committee for final approval of the competent authority of the university.

### 28. CONSTITUTION

The University Library Committee shall consist of the following members, namely

1. A senior teacher (Assistant Professor or above) to be nominated by the Vice-Chancellor (President)
2. One teacher from each department to be nominated for three years by the Vice- Chancellor on recommendation of the chairman (Member)
3. The Treasurer, Ex-Officio Member
4. The Registrar, Ex-Officio Member
5. Director Procurement, Ex-Officio Member
6. Chief Librarian, Member
7. The Librarian (nominated by the Chief Librarian), Member/Secretary
8. President SLAB, Student Member

### 29. QUORUM

The quorum for the meeting of ULC shall be one half of the total number of regular members.

### 30. TERM OF OFFICE

The nominated member of the ULC shall hold office for three years i.e., from 1st July to 30th June provided that a person nominated to fill a vacancy shall hold office for the un-expired term of office of the person whose place he/she takes.

### 31. MANAGEMENT OF THE LIBRARY

Management and control of the library as regards placement of staff and delivery of services rests with the Chief Librarian.

1. Chief Librarian is solely authorized and responsible for implementation of the rules, regulations and policies of the library.
2. Chief Librarian is directly responsible and authorized to deliver services of the library through library staff.
3. Chief Librarian is solely authorized to allocate duties of the library staff.
4. Chief Librarian will furnish performance evaluation reports as and when required by the competent authority.
5. Chief Librarian will be responsible for selection of books, journals, etc. through appropriate ways and means to his discretion.
6. However, all the selections will come in the ULC for perusal and final recommendations for the approval of the competent authority.
7. Chief Librarian will present recommendations as per policy of the university library for de-accessioning of books, journals, and other materials for approval of the ULC.
8. Budgetary allocations and approval for direct/urgent purchases of library material will be authorized by the competent authority to the President ULC or Chief Librarian as to the discretion of the competent authority.

32. **LEARNING RESOURCE CENTER (ADAPTING TO THE NEEDS OF HOUR)**
    Library today is not just a collection of books in print and journals. They are now-a-days resource centers providing all the required information and services for an institute combined at a single platform. Library today is described as Learning Resource Center (LRC) that is a central point around which all the university activities revolve. University calendar, admission notices, tenders and advertisements, examination notices and results, etc. are all advertised through LRC. We also intend to develop LRC on the lines to become central for provision of teaching and learning aid resources for the faculty and students. Here at KFUEIT intends to develop a centre that is all inclusive for provision of resources and services. In order to accomplish this target and to adapt to the current trends in information services, we propose to convert Library to Learning Resource Center (LRC).
    Adaptation of the transition in regards to nomenclature, positions and titles, qualifications and responsibilities as envisioned are attached at Annex-I for perusal and approval of the academic council.

33. **REFERENCES**
    In preparation of this document, websites of following universities were extensively consulted.
    - University of Engineering & Technology, Lahore
    - RIPHAH International University, Islamabad
    - National University of Science and Technology, Islamabad
    - Institute of Business Administration, Karachi
    - Aga Khan University, Karachi

## FEE REGULATIONS

1. **PERIODS OF FEES AND OTHER CHARGES**
   a. Semester dues i.e. Tuition fee and other charges are payable before beginning of Semester i.e Fall or Spring.
   b. Extra Fee shall be charged based on "Credit Hour" for all the subjects studied during Summer Semester OR in regular Semester for course improvement as prescribed in fee schedule.
   c. The hostel charges include, Rent and Electricity are payable for the period of occupation, a part of term/semester shall be counted as full term/semester. Furthermore, Electricity charges for room heater/cooler will be charged separately.
   d. Due date of fee submission for upcoming Semester shall be announced 30 days before the Final Term Examination of current semester.
   e. Fee/Dues need to be deposited in Cash or Cheque directly in any branch of the designated bank.
   f. Students are supposed to submit copy of paid fee challan in Finance Department and their respective department.

2. **ENROLMENT IN A SEMESTER**
   For existing students, each department shall enrol their students before commencement of classes after ensuring that copy of paid fee voucher is attached to the enrolment form of that particular semester.

3. **SEMESTER FREEZING AND RELEGATION CHARGES**
   a. 1st semester cannot be frozen. However, students may apply for freeze of semester after completion of 1st semester.
   b. Maximum two semesters can be frozen for 4-year program and one semester for 2-year program.
   c. Students can apply to freeze of their semester(s) before the date of commencement of classes.
   d. Students freezing their semester(s) shall pay freezing charges per semester as prescribed in fee schedule. However, upon joining the next junior class they shall continue to pay semester fee as regular students along with the next junior session.
   e. Student may apply for refund of his/her semester fee (if paid) of the semester being frozen. However, fee will be refunded according to HEC guidelines on fee refund.
   f. If a student has applied to freeze one semester, he/she will be considered as unfreezed in next semester. Separate application will be placed if he/she wants to freeze the next semester. He/she will be considered as suspended if continuously absent for 30 days without any prior intimation to concerned department/Registrar.

**4.    REFUND OF SECURITIES**

a.    All type of refundable securities i.e. University security, library security, hostel security and Mess securities are only refundable upon successful completion of relieving and its relevant administrative approval for University security and upon assuring the deduction of outstanding dues in case of Mess securities/ Library Security/ Hostel security etc. (if any) accordingly.

b.    Furthermore, the amount of security is refundable within three years of the date of application received for security refund.

**5.    REFUND ON ADMISSION CANCELLATION**

The University Fee or security (refundable only), library security, hostel security and mess securities are refunded when a student cancels his/her admission before completion of his degree. In addition, Admission/ Readmission fee paid at the time of admission/readmission is non-refundable and tuition fee would be refunded as per National Refund Policy issued by Higher Education Commission, Islamabad and the same policy is applying on transport, internet, research, and semester charges. A student must pay his/her university dues (instalments if any) before getting clearance from finance department otherwise he/she shall not be eligible to claim his/her refund.

a.    Admission fee paid at the time of admission is Non-Refundable.

b.    100% of remaining fee is refunded if application for admission cancellation is received up to 7th day of convening of classes or registration in the department (whichever is later).

c.    Refundable security and 50% of remaining elements of fee will be refunded if application for admission cancellation is received from 8th to 15th day of convening of classes or registration in the department (whichever is later).

d.    Only refundable security will be refunded if application for admission cancellation is received from 16th day onward from the day of convening of classes or registration in the department (whichever is later).

Fees and Funds (University and departmental) of a student are transferable to any other Department of University subject to the approval of Vice Chancellor, Admission Committee.

Dues are not refundable in case of cancellation of admission on the basis of (i) misstatements, (ii) incorrect information, (iii) concealment of facts, (iv) fake certificates and (v) use of any other Unfair means from student's side.

**6.    INSTALMENTS**

Instalments are allowed for all semesters except 1st semester. "Instalment Committee" shall review the instalment cases and refer to the Finance department. Due Process is as follows:

a.    A student shall place his/her application for instalment to Instalment Committee NOT later than due date of submission of semester fee.

b.    Instalment Committee shall analyse the request and approve/disapprove the case accordingly.

c.    Instalment Committee may recommend the number of instalments and due date of each instalment.

d.    Members of Instalment Committee may include any two of:

I.    Member from Finance Department

II.    Member from Scholarship Department

III.    Member from Registrar Department

**7.    FINE WAIVER**

a.    Fine per day shall be charged after due date of fee voucher as prescribed in fee schedule.

b.    Applications for waiver of fine shall be reviewed by Instalment Committee to judge the genuineness of applicant's reason for inability to pay off the said dues.

**8.    COURSE IMPROVEMENT**

The students who wish to improve any subject must give application to the concerned department before commencement of classes. The concerned department will send the list of these students with their registration numbers, name of courses and credit hours of those courses to finance department (after checking for their credit hours availability, clash of course timings etc.) for issuance of fee voucher. The fee shall be charged on per credit hour basis as prescribed in fee schedule. Any application received after the commencement of classes shall NOT be entertained by the concerned department. The concerned department will make sure that copy of paid fee challan is attached with the course enrolment form.

**9.    SUMMER SEMESTER**

The students who wish to take any subject in Summer Semester must give application to the concerned department before commencement of classes. The concerned department will send the list of these students with their registration numbers, name of courses and credit hours of those courses to finance department for issuance of fee voucher. The fee will be charged on per credit hour basis.

Any application received after the commencement of classes will NOT be entertained by the concerned department. The concerned department will make sure that copy of paid fee challan is attached with the course enrolment form.

### 10.  MIGRATION FEE
- Any student migrating to KFUEIT from any other HEC recognised university will have to pay for the exempted courses on Rs. 1,000/- per credit hour basis. Additionally, he/she will also pay the current semester fee.
- Any student migrating from KFUEIT to any other university will have to pay Rs. 5,000/- for NOC before migration.

### 11.  REINSTATEMENT FEE FOR ABSCONDING STUDENTS
a.  If a student fails to register for classes before the end of fourth week of a regular semester (Fall/Spring) or continuously absent from classes for 30 days or more in a regular semester (Fall/Spring), without information and approval of the HOD, admission of such a student will be suspended automatically.

b.  Such a student may only be reinstated to continue studies at the University on the recommendation of the HOD and approval of the Dean of the Faculty, subject to payment of prescribed reinstatement fee which shall be equivalent to the admission fee enforced at the time of reinstatement. All outstanding dues are also to be cleared by the student before the reinstatement. If a student is absconder for one semester or more and applies for reinstatement, he will be liable to pay per semester absconding charges as prescribed in fee schedule for the semesters in which he/she was absconded.

### 12.  RE-ADMISSION FEE FOR SEPARATION DUE TO PROBATIONS
a.  A student may get probation due to lower CGPA (lower than 2 in undergraduate program & lower than 2.5 for graduate program) in two consecutive semesters. Such a student may only be reinstated to continue studies at the University on the recommendation of the HOD and approval of the Dean of the Faculty, subject to payment of prescribed reinstatement fee which shall be equivalent to the admission fee enforced at the time of reinstatement.

b.  Re-admission will be allowed only once during the period of study.

c.  Course improvement charges will be applicable as prescribed in fee schedule for that specific semester/year.

### 13.  FEE REGULATIONS FOR MS/M.PHIL STUDENTS
a.  If student fails to take the thesis due to less than 2.5 CGPA, he/she will not be liable to pay third semester fee and continues to pay per credit hour charges for improvement of courses as prescribed in fee schedule.

b.  However, after improvement of courses with the required 2.5 CGPA, he/she will be considered to take thesis with all the regular Semester fee charges.

## HOSTEL REGULATIONS

### 1.  SHORT TITLE
These regulations shall be called the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Hostel Regulations 2019.

### 2.  COMMENCEMENT
These Regulations shall come into force with immediate effect.

### 3.  APPLICATION
These Regulations shall apply to all resident students of the University.

### 4.  PREAMBLE
As the university hostel life is one of the key elements of liberal arts education as it is a critical part of the total university experience. It provides a good living and learning community for students. Its experience prepares a better transition for young adults to emerge from protected teenagers into intellectual individuals and future leaders. Students will learn independence, interpersonal skills, sense of community and responsibility through living with roommate(s), floor mates, and community life in hostels. Hostel is a place where students find self-identity, unity, friendship and generosity. Everyone in the community contributes to the common good, to take responsibility and to console and support one another in difficulties. As the Khwaja Fareed University of Engineering and Information Technology is newly established university, to facilitate the students coming from surrounding of Rahim Yar Khan and across the country hostels have been arranged for male and female students. Hostel affairs are managed by a competent and dedicated team of full time staff, available round the clock.

In addition to the messing, TV room, study hall, mosque, indoor games hall, internet accessibility, Tuck shop and other essential utility services are available to the residents.

**5. ADMISSION TO HOSTEL**

There are separate Halls for male and female students in the University Hostel setup. The Warden Hostels and Resident Tutors shall manage the Hostels. The Hostel is open only to the bonafide students of the University. A resident student is bound to abide by the following regulations and to such other regulations that may be notified from time to time:

a) Application on the prescribed form / online application form for allotment of space in the Hostels shall be submitted to the Warden Office one month before the final exams of running semester. Newly admitted students should submit the prescribed form / online application form at the time of admission.

b) Hostel accommodation shall be provided only to the bonafide students of the University subject to availability. Hostel accommodation will be allotted to outstation students who get admission in any academic program of KFUEIT. If any local student (living in Rahim Yar Khan/Sadiq Abad/Khanpur, etc.) applies for hostel accommodation, his/her request may be considered after accommodating the outstation students.

c) Vice Chancellor/Warden Hostels may refuse admission or eject any student if he/she is satisfied that he/she is not a desirable person to live in the Hostel.

d) Warden Hostels shall allot the Hall whereas room within the Hall shall be allotted by the Resident Tutor in order of seniority and merit, which will be determined in relation to the year of the study and marks obtained/GPA/CGPA and distance of domicile city.

e) Resident student shall deposit Hostel dues within specified period and submit deposit receipt in the office of Resident Tutor. Allotment list of residents shall be provided to Warden Office after the 15 days of allotment.

f) While making semester wise allotment of seats in the Hostels, Hostel authorities shall take into consideration the conduct and character of a boarder. Those having been imposed penalties on disciplinary grounds, shall lose their seniority.

g) No boarder is allowed to change his/her room without prior permission of the Hostel authorities.

h) Students spending more than the prescribed regular period for the course shall be accommodated subject to availability of seats.

i) Halls shall be open to students only when the University is engaged in Regular Classes / Examinations / Zero Semester / Summer Semester. However, postgraduate students involved in research may be allowed to stay in Halls by the Warden Hostels on the recommendations of concerned Supervisor, Chairman of the Teaching Department and Dean of the Faculty, subject to enrolment.

**6. HOSTEL DUES**

a) Hostel dues and security deposits, as determined and revised by the University from time to time, are payable by the student in each regular / summer / zero semester.

b) Hostel dues once paid shall be refunded after deduction as per deduction rules i.e. 10% deduction in fee if applied before allotment and 30% deduction in fee if applied after allotment but with in 30 days.

c) Hostel allotment of a student shall stand cancelled, if he/she fails to pay Hostel dues within specified period. However, such a student may seek re-admission in the Hostel as admissible under the rules.

d) A list of students shall be forwarded to Finance Department by the Warden Office for issuance of Hostel Fee Challan which shall be uploaded on KFUEIT official website (www.kfueit.edu.pk) by IT Department.

**7. MESS / CAFETERIA / FRUIT SHOP**

a) The mess shall be managed by the resident students and supervised by the Resident Tutor.

b) There shall be time to time supervision of mess hygiene and food quality by the respective Resident Tutors.

c) There shall be a register in which the remarks relating to food quality will be entered on the basis of routine supervision.

d) Nobody other than a resident student shall be allowed to be a mess member. A day scholar may become a mess member with permission of the concerned Resident Tutor who will ensure the payment of mess dues.

e) Resident Tutor shall nominate Mess Manager/Mess Committee out of resident students for one semester.

f) Mess Manager/Mess Committee shall be responsible for proper running of the Mess and cleanliness of the kitchen, utensils and Dining Hall including its surroundings.

g) Residents shall not be allowed to take crockery and cutlery to their rooms.

h) Meals shall be served only in the Dining Hall. No service shall be provided in the room(s).

i) Dining Halls shall remain open daily during specified hours as prescribed by Resident Tutor for each meal.

j) Residents attending the Dining Hall, Common Room, T.V. Room and other public places shall be in proper dress.

k) Smoking is strictly prohibited in the Mess and its premises.

l) Students must settle their accounts with mess/cafeteria/fruit shop etc. every month regularly. Arrears if any, shall be recovered from the students at the time of enrolment of each semester. A resident student shall not be allowed to enroll without getting clearance from Resident Tutor.

m) If a student leaves Hostel after qualifying for a degree without the settlement of dues, outstanding amount shall be recovered at the time of issuance of provisional certificate/degree etc. by the Controller of Examinations.

n) No resident student shall be permitted to have private cooking arrangements in the Hall.

o) No political / religious / social gathering shall be allowed in the cafeteria and its premises.

## 8. GENERAL REGULATIONS

a) Roll of resident students shall be checked by Resident Tutor and entrance record of hostel residents, daily at specified hours as prescribed by Warden Hostels.

b) A resident student shall be responsible for the articles (Charpai / Cot, Trunk etc.) issued to him/her and shall return these articles when leaving the Hostel. He / She shall also be responsible for any loss or damage to these articles.

c) Resident students must treat Hostel staff politely. The Hostel staff shall not render any private service to any student. Misbehaviour with the staff shall be treated as a serious offence. Complaints regarding misbehaviour of the Hostel staff should be reported to the Warden Hostels.

d) Telephone provided in the Hostel shall be used only for receiving calls.

e) Outdoor games shall not be allowed in the Hall's premises but indoor games shall be allowed only in specified hours as prescribed by Resident Tutor.

f) The allotment of a student who remains absent from the Hostel without prior permission for a period of one week shall be cancelled. However, he/she may seek re-admission as admissible under the rules.

g) No meeting of any kind (political/religious/social etc.) shall be allowed in the Hostel and its premises without prior permission of hostel authorities. Moreover, any activity / planning anywhere but having influence on the hostel is also prohibited.

h) Every part of the Hostel shall be freely open to the Hostel authorities for inspection at any time.

i) No boarder shall indulge in any amusement that may disturb other boarders.

j) Resident students shall be allowed to use computers only for academic purposes. If hostel authorities find any students involved in cybercrimes, the hostel authority may report the said resident to the Federal Investigation Agency (FIA). Cybercrimes include the misuse of Internet such as others personal video/picture uploading, hacking personal data/account and immoral/ unethical SMS/MMS.

k) No electric appliance (electric heater, electric rod, electric kettle, air cooler, air conditioner, T.V., cassette / C.D. player, musical instruments and exhaust / pedestal fans etc.) other than electric light and ceiling fan shall be used in the Hostel. The use of electrical appliances shall lead to confiscation of the appliance along with a fine to be decided by the Hostels authorities. However, permission may be sought for the use of air cooler and exhaust / pedestal fan from the Hostels authorities on payment of extra charges to be prescribed by University authorities.

l) All electric articles must be switched off before leaving the room. Leaving the room with electric appliance switched on shall be an offence punishable with fine.

m) Firearms and other weapons and prohibited literature shall not be allowed to be kept / used in the Hostel.

n) Residents shall not be allowed to gamble or to use any intoxicants and narcotics. Violation of this restriction shall render a resident liable to expulsion from the Hostel, in addition to any criminal proceedings that may be initiated against him under the Penal Law of Pakistan.

o) Residents shall be responsible for keeping their rooms neat and tidy. They shall not dispose off litter in the verandahs or other parts of the Hostel premises.

p) No notice / banner / advertisement etc. of any kind can be displayed in Hostel and its premises without prior approval of Hostel authorities.

q) Defacing walls and fixtures shall be strictly prohibited.

r) Boarders shall be required to observe necessary precautions for the safe custody of their belongings/ valuables. They must not leave their rooms unlocked. In case of theft, Hall administration shall not be responsible for any loss.

s) All cases of sickness must be reported to the Resident Tutor for necessary help.

t) Female resident shall not leave the campus / hostel without the written permission of the Resident Tutor.

u) Permission to allow resident students to keep two-wheeler/four-wheeler is generally dissuaded but in exceptional cases permission can be granted by the Vice-Chancellor of the University in the request of the parents if security norms are fulfilled. Boarders who are granted permission for keeping two-wheeler/four-wheeler are required to obtain security clearance from CSO of the University for that purpose. Certified copy or x copy of following documents are required to be submitted for permission of two-wheeler/four-wheeler.

a. Ownership along with Registration No.

b. Validity and fitness certificate.

c. Insurance Certificate if any

d. Driving License of the individual.

e. Helmet / seat belt for safety

v) Parking of vehicles inside the Hostel Campus is strictly forbidden. Parking of permitted two-wheeler/four-wheeler shall be done only in the notified area.

w) All residents shall submit "Security Clearance Certificate" issued by the Registrar Office/Warden office, uploaded on KFUEIT's official website (www.kfueit.edu.pk /department/hostel), before allotment. List of all resident shall be verified from the Registrar office who submitted the "Security Clearance Certificate" at the time admission.

x) Smoking is strictly prohibited in the hostel and its premises.

y) Boarders should avoid taking meals or any edibles from outside for hygienic and safety reasons in the wake of increasing cases of food poising etc.

z) Residents are forbidden to keep/store, lathi, rod, knives, bolder, cracker or fire arms whether in room or anywhere in hostel. Strict disciplinary action shall be taken against the erring resident if noticed or bound during the visit of Resident Tutors, Warden Hostels, CSO, SO or any other authority of university.

## 9. VISITORS

a) Rights of admission to the Hostel premises are reserved.

b) All visitors of Boys Hostels must leave the Hostel at specified hours as prescribed by Warden Hostels.

c) Parents / authorized guardians of the resident student(s) are allowed to see the student only in visitor room of Hostel during visiting hours.

d) No female visitors are allowed to enter the Boys Hostel under any circumstances and no male visitors are allowed to enter Girls Hostel.

e) No outsider shall be allowed to stay in the Hostel. Violation of this rule shall render the boarder liable for expulsion from the Hostel and/or any other penalty which the Warden Hostels may deem fit. The outsider found staying / residing in the Hostel shall be handed over to the Police.

## 10. DISCIPLINE

Resident are required to maintain discipline in the Hostel.

## 11. SECURITY OFFICE

There shall be a security office, headed by a security official appointed by Chief Security Officer. The Security Office and all security staff shall work under the general direction of the Warden Hostels.

## 12. DISCIPLINARY CONTROL

a) Every boarder living in the hostel shall be subject to the disciplinary control, primarily of the Resident Tutor and in the absence of the Resident Tutor, the Warden Hostels or any other officer authorized in this regard.

b) There shall be Hostel Disciplinary Committee consisting of the Warden Hostels as president and resident tutors as member thereof.

c) Where a hostel resident(s) is found involved in a case of indiscipline in the hostel, he shall be dealt with strictly.

d) Any contravention or violation of Rules shall be subject to punishment provided in Appendix-1.

**CONDUCT OF INQUIRIES**

a)    In cases of any student violence/clash/unrest etc. inside the hostel premises - the inquiry shall be conducted by the respective Resident Tutor and report to be forwarded to the office of the Warden Hostels.

b)    In case of any student violence/clash/unrest outside the hostel but within the campus- the case shall be forwarded to Student Disciplinary Committee of University.

c)    In case of inter-hostel violence/clash/unrest- the inquiry shall be conducted by respective Resident Tutors and report to be forwarded to the office of the Warden Hostels.

d)    Serious cases of indiscipline shall be brought to the notice of the Vice Chancellor also.

## 14.    JURISDICTION OF AUTHORITIES

All cases of indiscipline in the hostel shall be dealt with by the Hostel Warden. He shall be competent authority to impose penalties subject to the quantum and conditions prescribed in Appendix-I (Maintenance of Hostel Discipline) of the Hostel Rules.

## 15.    POWER OF INQUIRY FROM RESIDENTS

Any authorized person of the University shall have the power of demanding from the residents their identity cards and such other information as may be desired by the aforementioned persons concerned. Residents failing to provide the concerned information, shall be liable to disciplinary action vide Appendix-1.

## 16.    APPEAL

A resident who has been subjected to any punishment by the Hostel Authorities or other authorized officer may within two weeks of the order imposing punishment appeal to the Vice-Chancellor. The Vice-Chancellor, after being satisfied may pass necessary order in the matter. The decision of the Vice-Chancellor shall be final in the matter.

## 17.    INTERPRETATION

If any question arises regarding the interpretation of these regulations the matter shall be deliberated by the administration consisting of Registrar, Deans and Vice Chancellor and their decision thereon shall be final.

## 18.    REMOVAL OF DIFFICULTIES

If any difficulty arises in giving effect to any of the previsions of these Regulations, the Vice Chancellor in individual cases may take such decision, not inconsistent with the spirit of these Regulations as may appear to necessary for the purpose of removing the difficulty, provided that such a decision is not ultra vires of the Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan Act 2014.

**Appendix-1**

Maintenance of Hostel Discipline Without prejudice to the generality of the foregoing provisions "indiscipline" and "misconduct" in the hostel shall include the following and if the allegation of indiscipline/misconduct against a resident student is found correct, he will be liable to disciplinary action as indicated below or listed in general regulations:

## Indiscipline in the Hostel:

| Sr. No. | Acts | Punishment |
|---|---|---|
| 1 | Act of ragging in the Hostel | Rustication from the University and/or an FIR with the police authority. |
| 2 | Leaving the hostel over-night without obtaining prior permission in writing. | Warning and on repetition of this thrice, the resident shall be expelled. |
| 3 | Irregularity in attendance in hostel and default in payment of Hostel dues. | do |
| 4 | Accommodation of unauthorized guest in the hostel room. | do |
| 5 | Failure to inform about the number of guests during grand feast. | do |
| 6 | Failure to accept the membership of the Mess Committee intentionally. | Imposition of fine at the discretion of Resident Tutor. |
| 7 | Taking meals frequently from outside while residing in the hostel. | A fine of Rs. 500/- at least on each occasion. |
| 8 | Holding political / religious meeting with outside bodies whatsoever in the hostel. Organizing games, sports other programs etc. without informing the Resident Tutor. | Warning by the authorities and imposition of fine up to Rs. 3,000/-. Two such offences shall result in expulsion Imposition of fine as shall be decided from time to time by Resident Tutor. |
| 9 | Playing of music or musical instruments. | do |
| 10 | Use of air conditioner, electric heater etc. | Warning by the authorities and imposition of fine up to Rs. 1,000/-. When such mistake is repeated twice the resident shall be expelled. |
| 11 | Change of seat in the Hostel without prior permission of the Resident Tutor. | do |
| 12 | Entertainment of guests/outsider without written permission of the Resident Tutor. | Warning by the Resident Tutor with a fine up to Rs. 1,000/-. Two such offences shall result in expulsion. |
| 13 | Smoking/chewing of Pan Masala/Gutka/Tobacco/drinking or any others. | Rs. 2,000/- maximum up to three occasions subsequently expulsion from the hostel. |
| 14 | Damage in any form to the hostel property. | Recovery of the actual loss, apart from the punishment as decided by the Warden Hostels or the recommendation of Resident Tutor. |
| 15 | | |
| 16 | Remain in the hostel during the class hours without any prior permission. | Warning by the appropriate authority. In case of repetition of such act thrice the resident may be suspended from hostel pending inquiring in the matter. |
| 17 | Any other indiscipline act in hostel and its premises | Fine Rs. 10,000/- maximum and/or issuance of warning letter by Warden Hostels, according to the situation. |

## Mis-behaviour in the Hostel:

| Sr. No. | Acts | Punishment |
|---|---|---|
| 1 | Manhandling or physical assault of any Hostel or mess staff | Suspension from hostel, pending inquiry. The Punishment at the discretion of hostel disciplinary committee. |
| 2 | Manhandling, assault or betray of any one in the Hostel premises. | do |
| 3 | Removing any furniture or fixture of the Hostel without permission. | Rs. 1,000/- fine on each occasion. Repetition of this thrice shall result in expulsion from the hostel. |
| 4 | Abuse of drugs/indulgence in intoxicants. | Expulsion from the Hostel |
| 5 | Keeping arms and other contraband material etc. | do |

# STUDENT SOCIETIES / CLUBS REGULATIONS

**1.  SHORT TITLE**
These regulations shall be called the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan Student Societies / CLUBS Regulations 2019.

**2.  COMMENCEMENT**
These regulations shall come into force at once on approval by the Vice Chancellor.

**3.  APPLICATION**
These regulations govern the Creation and Operation of Student Societies and Clubs at the Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan.

**4.  PREAMBLE**
Co-curricular and extra-curricular activities play a vital role in the academic and social life of students. Such activities admittedly invigorate a healthy relationship among the students and develop a sense of co-ordination in the living-learning processes of the students, faculty and administration. These activities are vital for the physical, social and psychological growth of students. Since the Student Affairs Department provides proactive support and capacity building services to promote co-curricular activities in the University which could enrich our graduates at every stage of their life as well as to help them to build strong relationships with their peers, faculty, administration and other stakeholders with the following aims and objectives:
i.  to enhance the creative potential of the students
ii.  to expose the hidden talents of the students
iii.  to induce and stir a sense of love, altruism and service to the humanity in the students
iv.  to prepare the students to face the challenges of practical life
v.  to inculcate in students the spirit of healthy competition
vi.  to prepare the students for future challenges in the global context
vii.  to keep the students away from unwanted/undesirable associations/activities
viii.  to promote teamwork among the students
ix.  to give them a sense of responsibility and ownership
x.  to inculcate leadership potential in students
Therefore, for the smooth functioning of the student societies/clubs, their formations, functioning, responsibilities needs proper Regulations, which are provided in the following.

**5.  STUDENT SOCIETY ORGANIZATIONAL STRUCTURE**
Each student society/club will consist of a faculty member as its mentor and students as members. Member students will elect a cabinet composed of the following members:
i.  President (must be a student)
ii.  Vice President (one each from male and female students)
iii.  General Secretary
iv.  Assistant Secretary (one each from male and female students)
v.  Secretary for Finance
vi.  Secretary for Media and Public Relations
vii.  Five members
Members of the cabinet shall be elected from amongst the members of the Student Society/Club for a period of one academic year.
For the purpose of the elections, the Advisor/Mentor shall act as the election commissioner.
However, if required and after the approval of Competent Authority, a society may have its own constitution setting out the aims and positions of office bearers.

**6.  RESPONSIBILITIES OF THE CABINET MEMBERS**
**a.  THE ADVISOR/MENTOR**
Each society/club would be headed by an Advisor/Mentor who would be a faculty member.

**b.  THE PRESIDENT**
The President of a society would be responsible to look after the business of his/her society.

He/she would be responsible to his/her Advisor/Mentor and chalk out activities in compliance with the academic calendar/schedule.

**c.   THE VICE PRESIDENT**

The Vice President would act as President in the absence of the President of a student society/club, on the recommendation of the concerned Advisor/Mentor.

**d.   THE GENERAL SECRETARY**

The General Secretary would keep a proper record of all activities, attendance of the cabinet and general members, minutes of the meetings etc. The General Secretary of a Society would submit a copy of attendance to the Directorate of Student Affairs after each meeting. All record must be properly submitted to the Directorate of Student Affairs on the completion of the term of the cabinet or earlier.

**e.   THE ASSISTANT SECRETARY**

The Assistant Secretary would perform duties as General Secretary in the absence of the General Secretary on the recommendation of the concerned Advisor/Mentor.

**f.   THE SECRETARY FOR FINANCE**

The Secretary for Finance would be responsible for financial matters of a society and prepare a case in advance for approval for any activity. He/she would also be responsible for the adjustment of the amount within a week after holding of event and submit the case to the Directorate of Student Affairs through the Advisor/Mentor of the concerned society/club.

**g.   THE SECRETARY FOR MEDIA AND PUBLIC RELATIONS**

The Secretary for Media and Public Relations of each society would coordinate with Public Relation Officer (PRO) of Central Organizing Committee. He/she would send an advance press release/report to PRO for onward submission to the concerned quarters. He would keep a proper record of reports, press cuttings etc. related to students' activities and send a copy of the report to the Directorate of Student Affairs. He/she would also be responsible for submission of report of bi-annual activities of his/her society to the Directorate of Student Affairs through the Advisor/Mentor. Any media/press release must be approved by the concerned authority before it is issued. The Secretary for Media and Public Relations would be responsible for designing, printing and distribution of invitation cards of the activities/ceremonies held. They have to maintain a list and contact numbers of the invitees, faculty members, administrative Heads and key persons in Public and Private sectors. They would chalk out the program of their society in advance in consultation with the Advisor/Mentor and Cabinet Members. List of invites however, to be finalized/ approved by the Competent Authority.

**7.   PROCEDURE FOR THE FORMATION OF SOCIETY/CLUB**

Following procedure shall be used for the formation of a student society/club:
i.   Duly filled application form must be submitted to the Directorate of Student Affairs.
ii.   Directorate of Student Affairs will evaluate/review the form with respect to the following conditions:
a.   KFUEIT Code of Conduct.
b.   Eligibility requirements.
c.   General Guidelines/University Policy.
d.   Need of the Society/Club.
iii.   Evaluated form will be forwarded to the Worthy Vice Chancellor for final decision.

**8.   ELIGIBILITY REQUIREMENT TO BECOME MEMBER OF THE SOCIETY/CLUB**

i.   Only those students who qualify their first semester in the University would be eligible for any cabinet position/member.
ii.   CGPA must be greater than 2.5
iii.   Must adhere to University (KFUEIT) Code of Conduct.

## 9.    MAIN HIERARCHY

| Vice Chancellor |
|---|
| Chairman Committee of SECASSC (Senior Dean) / DSA |
| Advisor / Mentor |
| President |
| Vice President |

| General Secretary | Finanace Sectretary |
|---|---|

| Members |
|---|

## 10.    GENERAL INSTRUCTIONS/GUIDELINES

i)      The Vice Chancellor will have the authority to cancel/suspend membership of any Advisor/cabinet member or Society/Club on the recommendation of Chairman Committee of SECASSC / DSA.

ii)     The whole cabinet would work collectively as a single body for a society.

iii)    The cabinet members would perform their duties for one academic year or till the appointment of a new cabinet.

iv)     No student can enjoy membership of two or more cabinets/societies/clubs or keep two positions of the same society at the same time.

v)      Any member of the cabinet can be removed by the Directorate of Student Affairs on request of the concerned Advisor/Mentor on account of misbehavior, such as using un-parliamentary language or violation of the rules etc.

vi)     Each society/club would be allowed to arrange for correspondence/linkages with similar nature of societies/clubs at other similar type of organizations/institutions.

vii)    Based on previous performance of the members of societies/clubs, the Organizers would recommend a panel of at least three students for each cabinet position with acceptable standards or adopt any other procedure approved by the Competent Authority from time to time.

viii)   The primary duty of an Advisor/Mentor would be to organize, supervise and look after the concerned society/club.

ix)     After the announcement of the new cabinet of the concerned society, the Advisor/Mentor would distribute membership forms among the students and would col-lect the forms, duly filled, within a week and allot membership number to each student and collect an oath from students not to involve in any political activities.

x)      The Advisor/Mentor would propose a panel of at least three students (who have qualified first semester with acceptable standards) to the Directorate of Student Affairs for each of cabinet positions.

xi)     At the outset of an academic year, Advisor/Mentor would chalk out activities to be held on specific days.

xii)    Meeting of the Cabinet/Society can be called only on designated days in order to avoid any disturbance in the curricular activities.

xiii)   The Advisor/Mentor would be responsible to organize two major events during one academic year.

xiv)    The Advisor/Mentor would keep a proper record of the activities of the society concerned.

xv)     The Advisor/Mentor would seek prior approval from the Directorate of Student Affairs for the advance payment for any approved activity. Case for adjustment of the advance payment drawn would be submitted to the concerned office within a week, after the event is held.

xvi)    Regular reporting of any activity to the Directorate of Student Affairs would be the responsibility of the Advisor/Mentor.

xvii) The Advisor/Mentor, through Secretary for Media and Public Relations, would send press release/report to Public Relation Officer before it is issued.

xviii) Any member of the society/club who does not attend two consecutive official meetings without any valid reason would be relieved from his/her office/duties i.e. the Office of Advisor/Mentor.

xix) The Advisor/Mentor once appointed will remain in office for one academic year or till the appointment of a new Advisor/Mentor, whichever is earlier. However, he/she can submit his/her resignation on one month notice.

xx) For any major event Advisor/Mentor and Cabinet Members would shoulder the responsibility collectively.

xxi) Prior approval for organizing an event along with its budget would be necessary from the Competent Authority.

xxii) The Advisor/Mentor would pinpoint the talented students, keep a record and furnish their information to the Directorate of Student Affairs. He/she would motivate talented students and keep them busy in healthy and constructive activities which are the main purpose of running the Societies.

xxiii) The Advisor/Mentor on the termination of each tenure would recommend the names of deserving cabinet members or general members for awarding certificates, subject to fulfillment of the condition of attendance, active participation, excellent performance and meritorious services.

xxiv) The Advisor/Mentor would be responsible for security measures in consultation with the Administrative Officer.

xxv) The performance of an Advisor/Mentor would be judged on the basis of his/her devotion and good behavior, excellence in planning, organizing and efficiently administering multiple activities, motivating students for membership, order and discipline, punctuality in meetings and functions of his/her society.

xxvi) The Advisor/Mentor would be responsible for security measures in consultation with the Administrative Officer.



## 11. INTERPRETATION

If any question arises regarding the interpretation of these regulations the matter shall be deliberated by the University administration consisting of Head of the Department, Director Student Affairs, Registrar, Deans and Vice Chancellor and their decision thereon shall be final.

## 12. REMOVAL OF DIFFICULTIES

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Vice Chancellor in individual cases may make such decision, not inconsistent with the spirit of these Regulations, as may appear to necessary for the purpose of removing the difficulty, provided that such a decision is not ultra vires of the Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan Act 2014.

# Administrative Departments

## Section

# 7

# Administrative Departments

## Vice Chancellor Secretariat

### Muhammad Abid Ali

**PA to Vice Chancellor**
Email: pa.vc@kfueit.edu.pk
Call: +92 (68) 5882443

- The VC Secretariat provides all the secretarial support required for the operations of Office of the Vice Chancellor. In this connection it is responsible for:
- Coordination with all Universities andGovernment departments i.e. HEC, HED, PHEC, PEC, P&D, Governor Secretariat, CM Secretariat, Law enforcement agencies, etc.
- Interaction with District and Divisional Government officials, as and when required
- Correspondence with District and Divisional Government offices on all matters related to the University
- To maintain daily schedules and coordinate appointments & meetings for the ViceChancellor
- Scheduling and managing the various official meetings / video conferences, in-house and outside the University i.e.Syndicate Meeting, Academic Council, Board of Studies, Board of Faculties, Board of Advance Studies and Research, PEC Zero visits, Selection Boards and Selection Committees, HEC, PHEC, HED meetings,all internal departmental / committee meetings
- Drafting / composing of official correspondence and Preparation Minutes of Meeting(s)
- Preparation of all correspondences and other documentation as may be requested by the ViceChancellor from time to time
- Maintenance of official record pertaining to the Office of the Vice Chancellor
- Coordination with heads of all teaching and non-teaching departments of the University and scheduling their meetings with the Vice Chancellor

## Professional Development Center (PDC)

### Engr. Ghias M Khan

**Incharge PDC**
Email: ghias.khan@kfueit.edu.pk
Call: +92 (68) 5882459

Continuous skill development is the basic need for the working professionals. To enhance the skills and equip with the latest tools the esteemed University established the Professional Development Center (PDC) in 2017. Through this Center not only students but the professionals and entrepreneurs are getting benefits. The PDC of the university helps to enhance the skills in different areas of the business such as Office Management, Project Management, Auto CAD, Solid Works, CCNA, MCSA etc. More than 20 courses are being offered to the students and professionals to come and get enrolled.

Through this center we utilize our skilled faculty professionals to polish and enhance the skills of the students. PDC is the means by which members of professional bodies and other beneficiaries maintain, improve and broaden their knowledge and skills for developing personal qualities required in their professional lives.

## Office of Marketing & Communications

**Shahid Durrani**

**Director Marketing & Communications**
Email: shahid.durrani@kfueit.edu.pk
Call: +92 (68) 9232478

The Department of Marketing & Communications at KFUEIT has been created with the objectives of standardizing, streamlining and synergizing the activities related to marketing, branding, image building, advertising campaigns, corporate communications, press & PR and event management of KFUEIT. The Department acts as face of the university for external stakeholders. The importance of marketing and promotional activities gets manifolds for any young organization like KFUEIT, with very aggressive plans of becoming a world-class institution. The Department of Marketing & Communications is professionally embarking upon its journey of taking KFUEIT from good to great.

This department is broadly responsible for:

- Branding (Designing, outlook, feel, aesthetics and quality) of campus and KFUEIT
- Admissions campaign (at least bi-annual, Spring and Fall semesters)
- Advertising, promotions and campaigns
- Extending marketing and designing support to all teaching and non-teaching departments
- Ensuring compliance of brand guidelines, corporate Identities, standardization and symmetry
- Employer Branding and Image building of university, making preferred choice
- Handling social media platforms of the university
- Content management of Web and Social Media touchpoints
- Corporate communication and official spokesperson / department of Vice Chancellor and  KFUEIT
- Corporate interface for external stakeholders
- Media interaction, management and relation building
- Arranging media conference, briefings and delegation visits for image projection of KFUEIT
- Dealing with enquiries from the public, the press and related organizations
- Centralized interface for event management of KFUEIT
- Managing variety of events including corporate level, academic, sports, extra-curricular, students' societies, fun fairs, religious and cultural, welcome & farewell, media events and other associated events of KFUEIT
- Achieving excellence in communication by adopting authentic, quick and efficient mediums
- Exploring opportunities co-branding, sponsorship and donations for events and their objective execution
- Representing KFUEIT on national and international forums
- CSR Initiatives (Corporate Social Responsibility)of the university.

دلِ مردِ مومن میں پھر زندہ کردے

وہ بجلی کہ تھی نعرۂ لا تذر میں

عزائم کو سینوں میں بیدار کر دے

نگاہِ مسلماں کو تلوار کر دے

حضرت علامہ محمد اقبالؒ

## Registrar Department

### Muhammad Bilal Irshad

**Additional Registrar**
Email: addl.registrar@kfueit.edu.pk
Call: +92 (68) 5882413

Office of the Registrar acts as the Secretariat of the University and
is responsible for the following:

- Managing the Admissions Process for all degree programs
- Managing the Student Registration Process and ensure that electronic as well as paper-based records of students are maintained properly
- Managing the Recruitment Process for all employments
- Constituting of Statutory Bodies (Syndicate, Selection Board, Academic Council, Finance and Planning Committee, BASR, Boards of Studies)
- Conducting Meetings of Statutory Bodies: Organizing the meetings, preparation of agenda and working papers, preparation of minutes of meetings and circulation of minutes
- Employee Attendance and Leave Record Management
- Employee Personal File, Performance Appraisals and Records Management
- Degree and Experience Verification of Employees and students
- Ensuring that prescribed procedures and rules are followed for award of financial assistance and scholarships
- Ensuring that cases pertaining to migration, separation, suspension and withdrawal of students are processed as per prescribed procedures and rules
- Being responsible to ensure that disciplinary matters of both Academic and Non-Academic nature pertaining to the faculty members, officers, non-teaching staff and students are dealt in accordance with the Statutes, Rules and Regulations of the University
- Being fully responsible for processing all matters pertaining to University convocations; and
- Performing any other responsibility assigned by the Vice Chancellor, from time to time.

نہیں ہے نااُمید اقبال اپنی کشتِ ویراں سے
ذرا نم ہو تو یہ مٹی بڑی زر خیز ہے ساقی

حضرت علامہ محمد اقبالؒ

## Examinations Department

### Engr. Affifa Adeeb

**Incharge Examinations**
Email: examinations@kfueit.edu.pk
Call: +92 (68) 5882421

The Examination Department of KFUEIT is established for handling all matters related to university exams and is responsible for maintaining their quality and standards. The Examination Department works in compliance with HEC guidelines and KFUEIT Examination Regulations. All academic results are prepared within this department keeping a high level of secrecy, transparency and integrity.

# Planning & Development (P&D) Department

## Dr. Zaheer Ahmad

**Director Planning & Development**
Email: zaheer@kfueit.edu.pk
Call: +92 (68) 9232420

The mission of the Planning & Development Department is planning and development of the physical infrastructure of the University consisting of, but not limited to, Buildings and Classroom Facilities, Teaching and Research Laboratories, Academic Departmental Offices, Library Facilities & Campus Study Spaces, Recreation / Athletic Spaces, Food Service Areas, Plant Maintenance, Administrative Offices, Central Services, Health Service Facilities, Common Use & Student Activity Spaces, Assembly and Exhibition Facilities, Residential Spaces, etc.

The Department consists of two wings, Planning Wing and Development Wing. The Planning Wing is responsible for preparing fresh / revised PC-1's and medium to long term physical infrastructure development Plans for the University. While the Development Wing is responsible for space programming, master planning, preparation of engineering designs and engineering estimates, preparation of construction and contract documents, and construction administration for the major maintenance, alterations and new construction for all University facilities and building systems. In particular, the Development Wing is responsible for executing the approved / funded PC-1's and physical development projects.

Planning and Development Department services that are prepared:

Development Plans are prepared in line with the Master Plan of the University.It is also responsible for exploring funding possibilities for University development projects from funding agencies within the government and outside the government as well as from international development funding agencies. Lastly the department is responsible for developing and implementing a quality audit program, monitoring contractor corrective actions and ensuring quality project execution conforming to plans and specifications.

# Directorate of Students Affairs

## Dr. Abdul Shakoor

**Director Students Affairs**
Email: ashakoor@kfueit.edu.pk
Call: +92 (68) 5882422

The Directorate of Student Affairs (DSA) is considered as the first point of contact for all the University students. DSA serves as the guide and friend for the student from their first day to the last day at the university providing existence in curricular and extra-curricular activities. It helps students in providing them opportunities to take part in different healthy co-curricular activities and maintains liaison with a wide cross-section of students and to be responsive to their needs and problems. It also provides them different platforms for the development of their literary and artistic potentials.

Director Student Affairs is responsible to constitute the Societies at the commencement of every academic session and run them amicably throughout the year. The objective of this wing is to provide opportunities to take part in co-curricular, extra-curricular activities through a range of KFUEIT Student Societies.

## Quality Enhancement Cell (QEC)

### Prof. Dr. Muhammad Asghar Hashmi

**Director QEC**
Email: asghar.hashmi@kfueit.edu.pk
Call: +92 (68) 5882457

The Quality Enhancement Cell (QEC) at KFUEIT was established in March 2016. Since then, the Cell has been working effectively not only to enhance quality of education but also continuously improving upon it.

Key objectives of QEC are:
- To conduct regular training programs to enhance awareness of quality among faculty members
- To take steps to implement Outcome Based Education (OBE) in all degree programs at KFUEIT
- Conduct Mid-Semester and End-Semester student feedback survey for each course being conducted at KFUEIT and provide summary reports for the same to faculty members concerned through his/her Dean and HoD
- Conduct Campus Facilities & Environment Feedback Survey once every semester and submit the report to Vice Chancellor
- Conduct Faculty Members Course Feedback Survey for each course conducted at KFUEIT and submit the report to the HoD concerned through the relevant Dean
- Conduct a Faculty Satisfaction Feedback Survey once every semester and submit the report to the Vice- Chancellor and relevant Dean and HoD
- Conduct self-assessment Review (SAR) for each degree program at KFUEIT once every two years using the methodology prescribed by HEC and prepare relevant reports for the consideration of Vice Chancellor, Dean of the faculty concerned and relevant HoD.
- Promote the linkage between university and industry
- Conduct Alumni Feedback Survey from graduates of all programs at KFUEIT at the time of degree completion and submit the report to Vice Chancellor
- Conduct an Alumni Feedback Survey from graduates of all programs at KFUEIT three years after graduation and submit the report to Vice Chancellor
- Provide KFUEIT quality related data to HEC as requested from time to time in coordination with Registrar Office, Deans and Vice Chancellor

## Finance Department

### Abdul Samad

**Additional Treasurer**
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Call: +92 (68) 5882412

Finance Department is committed to provide KFUEIT with excellent services within its domain of responsibilities. The primary responsibility of Finance Department is the management of the University's financial assets and liabilities. It is our goal to provide all University stake holders with high-quality services in finance related matters

With that in mind, the Finance Department are committed to create an environment where we can step up and make a positive difference for all the students of the University. Our goal is to efficiently and effectively manage the university's financial assets to achieve the highest possible return at an acceptable level of risk.

## ICT Department

### Rizwan Majeed

**Director ICT**
Email: rizwan@kfueit.edu.pk
Call: +92 (68) 5882425

KFUEIT has by far the latest and updated Information & Communication Technology (ICT) infrastructure. ICT Department has embarked upon an ICT infrastructure design through which we can implement all sorts of information systems with zero cost for the software component by leveraging open source technologies. For the hardware and networking components, we have implemented solutions with long life and total low cost of ownership. Additionally, with a minimum number of support staff, the deployed IT infrastructure and services give KFUEIT a leading edge over all other universities in the region. Solutions that we have made operational at KFUEIT for the academia include the technologies of learning management, university management, project management, communication and collaboration, virtual private networking, thin client computing and multimedia services.

## Library

### Dr. Sana Ullah

**Chief Librarian**
Email: librarian@kfueit.edu.pk
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Library at Khwaja Fareed University of Engineering and Information Technology
was initially housed in a renovated hall with an area of about 700 meters square. THe library library has six full time librarians with four persons as attached staff. Library collection has risen to 14,000 books with 6,000 titles. Library services are being offered at three premises in ICT, Civil and Electrical engineering buildings. In its immediate plans, KFUEIT Library aims to add 5,000 international and local book titles along with 15 journal titles per year over the next 3 years. Access to digital databases including IET digital library, McGraw Hill collections, Springer Link, Taylor & Francis Journals, Wiley Blackwell etc. is also in process.

Library has a number of objectives to widen horizon of services these include:
- To get all information relevant to our University community then analyze and store it in a way that is preserving and easy to retrieve when demanded
- To provide required information in a useful manner.
- To act as expeditor in provision of latest education and research related extended services for grooming of human capital of University.
- To be pivotal in University by acquiring and disseminating latest knowledge and information through effective acquisition and dissemination encompassing all the faculties and allied services and departments of University.
- To continually develop University library, collection and resources, services and facilities through periodic interaction with library advisory board, soliciting feedback from University students and faculty.

## Procurement Department

### Engr. Dr. Aamir Alaud Din

**Director Procurement**
Email: dp@kfueit.edu.pk
Call: +92 (68) 5882464

The Procurement Department is a service unit established in September 2015 to support the educational and research missions of the Khwaja Fareed University of Engineering & Information Technology. The department is staffed by procurement professionals who have the requisite knowledge, skills and training to assist University personnel in the purchase of required goods and services. The department ensure that Punjab Public Procurement Regulatory Authority (PPRA) Regulations are followed during procurement processes at KFUEIT.

In this connection Procurement Department is responsible for following key tasks:

- Procurement of goods/services for the University with complete transparency
- Purchasing quality goods and services at competitive prices ensuring value for money
- Promoting supply chain diversification
- Exercising proper financial stewardship for payments and providing responsive service to all University departments
- Stores maintenance and issuance

## Internal Audit Department

### Muhammad Atif Raza

**Director Internal Audit / ACCA (UK)**
Email: atif.raza@kfueit.edu.pk
Call: +92 (68) 5882435

Internal Audit department has been established to assure independent and objectivity in Pre and Post Audit of University inflows and outflows. It helps the University to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance process. Internal auditing at KFUEIT is used a catalyst for improving organizational governance, risk management and management controls by providing insight and recommendations based on analyses and assessments of data and overall university processes.
Three External Audits in 4-year time by DG, Audit Punjab have successfully been conducted and responded at appropriate level i.e DAC, SDAC etc while giving the official version of KFUEIT

Key responsibilties of Internal Audit Department are:

- Designing hierarchy for transaction flow on ERP system
- Providing consultation regarding development of payroll system in coordination with Treasurer office and ICT
- Detailed Internal Audit inspection in a year, in order to assure the verification of KFUEIT Assets, their designated utilization and completion of record

## Career Counseling and Industrial Placement Center

**Muhammad Umair Ashraf**

**Manager Career Counseling**
Email: muhammad.umair@kfueit.edu.pk
Call: +92 (68) 5882429

Our Career Counseling and Industrial Placement Center (CCC) plays an instrumental role in shaping up student's future plans and educational aspiration by inviting guest speakers from relevant industries, arranging industrial visits, conducting mock interviews, recommendation for internships and job placements. Since 2016, Career Counseling and Industrial Placement Center has arranged multiple developmental activities for the students and the staff of KFUEIT
Some key activities and services are listed below:

- Arranged more than 70 guest speaker lectures of renowned professors, industry leaders and entrepreneurs
- Multiple individual and group counselling sessions
- 1,200+ students' placements for Internships
- Job fair & campus recruitment derives
- Industrial advisory and counselling camps
- Foreign scholarships advisory sessions
- GRE Intl. Test preparation and mock testing exercises
- 50+ industrial / study visits
- Sessions on industrial research and developments

Furthermore, CCC has established strong collaboration with industries, chamber of commerce, NGOs and local government authorities to enhance the professional and industrial acumen of the students by leading largest community outreach program of the region to boost educational standards at primary and secondary school level. Through this program, students of KFUEIT have contributed more than 37,000+ service hours towards educational community to promote education of Science, Technology, Engineering and Mathematics (STEM).

میں ویکھاں مرا یار نا ویکھے

جے میں نا ویکھاتے اوہ ویکھے

غلام فریدا بو ہے یار دے مرئے

اوہ ویکھے یا نا ویکھے۔ ۔ ۔

حضرت خواجہ غلام فریدؒ

## Horticulture Department

### Qazi Muhammad Rizwan

**Horticulture Officer**
Email: ho@kfueit.edu.pk
Call: +92 (68) 5882424

KFUEIT is an eco-friendly institution and realizes the importance of Horticulture. Horticulture is the art and science of plant production for both beauty and utility. It is about beautification and going green by growing flowers, fruits, vegetables and plants for ornament and fancy. The department is developing a Botanical Garden and an Ultra-High-Density mango orchard in university for research and revenue purpose

The Horticulture Department at KFUEIT is:
*       To develop green areas in the University
*       Plantation of maximum number of plants in the University
*       Maintenance of all the green areas
*       To provide facilities for sports
*       Care and maintenance of mango and lemon orchards
*       Care and maintenance of Botanical Garden
*       Provide facilities to all departments for their events

Throughout the academic year Horticulture department organizes Tree plantation drives and different events to promote greenery and eco-.friendliness

## Sports Department

### Engr. Hammad Khalid

**Director Sports**
Email: hammad.khalid@kfueit.edu.pk
Call: +92 (68) 5882427

Sports is an integral part of every Institution. Hence the Department of Sports is one of the core department of KFUEIT, offering sports facilities to both students and staff alike. The vision of sports department is to provide the students with best sporting facilities both at recreational and competitive level. The Sport Department has always paid special attention and devotion towards students mentoring and grooming so that they are able to glorify their institution in national as well as international forums.

Following sports facilities are currently available at campus:
*       Cricket (Cricket League)                        *       Football (Football League)
*       Table Tennis (Table Tennis League)    *       Tug of War
*       Volley Ball                                            *       Kabaddi
*       Basketball Courts (02)                         *       Athletics

Beside above-mentioned facilities, University has a dedicated gym for students (male / female) and staff as well. The Biggest event of KFUEIT is our Annual Sports Gala which continues for a whole week and maximum number of students participate in this event every year. Throughout the academic year different Leagues and Sports festivals in the university are organized including but not limited to Futsal League Mr. KFUEIT Body Building Championship etc.

## Transport Department

### Engr. Yasir Yasin

**Director Transport**
Email: to@kfueit.edu.pk
Call: +92 (68) 5882423

Transport Department renders the quality policy of KFUEIT by providing undesturbed and cost-effective transport facility. University is served by a comprehensive network of buses that include six Hino Buses, one Toyota Coaster, one Toyota Hi-Ace and other pool vehicles. Additional transport vehicles for meeting university needs are arranged through leasing. The pick and drop services are being provided within city and surrounding areas that include Sadiqabad and Khanpur for easy commuting. Trained staff including transport supervisors, drivers, helpers and other supporting staff of the department are committed to provide the best services.

Other key responsiblities of the transport department are:
- Managing and operating an ambulance service in case of an emergency situation
- Availability of vehicles for official visits and study tours
- The vehicle's frequent check helps in reducing the environmental impact and improves the efficiency, performance and health.
- Providing assistance to the community of KFUEIT and visitors on department-related matters and promote compliance with the Institute's regulations.
- Striving to provide sustainable services to the University.

## Hostel Department

### Dr. Farrukh Jaleel

**Warden Hostels**
Email: warden@kfueit.edu.pk
Call: +92 (68) 5882480

As the university hostel life is one of the key elements of a liberal arts education . The hostel is a critical part of the total university experience. It provides a good living and learning community for students. Its experience prepares a better transition for young adults to emerge from protected teenagers into intellectual individuals and future leaders. Students learn independence, interpersonal skills, sense of community and responsibility through living with roommate(s), floor mates and the community life in hostels. Hostel is a place where students find self-identity, unity, friendship and generosity. Everyone in the community contributes to the common good, to take responsibility and to console and support one another in difficulties.

To facilitate the students coming from surroundings areas of Rahim Yar Khan and from across the country, separate hostels have been arranged for male and female students. Hostel affairs are managed by a competent and dedicated team of full-time staff, available round the clock. In addition to the messing, TV room, study hall, mosque, indoor games hall, Internet accessibility, tuck shop and other essential utility services are available to the hostel residents. Students hostels inside campus are under construction at this time.

## Security Department

### Maj (R) Badar ul Islam Tahir

**Chief Security Officer**
Email: so@kfueit.edu.pk
Call: +92 (68) 5882430

Security Department is responsible for providing security cover and protection to all sites maintained by the University and all activities taking place under University's auspices. It consists of nearly 100 Security staff including Security Officers, Assistant Security Officers, Security Supervisors, CCTV Supervisors, Lady Security Supervisors and male, female security guards. KFUEIT is the only University in Punjab where QRF (Quick Response Force) has been formed to take prompt action in any emergency by taking security measures to the next level and having Bomb disposal squad in order to meet any untoward situation. The Department performs its function using state of the art video surveillance system. An advance communication system is in place to facilitate the coordination between security personnel and control centre. The Department is equipped with latest weapons and gadgets meeting the requirements of modern day challenges.

Further more, the Security Department of KFUEIT:
- Prepares and keeps updating the Security Plan / Policy / Procedures to ensure safety and security of University, its assets and allied facilities
- Ensures Implementation and enforcement of all procedures and policies
- Arranges regular training for the Security Staff, employees of University and the students
- Takes necessary measures to ensure that the University Campus and Student Hostels are free from drugs, narcotics and weapons of any kind
- Ensures that measures are put in place to guard against robberies, theft, pilferage of University stores and equipment, etc

## Time Table and Teaching Aid

### Asmara Habib

**Manager Time Table & Teaching Aid**
Email: asmara.habib@kfueit.edu.pk
Call: +92 (68) 5882461

The Time Tabling & Teaching Aids (TT&TA) Department is one of the core departments of University. TT&TA deals with formulation and implementation of time table of all departments of KFUEIT. Provision of all teaching aids (i.e. multimedia projectors, speakers, white board markers & teaching rooms) is also the responsibility of this department.

The major activities of the department are:
- Preparation of time table
- Implementation and communication of time table to all departments and students.
- Monitoring of classes and arranging make up classes.
- Generation & Submission of weekly time table report to the competent authority.
- Booking and provision of teaching rooms and auditorium for lectures, seminars, conferences, public lectures, educational meetings and any other related activity.

## Medical Services Department

### Dr. Sajid Rafique

**Medical Officer**
Email: sajid.rafique@kfueit.edu.pk
Call: +92 (68) 5882462

KFUEIT Medical Center provides a wide-range of comprehensive urgent, primary, and hospital services. The goal is to ensure that all Employees and Students of KFUEIT receive the best quality care through exceptional medical expertise, unsurpassed service and by putting safety first. There are dedicated male and female Medical Officer,

The department is delivering following services:
- OPD (All Faculty & Students)
- All kind of emergency handling and referral to Sheikh Zayed Medical College and Hospital (SZMC&H-RYK)
- Well equipped Ambulance
- Counseling Center running in collaboration with Department of Psychiatry & Behavioral Sciences, SZMC&H Rahim Yar Khan
- Drug Abuse, Dengue, Smog, Influenza, Heat Stroke and other running health issues' awareness campaigns through Awareness Seminars and walks
- Coordination and support for Blood Donation Society
- Students' Blood screening program in collaboration with Pathology Department, SZMC&H-RYK.
- Blood Screening against Substance abuse & Mental Test of all Security guards in collaboration with Department of Psychiatry & Behavioral Sciences, SZMC&H-RYK.
- Security Check of all Departmental Laboratories.
- Provision of First Aid Boxes and related medicines to all departments.
- Water Quality test of RO Plants
- Food and Hygiene Quality Control of University Cafeteria.

یقین محکم، عمل پیہم، محبت فاتحِ عالم
جہادِ زندگانی میں یہ ہیں مردوں کی شمشیریں

پہلے وائس چانسلر کی تقرری 2015 میں ہوئی جس کے ساتھ ہی یونیورسٹی نے ہر سال ترقی کے زینے طے کرنے شروع کر دئیے۔ وائس چانسلر پروفیسر ڈاکٹر اطہر محبوب صاحب کی سربراہی اور ان کی ٹیم کی شبانہ روز محنت کی بدولت اس یونیورسٹی نے کئی سال کا سفر چند ماہ میں طے کر لیا۔ اس سفر میں بہت دفعہ مشکل حالات اور بے شمار رکاوٹوں کا سامنا بھی رہا مگر کوئی رکاوٹ اور کوئی مشکل سے مشکل صورتحال وائس چانسلر اور ان کی ٹیم کے حوصلے پست نہ کر سکی۔

خواجہ فرید یونیورسٹی آف انجینرنگ اینڈ انفارمیشن ٹیکنالوجی بلاک 275 ایکڑ پر مشتمل خوبصورت اور شاندار کیمپس ابو ظہبی روڈ رحیم یار خان پر واقع ہے۔ یہ کیمپس تعلیم و تحقیق اور تدریس کی جدید سہولیات سے آراستہ ہے۔ اس وقت یونیورسٹی میں 600 ملازمین کام کرتے ہیں جن میں سے دو سو اساتذہ کرام یونیورسٹی کے معیار کو بہتر بنانے کے لئے ہمہ وقت کوشاں ہیں۔ یونیورسٹی کی تیز رفتار ترقی اور سٹوڈنٹس کی بڑھتی ہوئی تعداد یہ ظاہر کرتی ہے کہ یونیورسٹی اس علاقے کی ضروریات کے مطابق تعلیم و تحقیق سر انجام دے رہی ہے۔ ایک محتاط اندازے کے مطابق ضلع رحیم یار خان کے لوگ ہر سال 2 ارب روپے اپنے بچوں کی اعلیٰ تعلیم پر خرچ کرتے تھے اور یہ رقم اس ضلع سے باہر دوسرے شہروں میں بھیجی جاتی تھی۔ رقم کی منتقلی کا یہ عمل یونیورسٹی کے قیام سے کافی کم ہو چکا ہے۔

خاص طور پر اس علاقے کی طالبات کے لیے یہ یونیورسٹی ایک بہت بڑی نعمت ہے کیونکہ یہاں پر بہت سارے جدید ڈگری پروگرام متعارف کروائے گئے ہیں جو طالبات کی دلچسپی سے مطابقت رکھتے ہیں۔ خزاں 2019 کے داخلوں کے بعد اس یونیورسٹی کا شمار پاکستان کی بڑی یونیورسٹیز میں ہونا شروع ہو جائے گا کیونکہ یونیورسٹی 94 ڈگری پروگرام متعارف کروا رہی ہے۔ یونیورسٹی کے سو سے زیادہ پی ایچ ڈی اساتذہ کرام مستقبل قریب میں دس ہزار طلبا و طالبات کی تعلیم و تربیت کے لئے موجود ہیں۔

اس وقت یونیورسٹی تیزی سے ایک روشن مستقبل کی جانب گامزن ہے مگر فنڈز کی عدم دستیابی کی وجہ سے ترقی کا یہ سفر سست روی کا شکار ہے۔ تعلیم کے ساتھ ساتھ یونیورسٹی میں غیر نصابی سرگرمیوں کا بھی انعقاد کیا جاتا ہے جس میں مقابلہ نعت، مقابلہ قرآت، پاکستان ڈے، ڈیفنس ڈے، کشمیر ڈے، عید میلاد النبی اور ڈرامہ شامل ہیں۔ ان سرگرمیوں کے انعقاد سے طلبہ کا اعتماد اور تخلیقی صلاحیتیں بہتر ہوتی ہیں۔

# رحیم یار خان اور خواجہ فرید یونیورسٹی آف انجئینرنگ اینڈ انفارمیشن ٹیکنالوجی تاریخ و ثقافت

رحیم یار خان ایسا شہر ہے جو کہ جنوبی پنجاب کے مضافات میں واقع ہے۔ اس کا پرانا نام نوشہرہ تھا اور نواب محمد صادق خان عباسی نے اس شہر کا نام 1809 میں اپنے پہلے بیٹے کے نام پر رحیم یار خان رکھا۔ 1931 میں اس کو ضلع کا درجہ دیا گیا اور 1942 میں یہ ایک صنعتی زون بن گیا جس کا زیادہ تر انحصار کپاس کی پیداوار اور کپاس کی مصنوعات بنانے پر تھا۔ 1950 میں یہاں دو بڑی فیکٹریاں قائم کی گئیں جن میں سے پہلی عباسیہ ٹیکسٹائل ملز اور دوسری صادق ویجیٹیبل اینڈ ٹائل ملز (یونی لیور) تھی جس کی وجہ سے اس شہر میں مزید جدت آئی۔ رحیم یار خان کی ترقی کا یہ سفر ابھی جاری و ساری ہے اور اس وقت اس کا شمار صوبہ پنجاب کے جدید اضلاع میں ہوتا ہے۔

رحیم یار خان پاکستان کے تین صوبوں پنجاب سندھ اور بلوچستان کے سنگم پر واقع ہے۔ اس شہر کی جغرافیائی حیثیت نے نہ صرف اسے صحت اور تعلیم بلکہ کاروبار تجارت اور زراعت کے حوالے سے ایک ممتاز مقام دیا ہے کیونکہ جنوبی پنجاب شمالی سندھ اور مشرقی بلوچستان کے بہت سارے اضلاع کے لوگ رحیم یار خان میں موجود جدید سہولیات سے استفادہ حاصل کرتے ہیں۔ رحیم یار خان کی اکانومی کا انحصار زراعت پر ہے اور یہاں کی بڑی فصلیں کپاس اور گنا ہیں۔ اس وقت رحیم یار خان کی بڑی صنعتوں میں یونی لیور, کوکا کولا, ایف ایف سی, احمد اورینٹل ٹیکسٹائل, احمد فائن ٹیکسٹائل مل, سات شو گر ملز اور ان کے علاوہ بے شمار ماربل, کاٹن, جننگ, فلور اینڈ ٹائل ملز اور پولٹری فیڈ یونٹس شامل ہیں۔

اس علاقے میں شروع سے ہی اعلی تعلیم کی سہولیات کا فقدان تھا اور والدین اپنے بچوں کو اعلی تعلیم کے حصول کے لیے بڑے شہروں میں بھیجنے پر مجبور تھے۔ اس شہر سے دونوں طرف جو قریب ترین یونیورسٹیز تھی وہ بھی 200 کلومیٹر کے فاصلے پر تھی۔ اس صورت حال میں طلباء اپنی تعلیم کے ساتھ ساتھ بڑے شہر میں رہنے کے بھاری اخراجات کا بھی بوجھ اٹھانے پر مجبور تھے اور انہیں اس ضمن میں داخلہ حاصل کرنے کے لئے سخت مقابلے کا سامنا تھا۔

ان حالات میں جنوبی پنجاب کی پہلی انجینرنگ اور آئی ٹی یونیورسٹی کا قیام اس علاقے کے لئے کسی نعمت سے کم نہیں تھا۔ 2014 میں پنجاب اسمبلی کی منظوری سے شروع ہونے والی خواجہ فرید یونیورسٹی آف انجینرنگ اینڈ انفارمیشن ٹیکنالوجی کا یہ سفر محض چار کمروں پانچ فیکلٹی ممبرز اور چار ڈگری پروگرامز میں داخلوں کے ساتھ شروع ہوا۔

# سینئر ڈین کا پیغام

خواجہ فرید یونیورسٹی آف انجینئرنگ اینڈ انفارمیشن ٹیکنالوجی رحیم یار خان کا قیام گورنمنٹ آف پنجاب کا اس علاقے کی تعمیر و ترقی کے لئے ایک انقلابی قدم ہے۔اس یونیورسٹی کی ترقی میں وزیر اعلی پنجاب کے ساتھ ساتھ علاقائی سیاست دان اور تاجر برادری کا کردار قابل ستائش ہے۔ مجھے امید ہے کہ ایک دن یہ یونیورسٹی عالمی معیار کی تعلیمی، تحقیقی اور تدریسی سہولیات سے مزین ہو گی ۔مگر اس خواب کی تکمیل کے لیے موجودہ اور مستقبل میں آنے والی حکومتوں کا کردار بہت اہم ہے۔ بلاشبہ اس یونیورسٹی کا قیام جنوبی پنجاب کے لوگوں کے لیے ایک نعمت سے کم نہیں ہے جو کہ اس علاقے کے کاروبار تعلیم اور معاشرت میں جدت کی وجہ بنے گی۔

ہمارے ملک کی ترقی کا انحصار علم پر مبنی معیشت میں ہے اور اس یونیورسٹی کا قیام اس ضمن میں ایک اہم سنگ میل ہے۔ ہم سب کو مل کر دنیا میں اپنا کردار مثبت رویے کے ساتھ ادا کرنا چاہیے اور انسانیت کی فلاح میں اپنا حصہ ڈالنا چاہیے۔ ہم دنیا سے جدانہیں رہ سکتے اس لیے ہمیں اپنی معاشرت، صفت اور کاروبار میں جدت اختیار کرنی چاہیے اگر ہم ایسا نہیں کریں گے تو ہم دنیا سے پیچھے رہ جائیں گے۔

ہمارے گریجویٹ اور انڈر گریجویٹ پروگرامز اعلی معیار کے ہیں اور ہمارا ہدف ہے کہ ان کا معیار دنیا کی بڑی یونیورسٹیز سے کسی صورت کم نہ ہو۔ یقینا دنیا کی بڑی یونیورسٹیز نے جو معیارات حاصل کر لیے ہیں ابھی ہم ان سے پیچھے ہیں مگر ان کا حصول ناممکن نہیں ہے۔

میں اپنے قابل اور محنتی نوجوانوں سے یہ کہوں گا کہ وہ اپنا ایسا ہدف مقرر کریں جو ان کے والدین کے اور اس کے قوم کے خوابوں کا حصول ممکن بنا دے۔ نوجوان اس قوم کا مستقبل ہیں اور انہیں قوم کی امیدوں پر پورا اترنا چاہیے۔ اس یونیورسٹی کی انتظامیہ اور اساتذہ کرام اسے عالمی معیار کی یونیورسٹی بنانے کے لیے پر عزم ہیں۔ جیسا کہ ہمارے عظیم لیڈر قائد اعظم محمد علی جناح نے فرمایا کہ ایمان، تنظیم اور انتھک محنت سے آپ جو چاہیں اس دنیا میں حاصل کر سکتے ہیں۔ اس یونیورسٹی نے ابتدائی چار سال میں یعنی 2018 میں اپنے پہلے سے طے شدہ 2024 تک کے اہداف حاصل کر لیے ہیں ۔ اب اس یونیورسٹی میں انجینئرنگ، مینجمنٹ، بیک سائنسز، ہیومینٹیز، سوشل سائنسز، الائیڈ ہیلتھ سائنسز، کمپیوٹر سائنسز اور انفارمیشن ٹیکنالوجی کے شعبہ جات میں 94 نئے پروگرامز کا اجراء کر دیا گیا ہے۔ 2019ء میں امید ہے کہ طلبہ کی تعداد دس ہزار تک پہنچ جائے گی۔ یونیورسٹی کے معاشی استحکام کے لئے انتظامیہ کی کوشش ہے کہ موجود وسائل کو بروئے کار لایا جائے بلکہ وسائل کی دستیابی کے لئے تحقیق اور جدت کے ذریعے نئے مواقع بھی پیدا کئے جائیں۔ یونیورسٹی فل ٹائم اور پارٹ ٹائم طلبا کے لئے ریگولر اور ای لرننگ پروگرامز متعارف کروا رہی ہے۔

میری نیک تمنائیں ہمارے تمام طلبہ کے لئے ہیں اور میری یہ نصیحت ہے کہ زندگی میں جو بھی کریں اس میں انسانیت کی فلاح کا پہلو مد نظر رکھیں کیونکہ آپ اس گلوبل ورلڈ کا حصہ ہیں جس میں رہنے کے لئے امن اور ہم آہنگی کی ضرورت ہے۔

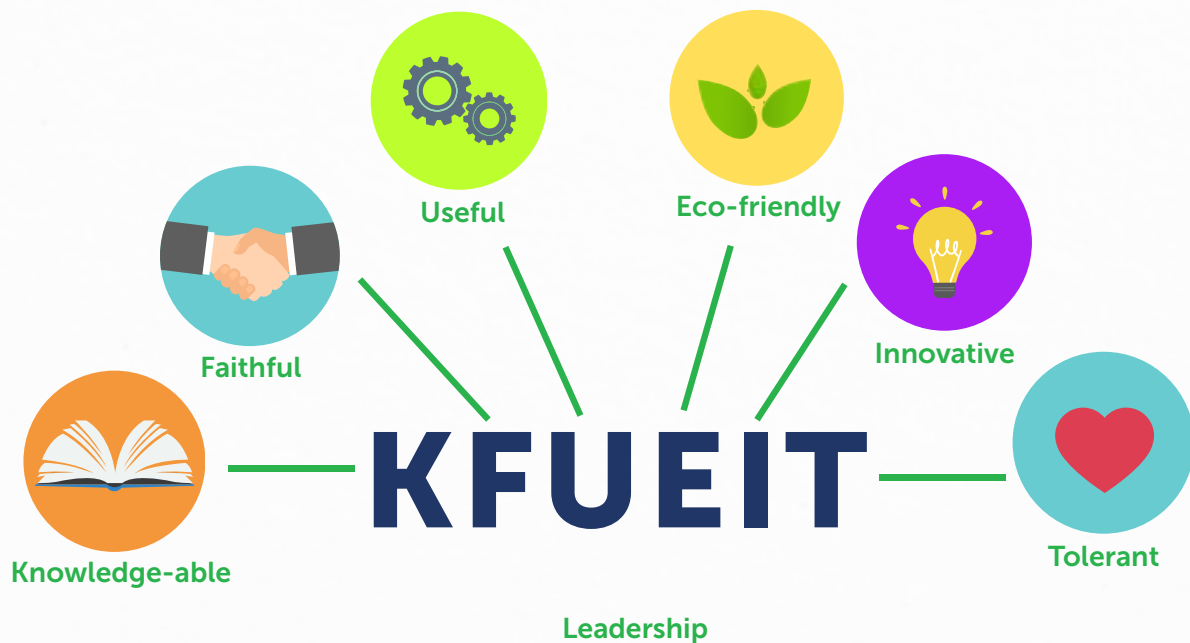انجینئر پروفیسر ڈاکٹر محمد منیر احمد

سینئر ڈین

# وائس چانسلر کا پیغام

اپنے تعلیمی اور پیشہ ورانہ مقاصد کے حصول کے لئے آپ کا خواجہ فرید یونیورسٹی آف انجینرنگ اینڈ انفارمیشن ٹیکنالوجی کا انتخاب ایک درست فیصلہ ہو گا۔ اس یونیورسٹی کے حوالے سے خاص بات یہ ہے کہ انتہائی جنوبی پنجاب کی یہ پہلی پبلک سیکٹر یونیورسٹی ہے جو کہ حکومت پنجاب کے وژن کے تحت جنوبی پنجاب کے باصلاحیت اور محنتی نوجوانوں کو اعلیٰ تعلیمی سہولیات فراہم کرنے کے لیے قائم کی گئی ہے۔200 کلومیٹر کے دائرے میں سندھ پنجاب اور بلوچستان کے سنگم پر واقع یہ یونیورسٹی علاقے کی تعمیر و ترقی اور اعلیٰ تعلیم کے فروغ کے لیے پرعزم ہے۔ پہلے مرحلے میں حکومت پنجاب کی چھ ارب روپے کی خطیر گرانٹ کے ذریعے سے یونیورسٹی میں نئے بلاکس کی تعمیر کے ساتھ ساتھ اعلیٰ تعلیمی اور تحقیقی سہولیات کی فراہمی کا کام تیزی سے جاری ہے۔اس وقت پہلے تعمیری مرحلے کی تکمیل کے بعد یونیورسٹی میں تعمیر کے دوسرے مرحلے میں مزید تعلیمی، رہائشی اور تفریحی سہولیات کی فراہمی کے لئے کام شروع ہو چکا ہے۔

خواجہ فرید یونیورسٹی آف انجینرنگ اینڈ انفارمیشن ٹیکنالوجی کا یہ مشن ہے کہ عالمی معیار کی تعلیمی، تحقیقی اور تدریسی سہولیات فراہم کی جائیں تاکہ یہ یونیورسٹی علاقے کی معیشت اور لوگوں کی بہتری کے عمل میں تخلیق علم اور تشکیل ذات کے ذریعے اپنا مرکزی کردار ادا کرے۔اپنے اس خواب کی تکمیل کے لئے یونیورسٹی پرعزم ہے کہ طلبہ کو ایسا تعلیمی ماحول فراہم کیا جائے جہاں نصاب اور تدریس عالمی معیار کے مطابق ہو جو کہ ان کی تشکیل ذات کے ساتھ ساتھ ان کی تخلیقی استعداد کو اوج کمال تک پہنچا دے تاکہ اپنی ہنر مندی کے ذریعے سے طلباء ملک و قوم کی ترقی میں اپنا جاندار کردار ادا کر سکیں۔ اسی وجہ سے یونیورسٹی سے فارغ التحصیل طلبہ کو انڈسٹری اور کمیونٹی کی طرف سے مثبت پذیرائی حاصل ہوئی ہے۔ اس وقت یونیورسٹی میں مختلف علوم میں بے شمار گریجویٹ اور انڈر گریجویٹ ڈگری پروگرامز کا اجراء کر چکی ہے اور ان پروگرام کی تعداد یونیورسٹی میں موجود تعلیمی، تحقیقی اور تدریسی سہولیات کے عین مطابق ہے۔

یونیورسٹی عملی اور اطلاقی تحقیق کے ذریعے نئے علم کو بروئے کار لاتے ہوئے علاقائی اور قومی سطح کے مسائل کے حل کے لیے پرعزم ہے۔ گہرے غور و فکر کے بعد یونیورسٹی نے تحقیق کے لیے خوراک، ماحول، توانائی، پانی، صحت، انفارمیشن اینڈ کمیونیکیشن ٹیکنالوجی اور مینوفیکچرنگ کے شعبہ جات کا انتخاب کیا ہے۔ یونیورسٹی اور تحقیق کار عالمی سطح پر آنے والی تبدیلیوں سے اور قومی سطح پر پیدا ہونے والی ڈیمانڈ سے بخوبی واقف ہیں جو کہ تعلیم پر مبنی معیشت سے متعلق ہے جس میں تمام سیکٹرز انفارمیشن کے حصول اور اس کی ترسیل پر بہت زیادہ انحصار کرتے ہیں۔ اب ضرورت اس امر کی ہے کہ ایسے حل متعارف کروائے جائیں جو کہ نہ صرف ملکی مسائل کو ختم کریں بلکہ کم خرچ اور دیرپا بھی ہوں۔ یونیورسٹی کے تمام تعلیمی، تحقیق اور تدریسی معیار بدلتی ہوئی عالمی اور ملکی صورتحال کے عین مطابق ہیں۔ یونیورسٹی کی مرکزی اقدار جن کا اطلاق تعلیمی، تحقیق تدریسی عمل میں مینجمنٹ اور اساتذہ کرام کرتے ہیں تاکہ طلبہ کی شخصیت میں وہی اقدار شامل ہو جائیں۔ ان کو یاد رکھنا بہت آسان ہے جو کہ یونیورسٹی کے نام کے مخفف سے ماخوذ ہیں۔

مجھے امید ہے کہ یونیورسٹی کا دورہ کرنے کے بعد اور یونیورسٹی سوشل میڈیا پیجز ویب سائٹ اور پراسپیکٹس میں دی گئی معلومات کے تجزیہ کے بعد یقیناً آپ بہتر پوزیشن میں ہوں گے کہ آپ اپنے مستقبل کے تعین میں خواجہ فرید یونیورسٹی آف انجینرنگ اینڈ انفارمیشن ٹیکنالوجی کا انتخاب کریں۔میں منتظر ہوں کے آپ اس یونیورسٹی کا حصہ بنیں جہاں قابل اور اعلیٰ تعلیم یافتہ اساتذہ کرام اور معاون انتظامیہ آپ کے مستقبل کے خوابوں کو تعبیر دینے کے لیے ہمہ وقت کوشاں ہیں۔

انجینئر پروفیسر ڈاکٹر اطھر محبوب، تمغہ امتیاز

وائس چانسلر

# Core Values

**Useful**

**Eco-friendly**

**Faithful**

**Innovative**

# KFUEIT

**Knowledge-able**

**Tolerant**

**Leadership**

**Khwaja Fareed University of Engineering & Information Technology**
Rahim Yar Khan

## چانسلر کا پیغام

اعلیٰ تعلیمی اداروں کی یہ بنیادی ذمہ داری ہے کہ وہ تعلیم اور تحقیق کے ذریعے ایسا علم اور فہم پیدا کریں جو کسی بھی معاشرے کی معاشی اور ثقافتی ترقی کے لئے ضروری ہوتا ہے۔ حکومت یونیورسٹی سے یہ چاہتی ہے کہ یہ لوگوں کی تعلیمی قابلیت، ہنر مندی اور استعداد بڑھانے میں اپنا کردار ادا کرے۔ خاص طور پر جنوبی پنجاب میں اعلیٰ تعلیم کا فروغ حکومت کی اولین ترجیحات میں شامل ہے۔ مجھے یقین ہے کہ تعلیم اور تحقیق میں بہتری کے ذریعے اس علاقے کی سماجی اور معاشی صورتحال میں ہم ایک مثبت تبدیلی لا سکتے ہیں۔ طلبہ کو عالمی معیار کا تعلیمی ماحول فراہم کرنا خواجہ فرید یونیورسٹی آف انجینئرنگ اینڈ انفارمیشن ٹیکنالوجی کی اولین ترجیحات میں شامل ہے۔ یونیورسٹی کا یہ مشن ہے کہ طلبا وطالبات کی تعلیم و تربیت اس جاندار طریقے سے کی جائے کہ وہ فارغ التحصیل ہو کر معاشرے کے کار آمد شہری بن سکیں۔ موجودہ دور کے تقاضوں کو پورا کرنے کے لئے یونیورسٹی کو اپنے تعلیمی اور انتظامی شعبہ جات کو مسلسل بہتر کرتے رہنا چاہئے تاکہ یہاں طلبہ کو وہ سہولیات دستیاب ہوں جو مستقبل میں ان کے کریئر کو بہتر کرنے میں مدد دیں۔ میری یہ دعا ہے کہ خواجہ فرید یونیورسٹی آف انجینئرنگ اینڈ انفارمیشن ٹیکنالوجی اپنے مقاصد کے حصول میں سرخرو ہو۔

### چوہدری محمد سرور
گورنر پنجاب

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## پرو وائس چانسلر کا پیغام

پنجاب حکومت کا وزیراعلیٰ سردار عثمان بزدار کی قیادت میں یہ عزم ہے کہ اعلیٰ تعلیم کو عالمی معیار کے مطابق بنایا جائے اور پنجاب کے ہر شہری کے لئے اعلیٰ تعلیم کے حصول کو ممکن بنایا جائے۔ خواجہ فرید یونیورسٹی آف انجینئرنگ اینڈ انفارمیشن ٹیکنالوجی رحیم یار خان کا قیام حکومت پنجاب کے اسی عزم کا اظہار ہے۔ یونیورسٹی کی تعمیر و ترقی کے پہلے مرحلے میں حکومت پنجاب اب تک چار ارب روپے خرچ کر چکی ہے جس کے نتیجے میں یونیورسٹی میں تعلیمی اور انتظامی بلاکس کی تعمیر اور مناسب تعلیمی سہولیات کی فراہمی مکمل ہو چکی ہے۔ مجھے یہ جان کر خوشی ہوئی ہے کہ یونیورسٹی کی تعمیر کے پہلے مرحلے کی تکمیل کے ساتھ ہی توسیع کے لئے دوسرے مرحلے کی منصوبہ بندی بھی مکمل ہو چکی ہے۔ توسیع کہ اس منصوبے کے ذریعے سے نہ صرف یونیورسٹی کے رقبے میں اضافہ ہوگا بلکہ نئے بلاکس کی تعمیر کے ساتھ ساتھ بہتر تعلیمی سہولیات کی فراہمی بھی ممکن ہوسکے گی۔ توسیع کا منصوبہ تعمیر کے ابتدائی منصوبے سے حجم میں دوگنا ہو گا جس کے ذریعے سے فیکلٹی ڈویلپمنٹ پروگرام اور انڈومنٹ فنڈ کے اجراء سے یونیورسٹی کو مزید استحکام دیا جائے گا۔ حکومت پنجاب اس چیز پر یقین رکھتی ہے کہ نوجوان نسل پر سرمایہ کاری ایک محفوظ مستقبل کی ضمانت ہے۔ میں اس چیز پر مطمئن ہوں کہ خواجہ فرید یونیورسٹی آف انجینئرنگ اینڈ انفارمیشن ٹیکنالوجی حکومت پنجاب کی سربراہی میں نہ صرف تیز رفتار ترقی کر رہی ہے بلکہ مقامی طور پر ایک اچھی تعلیمی سہولت کے طور پر ابھر کر سامنے آ رہی ہے۔ میری خواہش ہے کہ جنوبی پنجاب کے نوجوان اپنے بہتر مستقبل کے لیے اس یونیورسٹی سے بھرپور فائدہ اٹھائیں اور میں ان کو یہ یقین دلاتا ہوں کہ یہ ادارہ ہمیشہ ان کے بہتر مستقبل کے لیے مخلصانہ کوششیں کرتا رہے گا۔ میری نیک تمنائیں اور دعائیں جنوبی پنجاب کے طلبہ و طالبات، یونیورسٹی میں پڑھانے والے اساتذہ کرام، مینجمنٹ اور سٹاف کے ساتھ ہیں۔

### راجہ یاسر ہمایوں
منسٹر آف ہائر ایجوکیشن، حکومت پنجاب

## نصب العین

عالمی معیار کی یونیورسٹی بن کر علاقے کی معیشت اور لوگوں کی بہتری کے عمل میں تخلیق علم اور تشکیل ذات کے ذریعے مرکزی کردار ادا کرنا۔

## عزم

ایک ایسا تعلیمی ماحول فراہم کرنا جہاں

1. نصاب اور تعلیم کا عمل عالمی معیار سے مطابقت رکھتا ہو۔
2. طلباء کو ایسا ماحول فراہم ہو جو کہ ان کی تشکیل ذات کے ساتھ ساتھ ان کی تخلیقی استعداد کو اوج کمال تک
3. پہنچا دے۔
4. ایسے ہنر مند افراد پیدا ہوں جو ملک و قوم کی ترقی میں اپنا جاندار کردار ادا کر سکیں۔
5. ایسی تحقیق ممکن ہو جسے کے نتیجے میں پیدا ہونے والے علم کے ذریعے سے مقامی اور قومی مسائل حل کئے جاسکیں۔

## اغراض و مقاصد

سائنس، ریاضی، انجینئرنگ، انفارمیشن اینڈ کمیونیکیشن ٹیکنالوجی، لائف سائنسز اینڈ ہیلتھ کیئر، مینجمنٹ، سوشل اینڈ لیگل سائنسز، ہیومینٹیز اینڈ آرٹس کے شعبہ جات میں عالمی معیار کے تیس انڈر گریجویٹ ڈگری پروگرام متعارف کروانا۔ مختلف شعبہ جات کے باہمی اشتراک کے ذریعے ایسی تحقیق کو ممکن بنانا جس سے نہ صرف علاقائی اور ملکی سطح کے مسائل حل کرنے میں مدد ملے بلکہ اعلیٰ تعلیم یافتہ اور ہنر مند افراد کی تعداد میں بھی اضافہ ہو۔

- ایپلائیڈ اینڈ اوپن سورس انفارمیشن ٹیکنالوجی - تعلیم، صحت اور زراعت
- ایمبیڈڈ سسٹم – اگلی جنریشن سمارٹ فونز، ٹیبلٹس، سیکیورٹی کیمرہ، ہوم آٹومیشن سسٹم، بلڈنگ کنٹرول سسٹم، فیکٹری اینڈ
- پروڈکشن لائن، آٹومیشن فار ایگری بیسڈ انڈسٹریز، الیکٹریکل وہیکل کنٹرول سسٹم
- بائیو ٹیکنالوجی – فصلوں اور پھلوں کی مختلف اقسام کی بہتر پیداوار
- فوڈ سائنس اینڈ ٹیکنالوجی
- واٹر ریسورس انجینئرنگ / مینجمنٹ
- ماحولیاتی سائنس / انجینئرنگ
- ری نیو ایبل انرجی – بائیو ماس، سولر پی وی، ونڈ اینڈ اورز
- انفارمیشن سیکیورٹی – انفارمیشن ایشورنس، سائبر وار فیئر، ڈیجیٹل فرانزکس
- میٹیریل انجینئرنگ – سولڈ الیکٹر لائٹس، آرگینگ فوٹو وولٹیکس، نینو میٹیریلز
- پاور سٹوریج، کنورژن اینڈ مینجمنٹ
- ہیریٹیج سٹڈیز
- انجینئرنگ مینجمنٹ، ہیلتھ کیئر مینجمنٹ اینڈ سپلائی چین مینجمنٹ

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